

**专利列表**

2019/03/12

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**1、Nuclear fusion reactor that doesn' t pollute environment and that uses laser beam and deuterium in special tubes**

公开（公告）号：[GB201820354D0](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FO98eLw0FPQ5bMeYrAgyQSz&local=zh)

公开（公告）日：2019-01-30

申请号：GB1820354

申请日：2018-12-13

申请人：ZAKI GEORGE ABD ELMASSIH; ELADL AHMED ELMETWALI

**2、智能车辆利用混合采样滤波进行精确定位的方法及系统**

摘要：本发明公开了一种智能车辆利用混合采样滤波进行精确定位的方法及系统，利用混合采样滤波，结合事先构建的高精度地图数据和激光雷达或相机采集的实时点云数据，实现车辆在无/弱卫星信号环境中的精确定位，可用于车辆的辅助驾驶和无人驾驶。采用一个新的概率定位框架，使用核密度估计的方法将随机采样一致性算法和粒子滤波/直方图滤波算法高效融合在一起，充分利用各自优势弥补对方的不足，然后使用基于高斯混合模型的概率栅格地图进行更加鲁棒、精确、快速的定位。

公开（公告）号：[CN109186625A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gn6ZC7PLqDFGr4kAd0KKkg&local=zh)

公开（公告）日：2019-01-11

申请号：CN201811243970.9

申请日：2018-10-24

申请人：北京奥特贝睿科技有限公司

法律状态：法律状态公告日：20190111;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20190212;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01C 21/34;?

**3、APPLICATION OF COMPRESSED MAGNETIC FIELDS TO THE IGNITION AND THERMONUCLEAR BURN OF INERTIAL CONFINEMENT FUSION TARGETS**

摘要：Application of axial seed magnetic fields in the range 20-100 T that compress to greater than 10, 000 T (100 MG) under typical NIF implosion conditions may significantly relax the conditions required for ignition and propagating burn in NIF ignition targets that are degraded by hydrodynamic instabilities. Such magnetic fields can : (a) permit the recovery of ignition, or at least significant alpha particle heating, in submarginal NIF targets that would otherwise fail because of adverse hydrodynamic instability growth, (b) permit the attainment of ignition in conventional cryogenic layered solid-DT targets redesigned to operate under reduced drive conditions, (c) permit the attainment of volumetric ignition in simpler, room-temperature single-shell DT gas capsules, and (d) ameliorate adverse hohlraum plasma conditions during laser drive and capsule compression. In general, an applied magnetic field should always improve the ignition condition for any NIF ignition target design.

公开（公告）号：[US20190066851A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rFwbXuZgIqkXCvqiiRNCwVT&local=zh)

公开（公告）日：2019-02-28

申请号：US16152716

申请日：2018-10-05

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC

**4、一种实现超强脉冲输出的装置及方法**

摘要：本发明属于激光领域，具体涉及的是一种利用脉冲放大技术，在极小的谐振腔内控制完成脉冲序列的放大，以获得超强脉冲的装置及方法。一种实现超强脉冲输出的装置，包括：输出镜、第一电光开关、反射腔、第二电光开关以及超强脉冲接收装置，一种实现超强脉冲输出的方法，包括以下步骤：(1)根据输出镜得到的脉冲通过电光开关进入到反射腔中，得到脉冲电场Eq(z, t)；(2)根据脉冲电场Eq，通过反射腔与第二电光开关后，得到输出光强Im。进入反射腔的脉冲合成光强分量为单个脉冲光强的4倍，可以得到稳定的超强脉冲输出，大功率激光器可以用于激光核聚变、科学研究、医疗、检测、分析、通讯、投影显示以及军事国防等领域，具有极其重要的应用价值。

公开（公告）号：[CN109066282A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gs8Vp0CnS4rGr4kAd0KKkg&local=zh)

公开（公告）日：2018-12-21

申请号：CN201810763633.6

申请日：2018-07-12

申请人：哈尔滨工程大学

法律状态：法律状态公告日：20181221;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20190115;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01S 3/102;?

**5、POWDER MATERIAL AND METHOD FOR PRODUCING THREE-DIMENSIONAL MODEL**

摘要：The purpose of the present invention is to provide : a powder material which is not susceptible to aggregation of particles during preliminary heating, while enabling melt bonding of resin particles with a small amount of laser irradiation, and which is additionally capable of producing a three-dimensional model that is suppressed in deformation and has high impact strength; and a method for producing a three-dimensional model, which uses this powder material. The present invention relates to a powder material which is used for the production of a three-dimensional model, wherein a thin layer of a powder material containing resin particles is selectively irradiated with laser light, thereby forming a shaped article layer that is obtained by sintering or melt bonding the resin particles, and thus-formed shaped article layers are laminated to produce the three-dimensional model. Each of the resin particles has a core that contains a first amorphous resin and a shell that contains a second amorphous resin which has a glass transition temperature higher than the glass transition temperature of the first amorphous resin, and temperature T1 and temperature T2 as determined by a specific method satisfy the relational expression T2 - T1 ≤ 105°C.

公开（公告）号：[WO2019013069A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU4G7CtovUUyXPNkPtwy7rjn&local=zh)

公开（公告）日：2019-01-17

申请号：WOJP18025348

申请日：2018-07-04

申请人：KONICA MINOLTA INC

**6、一种基于反射式衰减片的等离子体不同光强区域原位同步成像方法**

摘要：本发明涉及一种基于反射式衰减片的等离子体不同光强区域原位同步成像方法，具体为一种利用光在两片非平行衰减片间多次反射和透射，实现等离子体不同光强区域原位同步成像的观察方法。本发明方法基于等离子体辐射的光进入非平行的两面反射式衰减片中多次反射和透射，采用相机记录每一次透射的光。两面衰减片采用非平行方式的目的是分开每次反射和透射的位置，以便错开透射成像的位置；多次反射的目的是层层剥离低光强区域，留到最后的是高光强区域。采用该方法能够获得等离子体不同光强区域的清晰形貌。本发明适用于激光制造、电弧制造、激光电弧复合制造、核聚变等过程中等离子体的观察。

公开（公告）号：[CN108738222A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iWQLmX3Habkmr4kAd0KKkg&local=zh)

公开（公告）日：2018-11-02

申请号：CN201810641656.X

申请日：2018-06-21

申请人：北京工业大学

法律状态：法律状态公告日：20181102;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20181127;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H05H 1/00;?

**7、基于核磁共振引导的激光消融系统的组织消融评估系统**

摘要：本发明提供了基于核磁共振引导的激光消融系统的组织消融评估系统，所述组织消融评估系统包括三维结构重建模块，温度获取模块，图像融合模块，消融计算模块，判断与反馈模块，评价模块；所述消融计算模块使用专用公式其中，E(n‑i)是标号为n的小体积在第i次调用温度获取模块时的累积消融量，Tn‑i是标号为n的小体积在第i次的融合图像中的开尔文温度，Sn是编号为n的小体积的平均灰度值，K(Sn)＝120.34×[log2(Sn+1)‑668]。

公开（公告）号：[CN108805991A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2imCa1vIXRwemr4kAd0KKkg&local=zh)

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申请号：CN201810633321.3

申请日：2018-06-19

申请人：华科精准(北京)医疗科技有限公司

法律状态：法律状态公告日：20181113;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20181207;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G06T 19/20;?

**8、一种产生中子源的方法**

摘要：一种产生中子源的方法，包括：利用激光打击含有聚变燃料的反射结构，反射结构内部具有汇聚空间，反射结构被配置成当激光射入反射结构的内部对其进行烧蚀时，产生的等离子体能够被反射结构反射汇聚到汇聚空间。其利用激光对反射结构的内部材料烧蚀，产生反向高速运动的等离子体。反向高速运动的等离子体集聚到汇聚空间，高速运动的等离子体与集聚到汇聚空间的等离子体碰撞，将能量转化为等离子体内能，使得集聚的等离子体温度升高。当激光持续发射，可实现集聚的等离子体温度持续升高，直至达到一个平衡点，然后聚集等离子体体积不断增长，形成一个稠密高温等离子体球。等离子体球中的聚变燃料发生热核反应，发射中子。

公开（公告）号：[CN108711460A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iZf%2FXsMpvXVmr4kAd0KKkg&local=zh)

公开（公告）日：2018-10-26

申请号：CN201810535332.8

申请日：2018-05-28

申请人：中国工程物理研究院激光聚变研究中心

法律状态：法律状态公告日：20181026;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20181120;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21G 4/02;?

**9、一种机器人终端装置**

摘要：本实用新型提供一种机器人终端装置，其特征在于：包括集成设置的核心处理单元Jetson芯片、FPGA芯片、嵌入式ARM模块和多种传感器，所述传感器包括GNSS卫星导航模块、IMU惯性导航模块、激光雷达和摄像头，核心处理单元Jetson芯片连接摄像头和激光雷达，FPGA芯片分别连接GNSS卫星导航模块和IMU惯性导航模块、嵌入式ARM模块；嵌入式ARM模块连接控制机器人的伺服电机。本实用新型集成程度高，接口丰富，能够为多传感器信息融合和深度学习提供硬件基础，体积小，成本低，市场优势大，符合当前机器人产品微型化的趋势。

公开（公告）号：[CN208224794U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORNZmg5PBa8lbWr4kAd0KKkg&local=zh)

公开（公告）日：2018-12-11

申请号：CN201820790147.9

申请日：2018-05-24

申请人：中山赛伯坦智能科技有限公司; 武汉大学; 武汉京天电器有限公司

法律状态：法律状态公告日：20181211;?

法律状态：授权;?

描述信息：授权;?

**10、一种具有多级功率性能的合束器及激光器**

摘要：本实用新型涉及一种具有多级功率性能的合束器及激光器，特别涉及于光纤通讯领域。该合束器包括第一级功率合束器、第二级功率合束器、第三级功率合束器；该激光器包括在合束器上增加泵浦源，并且在输出光纤终端设置输出端帽。本实用新型克服了现有技术中由于单级合束器因为功率使用上的问题而不能叠加使用的问题，如果采用单模光纤激光器容易产生较多成本的缺点。本设计的核心在于每一级由多根输入光纤与输出光纤进行熔接，第一级通常为输入光纤拉锥之后与输出光纤熔接，利用熔接技术将输入光纤与输出光纤紧密熔接贴合，避免了熔接点的引入造成额外的损耗，在更高功率使用条件下，本专利将具有非常明显的优势。

公开（公告）号：[CN208127619U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtOROPRJzt6V%2Fz9Gr4kAd0KKkg&local=zh)

公开（公告）日：2018-11-20

申请号：CN201820771345.0

申请日：2018-05-23

申请人：福州腾景光电科技有限公司

法律状态：法律状态公告日：20181120;?

法律状态：授权;?

描述信息：授权;?

**11、基于磁共振导引的激光热疗装置和系统**

摘要：本发明提供了基于磁共振导引的激光热疗装置和系统，包括：工作站、激光消融设备和微创手术光纤组件；工作站用于根据病人的术前病灶数字影像生成手术方案，将手术方案发送至激光消融设备，在术中利用磁共振温度成像技术融合生成病灶区域的实时温度图像，通过病灶以及周边健康组织的温度数值，实时调控激光功率和冷却功率；激光消融设备用于产生并调节激光，驱动并控制冷却间质的循环；微创手术光纤组件利用激光和冷却间质对病症治疗中的规则或非规则肿瘤进行精准适形消融和冷却手术组件及周边组织。本发明实现了对规则和不规则的肿瘤均能进行有效消融，并在术中通过核磁温度成像，实时调整消融边界，达到适形消融的目的。

公开（公告）号：[CN108836477A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gmwnjPtWp3uGr4kAd0KKkg&local=zh)

公开（公告）日：2018-11-20

申请号：CN201810459539.1

申请日：2018-05-14

申请人：华科精准(北京)医疗科技有限公司

法律状态：法律状态公告日：20181120;?

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描述信息：公开;?

法律状态公告日：20181214;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):A61B 18/22;?

**12、基于低线束雷达的低矮障碍物的优化检测方法及装置**

摘要：本发明提供了一种基于低线束雷达的低矮障碍物的优化检测方法及装置，其核心在于通过运动估计将历史点云数据转换到当前帧激光雷达坐标系中，并叠加至当前帧的点云数据中，从而将历史信息融合，能够提高激光雷达对于低矮障碍物的有效识别，加强识别效果，降低噪声点的影响。

公开（公告）号：[CN108647646A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hvKT9ja8TrRmr4kAd0KKkg&local=zh)

公开（公告）日：2018-10-12

申请号：CN201810451069.4

申请日：2018-05-11

申请人：北京理工大学

法律状态：法律状态公告日：20181012;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20181106;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G06K 9/00;?

**13、多脉冲激光吹气系统扫描装置**

摘要：本实用新型属受控核聚变杂质注入技术领域，具体涉及一种多脉冲激光吹气系统扫描装置。所述的多脉冲激光吹气系统扫描装置采用二维(XY方向)扫描振镜，能够高速步进式移动激光焦斑在靶片上的相对位置的装置，该系统包括：激光准直器、45°全反射镜、Y方向扫描振镜、X方向扫描振镜、fθ透镜、二维平移台。该设计能够高速步进式移动激光焦斑在靶片上的相对位置，转动中Y方向扫描振镜可以沿Y方向移动激光焦斑在靶片上的位置，转动X方向扫描振镜可以沿X方向移动激光焦斑在靶片上的位置。可以沿垂直于激光束的水平方向调节靶片上激光扫描的中心位置，还可以沿平行于激光束的方向调节靶片上激光光斑的大小，从而调节杂质注入量。

公开（公告）号：[CN208256294U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORM22a0uSWg7GGr4kAd0KKkg&local=zh)

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申请号：CN201820642632.1

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申请人：核工业西南物理研究院

法律状态：法律状态公告日：20181218;?

法律状态：授权;?

描述信息：授权;?

**14、室内巡检机器人小车**

摘要：本实用新型的目的是提供一种室内巡检机器人小车，通过对机器人小车前场景进行激光检测，激光传感器收集的现场数据融合驱动部分反馈的里程数据后在核心控制器内部进行地图建模以及实时更新地图模型，核心控制器根据地图建模结果向驱动机构发送控制指令，驱动机构根据接收到的控制指令驱动所述驱动轮正转或反转，以实现自动控制机器人小车在巡检环境中绕开障碍物移动和调整移动方向，在移动过程中，云台摄像头可以不断监控和拍摄经过的环境图像，从而在不需要对于现场环境进行任何改造的情况下，实现对室内环境进行巡检，增加机器人小车在实际环境中运行稳定性的同时，提高小车的智能性，大大降低了改造成本，快速适应场景变化，减少人工成本。

公开（公告）号：[CN208000498U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORNfouSFFz2nqGr4kAd0KKkg&local=zh)

公开（公告）日：2018-10-23

申请号：CN201820489774.9

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申请人：上海仙知机器人科技有限公司

法律状态：法律状态公告日：20181023;?

法律状态：授权;?

描述信息：授权;?

**15、TARGET FOR CARRYING OUT A NUCLEAR FUSION REACTION AND A METHOD FOR THE USE THEREOF**

摘要：FIELD : thermonuclear physics.SUBSTANCE : invention relates to a target for carrying out a nuclear fusion reaction and to a method for using such a target. Target 1 for carrying out the nuclear fusion reaction is made in the form of thin-walled hollow truncated cone 2, on the inner surface of which layer 3 of thermonuclear fuel is applied, while the cone dimensions are comparable with at least the dimensions of a focal spot in a laser beam, used to impact on the target. Method of using this target is to place the target in a vacuum chamber; the target is irradiated with first laser beam 7, directed along cone axis 6 to its inner surface from a side of its wider base 4; at the same time, the target is irradiated with second laser beam 8, directed symmetrically relative to the cone axis on its outer surface from a side of its narrower base 5; the laser radiation of both beams has circular polarization, which direction of rotation around the longitudinal axis of the cone in both beams coincides when viewed from the side of any of the bases.EFFECT : technical result is an increase in the burnout efficiency of the cone target.9 cl, 2 dwg

公开（公告）号：[RU2674256C1](https://www.incopat.com/detail/init2?formerQuery=TCyK%2FJgUpkQMpSEiYVlvNfR0OjOTHMZL&local=zh)

公开（公告）日：2018-12-06

申请号：RU2018106987

申请日：2018-02-27

申请人：Federalnoe gosudarstvennoe byudzhetnoe uchrezhdenie nauki Fizicheskij institut im P N Lebedeva Rossijskoj akademii nauk (FGBUN FIAN) (RU)

**16、一种可实现测距与鬼成像的一体化装置及方法**

摘要：本发明涉及一种可实现测距与鬼成像一体化装置及方法，属于光电成像技术领域。装置具有三种工作模式，既可以获取目标距离信息，也可以获得目标的二维、三维鬼成像，相比传统鬼成像系统，功能丰富，集成度高。本发明主要采用DMD，脉冲激光器，主控电路及高速时间探测器，其中DMD为核心器件，通过控制它来实现不同的工作模式。通过典型前沿判别法可实现测距功能；利用光强的二阶互相关函数可实现目标的二维鬼成像；结合测距功能与鬼成像功能，设置不同位置切片和切片数量，获得切片位置的目标表面二维分布信息，最后通过图像融合可获得目标的三维鬼成像及其距离信息。

公开（公告）号：[CN108107441A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hTQdbXc%2FCJUGr4kAd0KKkg&local=zh)

公开（公告）日：2018-06-01

申请号：CN201810100998.0

申请日：2018-02-01

申请人：北京理工大学

法律状态：法律状态公告日：20180601;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180626;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01S 17/08;?

**17、一种多传感器融合全天候高速无人车探测避障系统**

摘要：本发明属于无人驾驶技术领域，公开了一种多传感器融合全天候高速无人车探测避障系统。本发明包括控制系统和车顶激光雷达、车载双目视觉摄像头组、前方探测微波雷达组、后方探测微波雷达、前方激光雷达组和后方激光雷达组，控制系统包括上位机和下位机，所述下位机为由FPGA和ARM构成的双核控制器。本发明价格低廉、性价比相对较高，具有很强的实用性。

公开（公告）号：[CN107977004A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gOIZP%2BDfu6uGr4kAd0KKkg&local=zh)

公开（公告）日：2018-05-01

申请号：CN201711229489.X

申请日：2017-11-29

申请人：江苏若博机器人科技有限公司

法律状态：法律状态公告日：20180501;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180619;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):G05D 1/02;登记生效日:20180530变更前 申请人:江苏若博机器人科技有限公司 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼变更后 申请人:张好明 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼;?

**18、一种多传感器融合高速无人车探测避障系统**

摘要：本发明属于无人驾驶技术领域，公开了一种多传感器融合高速无人车探测避障系统。本发明包括控制系统和车顶激光雷达、车载双目视觉摄像头组以及前方激光雷达组和后方激光雷达组，车顶激光雷达用于探测到无人车前方道路的起伏以及与前方激光雷达组一并探测无人车前方运动路径中的障碍物情况；前方激光雷达组还用于探测无人车左前方和右前方运动路径中的障碍物情况；后方激光雷达组用于探测无人车后方的障碍物情况；车载双目视觉摄像头组用于识别无人车前方的标示和与车顶激光雷达及前方激光雷达组配合探测障碍物情况；控制系统包括上位机和下位机，所述下位机为由FPGA和ARM构成的双核控制器。本发明价格低廉、性价比相对较高，具有很强的实用性。

公开（公告）号：[CN108021133A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jP9DLFEwFvDGr4kAd0KKkg&local=zh)

公开（公告）日：2018-05-11

申请号：CN201711231563.1

申请日：2017-11-29

申请人：江苏若博机器人科技有限公司

法律状态：法律状态公告日：20180511;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180619;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):G05D 1/02;登记生效日:20180530变更前 申请人:江苏若博机器人科技有限公司 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼变更后 申请人:张好明 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼;?

**19、一种多传感器融合中速无人车探测避障系统**

摘要：本发明属于无人驾驶技术领域，公开了一种多传感器融合中速无人车探测避障系统。本发明包括控制系统和车顶激光雷达、车载单目视觉摄像头以及前方激光雷达组和后方激光雷达组，车顶激光雷达用于探测到无人车前方道路的起伏以及与前方激光雷达组一并探测无人车前方运动路径中的障碍物情况；前方激光雷达组还用于探测无人车左前方和右前方运动路径中的障碍物情况；后方激光雷达组用于探测无人车后方的障碍物情况；车载单目视觉摄像头用于识别无人车前方的标示和与车顶激光雷达及前方激光雷达组配合探测障碍物情况；控制系统包括上位机和下位机，所述下位机为由FPGA和ARM构成的双核控制器。本发明价格低廉、性价比相对较高，具有很强的实用性。

公开（公告）号：[CN108037756A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iy9UAhqn0ck2r4kAd0KKkg&local=zh)

公开（公告）日：2018-05-15

申请号：CN201711229561.9

申请日：2017-11-29

申请人：江苏若博机器人科技有限公司

法律状态：法律状态公告日：20180515;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180619;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):G05D 1/02;登记生效日:20180530变更前 申请人:江苏若博机器人科技有限公司 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼变更后 申请人:张好明 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼;?

**20、一种多传感器融合全天候中速无人车探测避障系统**

摘要：本发明属于无人驾驶技术领域，公开了一种多传感器融合全天候中速无人车探测避障系统。本发明包括控制系统和车顶激光雷达、车载单目视觉摄像头前方探测微波雷达组、后方探测微波雷达、前方激光雷达组和后方激光雷达组，控制系统包括上位机和下位机，所述下位机为由FPGA和ARM构成的双核控制器。本发明价格低廉、性价比相对较高，具有很强的实用性。

公开（公告）号：[CN108037757A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gXRq2j7Mi5N2r4kAd0KKkg&local=zh)

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申请号：CN201711231573.5

申请日：2017-11-29

申请人：江苏若博机器人科技有限公司

法律状态：法律状态公告日：20180515;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180619;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):G05D 1/02;登记生效日:20180530变更前 申请人:江苏若博机器人科技有限公司 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼变更后 申请人:张好明 ;地址:211106 江苏省南京市江宁经济技术开发区苏源大道19号九龙湖国际企业总部园C4座一楼;?

**21、一种基于DSP和多传感器融合的海面目标检测跟踪系统**

摘要：本实用新型公开了一种基于DSP和多传感器融合的海面目标检测跟踪系统，通过采用CCD和红外成像传感器进行目标的检测和跟踪；用激光测量目标距离，同时向火控系统发送精确的跟踪目标信息；以DSP+CPLD为核心的硬件平台，为图像处理和跟踪的相关、二值相融合双模式跟踪算法提供了支持，系统简单可靠，可有效地提高系统的全天时/全天候工作能力，用于搜索、观察和跟踪海面目标，可广泛应用于国家海防。

公开（公告）号：[CN207622869U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtOROsFhraEysMuWr4kAd0KKkg&local=zh)

公开（公告）日：2018-07-17

申请号：CN201721467700.7

申请日：2017-11-06

申请人：河北汉光重工有限责任公司

法律状态：法律状态公告日：20180717;?

法律状态：授权;?

描述信息：授权;?

**22、Constructing map data using laser scanned images**

摘要：Method comprising : receiving map-perspective patch images of a region near a vehicle that have been imaged by scanners on the vehicle; applying a mathematical transform operator to some of the map-perspective patch images to generate transform patch images; combining some of the transform patch images into a single patch image; constructing a map patch image using the single patch image and at least one of the map-perspective patch images. Untransformed images may be laser scanned images of a region of ground or road and may be transformed using operators including : discrete differentiation gradient, discrete Fourier, discrete wavelet, radial basis, noiselet, curvelet, Laplacian. Scanners may use LIDAR. Subset of transformed patches may be selected based on signal to noise ratio. Fused transformed patches may improve contrast or accuracy. Digital maps may comprise adjacent (eg. edge-to-edge, partially overlapping, contiguous) map patch images. Map patches may comprise map cells. Merging transformed and original patches may involve substituting cells and reverse transform operation. Vehicle may be a car, motorcycle, truck, sports utility vehicle (SUV), recreational vessel, aircraft, robot. Digital maps created may be used for localisation to enable vehicles to drive and operate autonomously. Scanner may not be calibrated.

公开（公告）号：[GB2558388A](https://www.incopat.com/detail/init2?formerQuery=3o32yfCIXpKDrKc6lwMwPw%3D%3D&local=zh)

公开（公告）日：2018-07-11

申请号：GB1718161

申请日：2017-11-02

申请人：FORD GLOBAL TECH LLC

**23、生成能够有效抑制参量不稳定的激光的方法及装置**

摘要：本发明公开了一种生成能够有效抑制激光等离子体参量不稳定的激光的方法，包括将一束光的能量分散到多束子束激光中，并使得该多束子束激光之间不相互耦合，以及使得该多束子束激光的每一束子束激光单独达不到激发参量不稳定的阈值。本发明还提供了一种生成能够有效抑制参量不稳定的激光的装置，包括子束激光产生器和子束激光合成器。通过本发明的方法和装置，能够实现对激光等离子体参量不稳定的充分抑制，同时还提供了一种实现激光惯性约束核聚变的驱动激光设计，能大幅提升激光与靶的耦合效率并减少热电子的产生。

公开（公告）号：[CN107863160A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iOwafGOtwvwmr4kAd0KKkg&local=zh)

公开（公告）日：2018-03-30

申请号：CN201711120810.0

申请日：2017-11-01

申请人：上海交通大学

法律状态：法律状态公告日：20180330;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180424;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/23;?

**24、A META-MATERIAL, DEVICES AND METHODS OF USE THEREOF**

摘要：This invention relates to a device for rapid focus control of one or more lasers. The controlled beam (5), is refracted by the dynamic refraction device (1) whose refractive index is set by its response to the control beam (3). The invention can be used for rapid focus and re-focus of a laser on a target as might be useful in such industries as flat panel television manufacturing, fuel injector nozzle manufacture, laser material processing/machining, laser scanning and indirect drive inertial confinement fusion.

公开（公告）号：[WO2018065745A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU6Ck107Jn9aYvNkPtwy7rjn&local=zh)

公开（公告）日：2018-04-12

申请号：WOGB17000146

申请日：2017-10-03

申请人：THE SECRETARY OF STATE FOR DEFENCE

法律状态：法律状态公告日：20181128;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2018065745A1Corresponding Publication Number:;17794397Corresponding Authority:;EPCorresponding Kind:;A1

**25、A meta-material, devices and methods of use thereof**

摘要：This invention relates to a device for rapid focus control of one or more lasers. The controlled beam (5), is refracted by the dynamic refraction device (1) whose refractive index is set by its response to the control beam (3). The invention can be used for rapid focus and re-focus of a laser on a target as might be useful in such industries as flat panel television manufacturing, fuel injector nozzle manufacture, laser material processing/machining, laser scanning and indirect drive inertial confinement fusion.

公开（公告）号：[GB201716050D0](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FMRkzOJnwVFCrMeYrAgyQSz&local=zh)

公开（公告）日：2017-11-15

申请号：GB1716050

申请日：2017-10-02

申请人：SECR DEFENCE

**26、一种铒镱共掺激光预制棒及其制备方法**

摘要：一种铒镱共掺激光预制棒，以高纯石英砂为基本重量份原料，配以占高纯石英砂重量5%～8%的微量元素添加剂，采用SiO2含量大于99.9999%，杂质含量低于2ppm，65～150目的高纯石英砂，其中，微量元素添加剂包括氧化铒Er2O3、氧化镱Yb2O3、硝酸锂LiNO3、硝酸铝Al(NO3)3.9H2O、硝酸镁Mg(NO3)2.6H2O、硝酸锌Zn(NO3)2.6H2O、硝酸钡Ba(NO3)2。本发明采用连熔炉拉制工艺拉制成型的铒镱共掺激光预制棒，工作波段在1.5～1.6μm，具有高输出功率、较高的能量转换率、光束质结构紧凑、转换效高的特点，大大改善激光放大性能，是实现贯性约束核聚变升级换代首选材料。

公开（公告）号：[CN107473579A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iafl0MTK3qn2r4kAd0KKkg&local=zh)

公开（公告）日：2017-12-15

申请号：CN201710919637.4

申请日：2017-09-30

申请人：徐传龙

法律状态：法律状态公告日：20171215;?

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描述信息：公开;?

法律状态公告日：20180109;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C03B 37/014;申请日:20170930;?

**27、OPTICAL SIGNAL FREQUENCY CALIBRATION METHOD AND DEVICE**

摘要：Disclosed are an optical signal frequency calibration method and device. The method comprises : receiving a first optical signal generated by a laser in a transmitter of an access node and shifted by a frequency; receiving a reference optical signal transmitted by a local oscillator; calculating a difference between a preset frequency difference and a frequency difference between the reference optical signal and the first optical signal; performing according to the difference frequency calibration on the first optical signal modulating by the calibrated first optical signal uplink data to be transmitted and transmitting the modulated uplink data to a core node. In a UDWDM converged network each of access nodes sets the optical signal transmitted by the core node as a reference and performs a frequency shift calibration on an optical signal generated by the laser in the transmitter and shifted by a frequency such that relative shifts are identical among the uplink signals transmitted by all the access nodes corresponding to the core node thereby effectively preventing the uplink signal from undergoing crosstalk between adjacent channels resulting from a data transferring process and improving transferring performance of the uplink signal.

公开（公告）号：[IN201747034561A](https://www.incopat.com/detail/init2?formerQuery=8leuOUExEImBin8G%2BP318c6vmRhU9mJS&local=zh)

公开（公告）日：2017-10-06

申请号：IN201747034561

申请日：2017-09-28

申请人：HUAWEI TECHNOLOGIES CO LTD

**28、一种PA66黑色激光印字材料及其制备方法**

摘要：本发明公开了一种PA66黑色激光印字材料及其制备方法，其配方组成为(重量百分比)：PA66树脂30％‑40％、PA6树脂15％‑25％、无碱玻璃纤维25％‑34％、阻燃剂8％‑12％、激光助剂1％‑3％、抗氧剂0.5％‑1％、润滑剂0.2％‑1％、成核剂0.2％‑1％、相容剂1％‑3％；制备方法为：将各组分材料按配方比例配制，然后倒入搅拌机搅拌，充分混合，混合后的物料经双螺杆挤出机熔融后挤出造粒，无碱玻璃纤维由挤出机中段喂料口加入，即得PA66黑色激光印字材料。所述PA66黑色激光印字材料激光打标字迹清晰、拉伸强度、弯曲强度性能好、激光印字后的外壳可通过自动影像设备(OCR)检测的要求。

公开（公告）号：[CN107459817A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gQeG%2B%2FRbNm1Wr4kAd0KKkg&local=zh)

公开（公告）日：2017-12-12

申请号：CN201710827107.7

申请日：2017-09-14

申请人：厦门金越电器有限公司

法律状态：法律状态公告日：20171212;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180105;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C08L 77/06;申请日:20170914;?

**29、METHOD FOR MANUFACTURING THREE-DIMENSIONALLY SHAPED OBJECT AND THREE-DIMENSIONALLY SHAPING DEVICE**

摘要：The present invention pertains to a method for manufacturing a three-dimensionally shaped object according to a powder bed fusion method for manufacturing a shaped object with higher accuracy than in the conventional art. The method comprises : a step of forming a thin layer of powder material containing core-shell type resin particles including core resin and shell resin with a storage modulus G' of 1 × 108.0 Pa or more at a temperature Tc(7.0) at which the storage modulus G' of the core resin becomes 1 × 107.0 Pa; a step of selectively irradiating laser light onto the formed thin layer to form a shaped object layer in which the resin particles contained in the powder material are sintered or fused; and a step of performing the step of forming the thin layer and the step of forming the shaped object layer in this order a plurality of times to laminate the shaped object layers together. In the step of forming the shaped object layer, a surface temperature of the thin layer is higher than Tc(7.0).

公开（公告）号：[WO2018087999A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU5ljTnjhAnU9PNkPtwy7rjn&local=zh)

公开（公告）日：2018-05-17

申请号：WOJP17031341

申请日：2017-08-31

申请人：KONICA MINOLTA INC

法律状态：法律状态公告日：20181128;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2018087999A1Corresponding Publication Number:;17870075Corresponding Authority:;EPCorresponding Kind:;A1

**30、一种具有多重刺激响应型药物控释功能的诊断治疗制剂及其制备方法和应用**

摘要：本发明公开了一种具有多重刺激响应型药物控释功能的诊断治疗制剂及其制备方法和应用，所制备的制剂以聚吡咯纳米粒子为核心，外部修饰环糊精‑化疗药物复合物和靶向基团，具有多重刺激响应型药物控释、光声成像、化疗和光热联合治疗的效果。该制剂同时结合了pH值、明胶酶、光热响应三种药物控释机制，提高了化疗药物对肿瘤的选择性；将成像和治疗相融合，可以实时监测制剂的体内分布，引导光热治疗时激光照射的位置、功率和时间；将化疗和光热治疗相结合，有效降低了肿瘤的复发率。该复合制剂有效增加了诊疗效率，改善药效，降低了毒副作用，具有很好的临床应用前景。

公开（公告）号：[CN107596366A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2haiDE21lIDAmr4kAd0KKkg&local=zh)

公开（公告）日：2018-01-19

申请号：CN201710713055.0

申请日：2017-08-18

申请人：中国科学院生物物理研究所; 北京大学

法律状态：法律状态公告日：20180119;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180213;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):A61K 41/00;?

法律状态公告日：20181016;?

法律状态：授权;?

描述信息：授权;?

**31、一种核壳结构的墨粉制备方法**

摘要：本发明涉及一种核壳结构的墨粉制备方法，属于激光打印/静电复印彩色粉的制备技术领域。本发明所述方法先采用物理熔融法制备色粉粒子，再采用化学反应法制备得到色粉粒子为核、苯丙树脂为壳的墨粉；所述方法融合了物理法和化学法制粉技术的各自优势，所制得的墨粉具有较好的流动性，在形态学及电学性能等方面均满足高品质激光打印/静电复印要求。

公开（公告）号：[CN107153332A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hoFmJ5Td2uHWr4kAd0KKkg&local=zh)

公开（公告）日：2017-09-12

申请号：CN201710514752.3

申请日：2017-06-29

申请人：邯郸汉光办公自动化耗材有限公司

法律状态：法律状态公告日：20170912;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20171010;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G03G 9/08;申请日:20170629;?

**32、一种定点核聚变发动机**

摘要：本发明公开了一种定点核聚变发动机，包括发动机本体和连接在发动机本体尾部的通道，所述通道的进口端连接有磁场产生装置，所述磁场产生装置包括第一套管和第二套管，所述第一套管外圆周向切线方向均布有数组内电磁铁，所述第二套管同心设置在第一套管外侧，所述第二套管外圆周向均布有与数组电磁铁对应的外电磁铁，所述内电磁铁和和外电磁铁分别连接有输入电流方向不同的外部电源。本发明所述的定点核聚变发动机，在等离子立柱内产生不同方向的磁场，然后向等离子立柱内通入高能激光束点火，具有能量不损失、核聚变终止简单方便、使用干净环保、节约能源。

公开（公告）号：[CN107131107A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ggpOnxHJ3AfWr4kAd0KKkg&local=zh)

公开（公告）日：2017-09-05

申请号：CN201710505508.0

申请日：2017-06-28

申请人：徐勤云

法律状态：法律状态公告日：20170905;?

法律状态：公开;?

描述信息：公开;?

**33、驱动聚变冲击点火的复杂形状非相干激光脉冲的产生方法及装置**

摘要：本发明涉及一种驱动聚变冲击点火的复杂形状非相干激光脉冲的产生方法及装置，该方法利用准分子激光器的增益饱和特性在自由运转的非相干光源上实现形状复杂的主脉冲输出，进而将宽度为皮秒量级的预脉冲、点火脉冲与主脉冲堆积构建出核聚变冲击点火所需的激光脉冲。本发明不需要价格昂贵的任意波形发生器和电光调制装置，直接利用了氟化氪准分子激光介质增益饱和特性进行脉冲整形，避免了光学科尔门带来的不确定性，经过放大的控制脉冲序列完全可以用作束靶物理诊断所需诊断激光脉冲的种子光，提高装置的整体利用效率。本发明对应用激光的波长、相干性和偏振性无特殊要求，对于高功率激光脉冲整形具有更好的普适性。

公开（公告）号：[CN107086431A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2g47yfhJcZhcWr4kAd0KKkg&local=zh)

公开（公告）日：2017-08-22

申请号：CN201710440512.3

申请日：2017-06-12

申请人：中国原子能科学研究院

法律状态：法律状态公告日：20170822;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170915;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01S 3/225;申请日:20170612;?

**34、METHOD OF TREATING METASTATIC CANCER USING SENDAI VIRUS**

摘要：FIELD : medicine.SUBSTANCE : invention relates to medicine, namely to oncology, and can be used to treat metastatic cancer in patients. For this purpose, percentage of T-cytotoxic lymphocytes of the peripheral blood CD8 subpopulation with receptors of programmed cell death (PD-1) in relation to the total number of lymphocytes of this subpopulation (the content of PD-1-positive T-lymphocytes). Therapy is three-staged. At the first stage, a complex procedure is carried out, including the impact on the patient' s skin surface by pulsed-periodic laser radiation and subsequent administration to the zone of said effect of the composition containing the Sendai virus, or the introduction of recombinant human HSP70 (Preparation-1 HSP70). In the second stage, these complex procedures are reassigned and additional fusion protein is introduced based on rchHSP70 and Fc fragment of human immunoglobulin G (Preparation-2 HSP70). In the third stage, depending on the size of the tumor, the metabolic activity of the tumor tissue, the content of PD-1-positive T-lymphocytes, the patient is additionally assigned a positron-emitting radionuclide conjugated to a tumor-specific substance.EFFECT : invention provides treatment of metastatic cancer in a patient.23 cl, 22 tbl, 8 ex

公开（公告）号：[RU2662916C1](https://www.incopat.com/detail/init2?formerQuery=TCyK%2FJgUpkT2hG4lnKiUzPR0OjOTHMZL&local=zh)

公开（公告）日：2018-07-31

申请号：RU2017119461

申请日：2017-06-05

申请人：Obshchestvo s ogranichennoj otvetstvennostyu "Alternativnye Innovatsionnye Tekhnologii"

**35、反射式共焦CARS显微光谱测试方法及装置**

摘要：本发明属于显微光谱成像探测技术领域，涉及一种反射式共焦CARS显微光谱测试方法及装置。本发明的核心思想是融合激光共焦显微技术与CARS光谱探测技术，采用二向分光系统对瑞利光和CARS光进行无损分离，其中CARS光进行光谱探测，瑞利光进行几何定位。本发明利用共焦曲线顶点与焦点位置精确对应这一特性，精确捕获和定位激发光斑焦点位置，实现高精度的几何探测和高空间分辨的光谱探测，构成一种可实现样品微区高空间分辨光谱探测的方法和装置。通过结合CARS显微技术，激发出的载有样品信息的拉曼散射光要远强于传统自发拉曼光，且激发时间短，为快速检测生物样品和化学材料提供可能。本发明具有定位准确、高空间分辨、光谱探测灵敏度高和测量聚焦光斑尺寸可控等优点，在生物医学，材料检测等领域有广泛的应用前景。

公开（公告）号：[CN106990095A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gbrh6mLgQ2Zmr4kAd0KKkg&local=zh)

公开（公告）日：2017-07-28

申请号：CN201710366677.0

申请日：2017-05-23

申请人：北京理工大学

法律状态：法律状态公告日：20170728;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170822;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/65;申请日:20170523;?

**36、透射式共焦CARS显微光谱测试方法及装置**

摘要：本发明属于显微光谱成像探测技术领域，涉及一种透射式共焦CARS显微光谱测试方法及装置。本发明的核心思想是融合激光共焦显微技术与CARS光谱探测技术，在透射式共焦显微结构中添加二向分光单元对瑞利光和CARS光进行无损分离，其中CARS光进行光谱探测，瑞利光进行几何定位。本发明利用共焦曲线顶点与焦点位置精确对应这一特性，精确捕获和定位激发光斑焦点位置，实现高精度的几何探测和高空间分辨的光谱探测，构成一种可实现样品微区高空间分辨光谱探测的方法和装置。通过结合CARS显微技术，激发出的载有透明样品信息的拉曼散射光要远强于传统激发拉曼光，且激发时间短，为快速检测生物样品和透明材料提供可能。本发明定位准确、空间分辨力高、光谱探测灵敏度高、测量聚焦光斑尺寸可控，在生物医学，透明材料检测等领域有广泛的应用前景。

公开（公告）号：[CN107167457A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2haILshmb27c2r4kAd0KKkg&local=zh)

公开（公告）日：2017-09-15

申请号：CN201710366729.4

申请日：2017-05-23

申请人：北京理工大学

法律状态：法律状态公告日：20170915;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20171017;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/63;申请日:20170523;?

**37、分光瞳激光共焦CARS显微光谱测试方法及装置**

摘要：本发明属于显微光谱成像探测技术领域，涉及一种分光瞳激光共焦CARS显微光谱测试方法及装置。本发明的核心思想是融合分光瞳激光共焦显微技术与CARS光谱探测技术，采用二向分光系统对瑞利光和CARS光进行无损分离，其中CARS光进行光谱探测，瑞利光进行几何定位。本发明利用分光瞳激光共焦曲线顶点与焦点位置精确对应这一特性，精确捕获和定位激发光斑焦点位置，实现高精度的几何探测和高空间分辨的光谱探测，构成一种可实现样品微区高空间分辨光谱探测的方法和装置。通过结合CARS显微技术，激发出的载有样品信息的拉曼散射光要远强于传统自发拉曼光，且激发时间短，为快速检测生物样品和化学材料提供可能。本发明具有定位准确、高空间分辨、光谱探测灵敏度高和测量聚焦光斑尺寸可控等优点，在生物医学，材料检测等领域有广泛的应用前景。

公开（公告）号：[CN107192702A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gcsHxt8GF2xmr4kAd0KKkg&local=zh)

公开（公告）日：2017-09-22

申请号：CN201710366654.X

申请日：2017-05-23

申请人：北京理工大学

法律状态：法律状态公告日：20170922;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20171024;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/65;申请日:20170523;?

**38、Laser-fusion device**

摘要：[Problem] to provide a fusion device. The gas given nuclear fusion, deuterium fuel by changing the atomic valence of the orbit is drawn closer together two atoms of atomic nucleus attractive A B coupling, said fusion state occurs. [Solution] the temperature achieved by the laser beam. The heat from the outside to change the valence electron orbital. The electronic nature of the heat. The energy beam is created by a human, naturally does not exist in the object. In the entity is an electron beam. The laser light is not so dispersed. Each of the rays being stronger than the attractive force acting on the electrons. The solar corona 500 million degrees temperature, this temperature is found to be in the beam can be made. Also, the temperature of the sun (temperature) × (instantaneous time) × (0.1 seconds) (400W) corona, (1 s) × (40W) from equal, by laser fusion has no realization of the dream. Figure 1 [drawing]

公开（公告）号：[JP2018189624A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXacJg9b5U47bmGuxfaWZrjp&local=zh)

公开（公告）日：2018-11-29

申请号：JP2017119959

申请日：2017-05-11

申请人：加納 義久

**39、智能驾驶中激光雷达点云数据与车辆信息融合的方法**

摘要：本发明提供智能驾驶中激光雷达点云数据与车辆信息融合的方法，首先将采集到的雷达点云数据转化成二维图像数据，通过定义参考帧索引图像，结合航向角，对参考帧索引图像与当前图像进行配准，并进行热核扩散处理，减少配准误差并去掉雷达数据中不稳定的噪点，最后根据处理后的参考帧索引图像还原生成二值化的雷达点云数据图像。本发明能够有效去除车辆在运行的过程中，激光雷达点云中包含的地面、尘埃等信息对自动驾驶的障碍物判断造成的影响。

公开（公告）号：[CN107194957A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gscxAC80OUb2r4kAd0KKkg&local=zh)

公开（公告）日：2017-09-22

申请号：CN201710248914.3

申请日：2017-04-17

申请人：武汉光庭科技有限公司

法律状态：法律状态公告日：20170922;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20171024;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G06T 7/32;申请日:20170417;?

**40、激光热喷涂制备非晶铝涂层的快速冷却装置**

摘要：本发明涉及非晶喷涂技术领域，尤其涉及一种激光热喷涂制备非晶铝涂层的快速冷却装置, 本发明的激光热喷涂制备非晶铝涂层的快速冷却装置，可以避免激光焊接、熔覆等过程中出现的变形、过烧等问题；极高的冷却速度(105K/s～106K/s)还可以有效地抑制液态金属在冷却过程中的形核和长大，从而得到非晶态固体；可以实时监测冷却温度，实现即时控制；冷却过程安全可靠无污染。

公开（公告）号：[CN107116304A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2h9D8yD8pdEaWr4kAd0KKkg&local=zh)

公开（公告）日：2017-09-01

申请号：CN201710241710.7

申请日：2017-04-14

申请人：常州大学

法律状态：法律状态公告日：20170901;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170929;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23K 26/34;申请日:20170414;?

法律状态公告日：20180717;?

法律状态：授权;?

描述信息：授权;?

**41、一个携带有NtRBSC1基因的瞬时表达载体**

摘要：本发明属于生物技术领域，具体涉及一个携带有烟草核酮糖‑1, 5‑二磷酸羧化酶的小亚基基因的重组瞬时表达载体。本发明利用烟草NtRBSC1基因构建了一个瞬时表达载体NtRBSC1‑pFF19‑GFP，该载体转化烟草细胞后，可使荧光标记基因GFP与NtRBSC1的融合蛋白能够在烟草原生质体，进而通过激光共聚焦显微镜检测融合蛋白的位置而对NtRBSC1蛋白进行亚细胞定位，并对叶绿体的位置进行显示。总体而言，这种方式是一种简便而又准确的在活细胞中进行定位的方法，可为研究烟草细胞叶绿体及相关基因提供确切参考依据，便于烟草NtRBSC1基因的进一步研究及其功能的深入开发。

公开（公告）号：[CN107058373A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jWd8r7L7CT%2B2r4kAd0KKkg&local=zh)

公开（公告）日：2017-08-18

申请号：CN201710223178.6

申请日：2017-04-07

申请人：中国烟草总公司郑州烟草研究院

法律状态：法律状态公告日：20170818;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170912;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C12N 15/82;申请日:20170407;?

**42、Laser welding apparatus**

摘要：The present invention relates to a jig detachable laser welding device. According to an embodiment of the present invention, the jig detachable laser welding device comprises a base (10), a laser irradiating unit (20), a rotating table (30), a fluid supplying unit (40), first to fourth clamp modules (51-54), first to fourth low detachable jigs (61-64), an up detachable jig (70), and a clamp module elevating unit (80). The jig detachable laser welding device of the present invention can automatically discharge a welding object having a poor welding state.COPYRIGHT KIPO 2018

公开（公告）号：[KR101890529B1](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczsgTQ2yq61Z3xl3Z10vNpVJ&local=zh)

公开（公告）日：2018-10-01

申请号：KR1020170043821

申请日：2017-04-04

申请人：EUROVISION LASER CO LTD

法律状态：法律状态公告日：20180814;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101890529B1

**43、强激光焦斑均匀性在线监测方法**

摘要：本发明属于强激光领域。为解决现有惯性约束核聚变“点火”用大型激光系统尚无焦斑均匀性在线监测方法可用的问题，本发明提供了一种强激光焦斑均匀性在线监测方法。该方法包括以下步骤：一、设置楔形分束镜；二、设置监测光学系统；三、分离监测光路；四、设置CCD图像传感器与数据处理系统；五、设置第一衰减片并粗调监测光路；六、精调监测光路；七、改用第二衰减片；八、进行在线监测。本发明的在线监测方法能够较好实现惯性约束核聚变“点火”用大型激光系统的焦斑均匀性在线监测，实际应用表明其监测结果准确可靠，为惯性约束核聚变“点火”用大型激光系统各关键技术的研究提供了可靠保障。

公开（公告）号：[CN106872144A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2j%2B5ySDHWJjHGr4kAd0KKkg&local=zh)

公开（公告）日：2017-06-20

申请号：CN201710007396.6

申请日：2017-01-05

申请人：中国原子能科学研究院

法律状态：法律状态公告日：20170620;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170714;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01M 11/02;申请日:20170105;?

**44、一种双目三维重构方法及系统**

摘要：本发明一种双目三维重构方法及系统，使用两个相机采集转台上的人或物体被线红外光照射的部分，同时转动转台一周得到被扫描对象的三维点云数据并重构出其三维曲面模型，然后驱动3D打印机打印得到被测对象的三维模型；核心思路是通过线激光器矫正待测对象在转盘上的位置，使其处于转轴中心；工控机连接两个相机采集被测对象被线红外光照射的部分，同时控制转台匀速转动一周；对采集到的图像进行红外线中心提取并生成点云数据；双目点云数据融合与去噪；根据融合后的点云数据进行曲面重建；打印出被测对象的三维模型；本发明能够实现对人或物体的三维重构及其三维模型的打印，快速稳定、精度高，能够满足快速获取被测对象三维模型的应用需求。

公开（公告）号：[CN106780725A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hiZZtRkr5oE2r4kAd0KKkg&local=zh)

公开（公告）日：2017-05-31

申请号：CN201611208473.6

申请日：2016-12-23

申请人：西安交通大学

法律状态：法律状态公告日：20170531;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170623;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G06T 17/00;申请日:20161223;?

法律状态公告日：20180706;?

法律状态：授权;?

描述信息：授权;?

**45、DOWNHOLE NEUTRON GENERATORS AND METHODS TO GENERATE NEUTRONS IN A DOWNHOLE ENVIRONMENT**

摘要：The disclosed embodiments include downhole neutron generators and methods to utilize downhole neutron generators in a downhole environment. In one embodiment, a downhole neutron generator includes a heating element to dissipate heat to a first transition metal, which heats up the first transition metal and facilitates the first transition metal to absorb deuterium and tritium gases flowing proximate said transition metal. The downhole neutron generator also includes a second transition metal separated from the target foil, where the second transition metal is doped with of deuterium and the tritium ions, and a laser to direct optical pulses onto a surface of the first transition metal to produce deuterium and the tritium ions from the absorbed deuterium and tritium, where said ions traverse through a back surface of the first transition metal to the second transition metal to interact with the doped deuterium and the tritium ions to initiate fusion reaction.

公开（公告）号：[US20180329109A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGK2mF%2FTfWCHsO9V9sT8HBf&local=zh)

公开（公告）日：2018-11-15

申请号：US15566184

申请日：2016-12-21

申请人：Halliburton Energy Services Inc

法律状态：法律状态公告日：20171012;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2018329109A1New Owner:;HALLIBURTON ENERGY SERVICES, INC., TEXASFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:NAVARRO SORROCHE, JUAN;GUO, WEIJUN;SIGNING DATES FROM 20170104 TO 20170414;REEL/FRAME:043855/0017

**46、DOWNHOLE NEUTRON GENERATORS AND METHODS TO GENERATE NEUTRONS IN A DOWNHOLE ENVIRONMENT**

摘要：The disclosed embodiments include downhole neutron generators and methods to utilize downhole neutron generators in a downhole environment. In one embodiment, a downhole neutron generator includes a heating element to dissipate heat to a first transition metal, which heats up the first transition metal and facilitates the first transition metal to absorb deuterium and tritium gases flowing proximate said transition metal. The downhole neutron generator also includes a second transition metal separated from the target foil, where the second transition metal is doped with of deuterium and the tritium ions, and a laser to direct optical pulses onto a surface of the first transition metal to produce deuterium and the tritium ions from the absorbed deuterium and tritium, where said ions traverse through a back surface of the first transition metal to the second transition metal to interact with the doped deuterium and the tritium ions to initiate fusion reaction.

公开（公告）号：[WO2018118053A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU7Mt86oDOVl9PNkPtwy7rjn&local=zh)

公开（公告）日：2018-06-28

申请号：WOUS16068104

申请日：2016-12-21

申请人：HALLIBURTON ENERGY SERVICES INC

法律状态：法律状态公告日：20171012;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2018118053A1Corresponding Publication Number:;15566184Corresponding Authority:;US法律状态公告日：20181205;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2018118053A1Corresponding Publication Number:;16924262Corresponding Authority:;EPCorresponding Kind:;A1

**47、冷核聚变空天攻击型飞船**

摘要：本发明涉及一种冷核聚变空天攻击型飞船，包括：采用钨钢作为外壳、外罩纳米碳纤维的本体；在所述本体的尾部安置采用能变轨的矢量发动机；在所述的矢量发动机前是冷核聚变箱；在所述的冷核聚变箱前是储电箱；在所述的储电箱前是电脑控制室；在所述的矢量发动机的两侧是尾翼；在所述本体的一侧安置两个螺旋桨；在所述本体的另一侧安置两个真空用喷口；在所述的本体上还安置一北斗导航系统；在所述本体的前部安置三管激光炮；在所述的本体中部安置导弹；本发明的有益效果是：能在未来的战争中取得制空权。

公开（公告）号：[CN108216620A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ijvt3IlZdWOmr4kAd0KKkg&local=zh)

公开（公告）日：2018-06-29

申请号：CN201611160484.1

申请日：2016-12-15

申请人：华东师范大学附属枫泾中学

法律状态：法律状态公告日：20180629;?

法律状态：公开;?

描述信息：公开;?

**48、METHOD OF DELIVERYING CRYOGENIC FUEL TARGETS FOR LASER THERMONUCLEAR SYNTHESIS**

摘要：FIELD : physics.SUBSTANCE : in the claimed method, each of the cryogenic fuel targets is placed in the carrier, and the carrier is advanced along the transport channel to the controlled inertial fusion synthesis zone. The carrier is made using a superconducting material, and a magnetic field is formed in the transport channel to allow the carrier to levitate above the surface of the transport channel.EFFECT : non-contact delivery of cryogenic fuel targets to the chamber without the risk of stopping the carrier, damage to the KTM from heating, risk of contamination of the reactor chamber atmosphere by the moving gas.7 cl, 6 dwg

公开（公告）号：[RU2635660C1](https://www.incopat.com/detail/init2?formerQuery=TCyK%2FJgUpkT4utKgHs5s6PR0OjOTHMZL&local=zh)

公开（公告）日：2017-11-15

申请号：RU2016147992

申请日：2016-12-07

申请人：Federalnoe gosudarstvennoe byudzhetnoe uchrezhdenie nauki Fizicheskij institut im P N Lebedeva Rossijskoj akademii nauk (FGBUN FIAN) (RU)

**49、伽码激光或伽码射线实现可控核聚变的方法与装置**

摘要：伽码激光或伽码射线实现可控核聚变的方法与装置，属核能源领域。其装置由伽码激光或伽码射线发生器、中子束或正离子束、由聚变材料制作的靶球、约束靶球等离子体的磁约束装置或激光惯性约束装置构成。伽码光子能量等于将靶核激发到较长寿命激发态的能量，伽码激光或伽码射线对称地辐照靶球，吸收伽码光子的靶核处于激发态。以普通激光或激光尾波将靶球等离子体加温到聚变温度，使中子束或正离子束入射靶球等离子体。处于激发态的靶核与中子或正离子聚变温度显著低于处于基态的靶核与中子或正离子聚变温度，从而劳逊判据容易实现，聚变反应能够发生。

公开（公告）号：[CN108154938A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jDL%2BrT2s3qYmr4kAd0KKkg&local=zh)

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申请号：CN201611144464.5

申请日：2016-12-06

申请人：姜云鹏

法律状态：法律状态公告日：20180612;?

法律状态：公开;?

描述信息：公开;?

**50、The powder material, method for producing three-dimensional and three-dimensional device**

摘要：The purpose of the present invention is to provide powder material containing particles made of resin for a powder bed fusion bonding method by which a more precise three-dimensional shaped object can be manufactured. The present invention pertains to powder material used to manufacture a three-dimensional shaped object obtained by selectively irradiating laser light onto a thin layer of the powder material containing particles to form a shaped object layer in which the particles are melted and coupled together, and laminating the shaped object layer. The particles contain coating particles having core resin and shell resin coating the core resin, a glass transition temperature (Tgs) of material constituting the shell resin is higher than a temperature (Tmc) at which material constituting the core resin is melted, and the material constituting the shell resin is material melted and thermally decomposed by heating resulting from the irradiation of the laser light.

公开（公告）号：[JPWO2017119218A1](https://www.incopat.com/detail/init2?formerQuery=IYqAVwX%2BZwbOJi0pM4eTDrussdTJQa1t&local=zh)

公开（公告）日：2018-10-25

申请号：WOJP16085467

申请日：2016-11-30

申请人：コニカミノルタ株式会社

法律状态：法律状态公告日：20170913;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2017119218A1Corresponding Publication Number:;16883718Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20180418;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2017119218A1Corresponding Publication Number:;2017560058Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20180706;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2017119218A1Designated State Authority:;DE

**51、HIGH POWER TW/PW LASER IRRADIATION**

摘要：The present invention refers to the method used to form diamond nano-sized structures on certain substrates made from interest materials for nuclear fusion using lasers in impulses. The present invention uses short laser beams (fs, ps) produced with a repetition rate of 1- 10 Hz, and wavelength from around 750 nm until around 850 nm, the most frequent at a frequency of 800 nm in vacuum or gaseous atmosphere (air or deuterium).The mixed films containing Be, C, W were obtained using the thermionic vacuum arc method (TVA). These films have thicknesses of 0.1 - 10 μm and interact directly with single or multiple laser beams as well as with the plasma produced by indirect laser beam irradiation in ambient gases as air or deuterium. The laser pulses produce diamond or fullerene nanostructures on the irradiated mixed materials surface.By this method, the irradiated material is processed in a non-thermal mechanism. Multiphotonic interactions and collision ionizations combination creates plasmas in the impact areas of shorter term than the kinetic electron energy that can be transferred in the material. The produced plasma is not in thermal equilibrium, the irradiated material being changed from initial solid state in totally ionized plasma in such a short time that the thermal equilibrium can not be reached. As a result, a negligible thermal transfer to the layers outside the interaction area occurs. The transition of this non-thermal regime to the thermal regime depends on the irradiated material and it is in the range 1 to 20 ps. Due to the fact that the unexposed area heating is negligible, the adjacent material composition is substantially unaffected by the irradiation process proposed in the present invention.

公开（公告）号：[EP3301682A1](https://www.incopat.com/detail/init2?formerQuery=3Tnqcr%2BXs10FPSbOebnxm%2FR0OjOTHMZL&local=zh)

公开（公告）日：2018-04-04

申请号：EP16464009

申请日：2016-10-14

申请人：National Institute for Laser Plasma and Radiation Physics

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状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 3301682A1Effective Date:;20161028法律状态公告日：20180404;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 3301682A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180404;?

状态效果：+;?

状态代码：AV;?

法律状态：REQUEST FOR VALIDATION OF THE EUROPEAN PATENT IN:描述信息：Docdb Publication Number:; EP 3301682A1Countries Concerned:;MA;MD;法律状态公告日：20180404;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 3301682A1Countries Concerned:;BA;ME;

**52、A dynamic refraction device**

摘要：This invention relates to a device for rapid focus control of one or more lasers. The controlled beam (5), is refracted by the dynamic refraction device (1) whose refractive index is set by its response to the control beam (3). The invention can be used for rapid focus and re-focus of a laser on a target as might be useful in such industries as flat panel television manufacturing, fuel injector nozzle manufacture, laser material processing/machining, laser scanning and indirect drive inertial confinement fusion.

公开（公告）号：[GB201616757D0](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FOtuEK5Aer2mLMeYrAgyQSz&local=zh)

公开（公告）日：2016-11-16

申请号：GB1616757

申请日：2016-10-03

申请人：SECRETARY OF STATE FOR DEFENCE THE

法律状态：法律状态公告日：20171108;?

状态效果：-;?

状态代码：AT;?

法律状态：APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 201616757D0

**53、TW/PW-CLASS POWER LASER IRRADIATION**

摘要：The invention relates to a method for producing nanometric layers with content of diamond or fullerene nanoparticles, by irradiation with ultrashort pulses within the range of picoseconds and femtoseconds, generated by high power lasers (terawatt - TW or petawatt - PW) and, in particular, to a process of forming diamond/fullerene structures on layers of interest for the nuclear fusion, namely C, Be and W layers. According to the invention, the method of modifying a layer deposited on a graphite sublayer consists in producing, by the thermionic vacuum arc method, a C and W bi-layer with the W layer thickness ranging between 2000...2500 nm and that of the C layer ranging between 180...200 nm, deposited on a parallelepipedal graphite sublayer, guiding some laser beams of short duration 100...300 ps in mono-pulse or multi-pulse, with peak power within the range 10...10watt, with pulse energies in the range of micro-Joule to milli-Joule, by means of a lens, in a focal point having the size of 20 x 2 mm, in order to form, by multi-photon absorption, diamond nanocrystals embedded in an amorphous C matrix. As claimed by the invention, the method of modifying a film deposited on a Si sublayer consists in producing, by the thermionic vacuum arc method, a C, Be and W mixed film on Si sublayer, guiding some laser beams of short duration 100 fs...360 ps in mono-pulse or multi-pulse with peak power within the range of 10...10watt, with pulse energies in the range of micro-Joule to milli-Joule, by means of a condensing lens, in a focal point of a plasma, at the normal pressure of the environment or deuterium at the pressure of 20 mbar, in order to produce structures with content of fullerene, beryllium oxide and/or wolfram oxide.

公开（公告）号：[RO131730A0](https://www.incopat.com/detail/init2?formerQuery=Ku5ix0FKqvtEScnpxh%2BBbA%3D%3D&local=zh)

公开（公告）日：2017-03-30

申请号：RO201600698

申请日：2016-10-03

申请人：INST NAŢIONAL PENTRU FIZICA LASERILOR PLASMEI ŞI RADIAŢIEI INFLPR

**54、MAGNETOCOMPRESSION-ASSISTED FUSION**

摘要：A method for facilitating fusion by magnetocompression of hydrogen isotopes. A magnetic field of at least 105 T is exposed to fuel including hydrogen isotopes. After exposure to the magnetic field, the fuel is energized by a laser, ionizing the hydrogen and converting the fuel to plasma. The magnetic field compresses internuclear separation of H2+. The magnetic field also compresses the electron radius of hydrogen atoms, resulting in increased electron binding energy. Each of these changes accompanying magnetocompression facilitates fusion of the nuclei following laser excitation. A solenoid for enhancing magnetic fields is also described. The solenoid includes conduction member defining a cavity therein. The conduction member is a highly conductive material, which may include a composite of a semiconductor and a conductor. The solenoid may be applied to hold the fuel or in any application to concentrate the magnetic field in a small volume.

公开（公告）号：[CA2999344A1](https://www.incopat.com/detail/init2?formerQuery=bfqTGHSWJCDIsZNdCgIB%2FfR0OjOTHMZL&local=zh)

公开（公告）日：2017-03-30

申请号：CA2999344

申请日：2016-09-22

申请人：1994680 ALBERTA LTD

**55、MAGNETOCOMPRESSION-ASSISTED FUSION**

摘要：A method for facilitating fusion by magnetocompression of hydrogen isotopes. A magnetic field of at least 105 T is exposed to fuel including hydrogen isotopes. After exposure to the magnetic field, the fuel is energized by a laser, ionizing the hydrogen and converting the fuel to plasma. The magnetic field compresses internuclear separation of H2+. The magnetic field also compresses the electron radius of hydrogen atoms, resulting in increased electron binding energy. Each of these changes accompanying magnetocompression facilitates fusion of the nuclei following laser excitation. A solenoid for enhancing magnetic fields is also described. The solenoid includes conduction member defining a cavity therein. The conduction member is a highly conductive material, which may include a composite of a semiconductor and a conductor. The solenoid may be applied to hold the fuel or in any application to concentrate the magnetic field in a small volume.

公开（公告）号：[EP3353791A1](https://www.incopat.com/detail/init2?formerQuery=3Tnqcr%2BXs122yv%2B2BbWBVfR0OjOTHMZL&local=zh)

公开（公告）日：2018-08-01

申请号：EP16847693

申请日：2016-09-22

申请人：1994680 Alberta Ltd

法律状态：法律状态公告日：20180801;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 3353791A1Effective Date:;20180419法律状态公告日：20180801;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 3353791A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180801;?

状态效果：+;?

状态代码：AV;?

法律状态：REQUEST FOR VALIDATION OF THE EUROPEAN PATENT IN:描述信息：Docdb Publication Number:; EP 3353791A1Countries Concerned:;MA;MD;法律状态公告日：20180801;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 3353791A1Countries Concerned:;BA;ME;

**56、MAGNETOCOMPRESSION-ASSISTED FUSION**

摘要：A method for facilitating fusion by magnetocompression of hydrogen isotopes. A magnetic field of at least 105 T is exposed to fuel including hydrogen isotopes. After exposure to the magnetic field, the fuel is energized by a laser, ionizing the hydrogen and converting the fuel to plasma. The magnetic field compresses internuclear separation of H2+. The magnetic field also compresses the electron radius of hydrogen atoms, resulting in increased electron binding energy. Each of these changes accompanying magnetocompression facilitates fusion of the nuclei following laser excitation. A solenoid for enhancing magnetic fields is also described. The solenoid includes conduction member defining a cavity therein. The conduction member is a highly conductive material, which may include a composite of a semiconductor and a conductor. The solenoid may be applied to hold the fuel or in any application to concentrate the magnetic field in a small volume.

公开（公告）号：[US20180268945A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rG4vq%2BDtB7iLvzBKltBUygi&local=zh)

公开（公告）日：2018-09-20

申请号：US15761953

申请日：2016-09-22

申请人：1994680 ALBERTA LTD

**57、MAGNETOCOMPRESSION-ASSISTED FUSION**

摘要：A method for facilitating fusion by magnetocompression of hydrogen isotopes. A magnetic field of at least 105 T is exposed to fuel including hydrogen isotopes. After exposure to the magnetic field, the fuel is energized by a laser, ionizing the hydrogen and converting the fuel to plasma. The magnetic field compresses internuclear separation of H2+. The magnetic field also compresses the electron radius of hydrogen atoms, resulting in increased electron binding energy. Each of these changes accompanying magnetocompression facilitates fusion of the nuclei following laser excitation. A solenoid for enhancing magnetic fields is also described. The solenoid includes conduction member defining a cavity therein. The conduction member is a highly conductive material, which may include a composite of a semiconductor and a conductor. The solenoid may be applied to hold the fuel or in any application to concentrate the magnetic field in a small volume.

公开（公告）号：[WO2017049406A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU77ED%2BRpuhn%2FvNkPtwy7rjn&local=zh)

公开（公告）日：2017-03-30

申请号：WOCA16051116

申请日：2016-09-22

申请人：1994680 ALBERTA LTD

法律状态：法律状态公告日：20170517;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2017049406A1Corresponding Publication Number:;16847693Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20180321;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2017049406A1Corresponding Publication Number:;2999344Corresponding Authority:;CA法律状态公告日：20180321;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2017049406A1Corresponding Publication Number:;15761953Corresponding Authority:;US法律状态公告日：20180323;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2017049406A1Designated State Authority:;DE法律状态公告日：20180423;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2017049406A1Corresponding Publication Number:;2016847693Corresponding Authority:;EP

**58、用于产生STUD脉冲的光纤环时间透镜系统**

摘要：一种用于产生STUD脉冲的光纤环时间透镜系统，采用单模连续光激光器作为光源，特点在于还包括第一光电开关，任意波发生器、第二光电开光、掺镱光纤放大器、带通滤波器、第三光电开关、相位调制器和光栅对；本发明系统结构简洁，不仅可以直接由一个光电开关产生脉宽较短的高重频超高斯脉冲，而且可以将经过光纤环的光脉冲的光谱进行展宽，还可以通过光栅对将光谱展宽后的激光脉冲进行压缩，产生带有陡峭上升沿或下降沿的超短激光超高斯脉冲(STUD脉冲)，且光谱的宽度、脉冲的宽度和脉冲上升沿都任意可调。STUD脉冲可被用于抑制激光驱动惯性约束核聚变过程中参量不稳定性，具有技术新颖、结构简洁(全光纤)等特点。

公开（公告）号：[CN106229797A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2g0bbkUvL5exWr4kAd0KKkg&local=zh)

公开（公告）日：2016-12-14

申请号：CN201610781421.1

申请日：2016-08-31

申请人：上海交通大学

法律状态：法律状态公告日：20161214;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170111;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01S 3/00;申请日:20160831;?

法律状态公告日：20181225;?

法律状态：授权;?

描述信息：授权;?

**59、NUCLEAR FUSION REACTOR USING ION LASER AND DEUTERIUM**

摘要：PROBLEM TO BE SOLVED : To provide a practicable nuclear fusion reactor for the first time in the world.SOLUTION : A nuclear fusion reactor is operated by applying ion laser from just above to deuterium entering a semi-circular focus point from a pin hole.SELECTED DRAWING : Figure 1COPYRIGHT : (C)2018, JPO&INPIT

公开（公告）号：[JP2018028525A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXbDZsVJoPqG1WGuxfaWZrjp&local=zh)

公开（公告）日：2018-02-22

申请号：JP2016188821

申请日：2016-08-15

申请人：ONO NOBUYUKI

法律状态：法律状态公告日：20180515;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2018028525A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20180515

**60、Processing device**

摘要：PROBLEM TO BE SOLVED : To provide a processing device of high output.SOLUTION : The processing device comprises : a laser device including a single mode optical fiber laser that outputs laser light of a basis mode, and a process optical fiber that is a multimode optical fiber propagating and outputting the laser light outputted from the single mode optical fiber laser; and a spatial optical system that guides the laser light outputted from the laser device to a processing target. An output-side single mode optical fiber that is positioned on an output-side final stage of the single mode optical fiber laser and the process optical fiber are fused and connected in such a manner that center axes of cores are matched with each other. In an output-side end portion of the process optical fiber, an optical connector is provided and directly connected to the spatial optical space.SELECTED DRAWING : Figure 6COPYRIGHT : (C)2017, JPO&INPIT

公开（公告）号：[JP2016201558A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaPwCDTW7JPBmGuxfaWZrjp&local=zh)

公开（公告）日：2016-12-01

申请号：JP2016136342

申请日：2016-07-08

申请人：FURUKAWA ELECTRIC CO LTD : THE

法律状态：法律状态公告日：20170413;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2016201558A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20170413法律状态公告日：20170425;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2016201558A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20170425法律状态公告日：20170815;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2016201558A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20170815

**61、一种具有功率放大能力的电感器**

摘要：本发明公开了一种具有功率放大能力的电感器，其技术特征在于，包括有铁芯、线圈与集磁装置。本发明的优点：1、揭示了电感器存在输出功率大于输入功率的超自然现象，破解了关于输出大于输入的公知问题；2、提高了人们重新认知自然和勇于改造自然的能力；3、不仅会导致电感器自身的技术进步，促进通信工程、互联网、机器人等新技术、新产业、新业态的可持续性发展；4、可在工业电子领域，在离子体物理、受控核聚变、电磁推进、重复脉冲的大功率激光器、高功率雷达、强流带电粒子束的产生及强脉冲电磁辐射等领域发挥极为重要的应用；5、可开发出具有“输出功率大于输入功率”特性的变功器、变压器并广泛应用于通信、机电、电力、能源等领域。

公开（公告）号：[CN107564668A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gowFxcvnePAGr4kAd0KKkg&local=zh)

公开（公告）日：2018-01-09

申请号：CN201610532089.5

申请日：2016-06-30

申请人：李扬远

法律状态：法律状态公告日：20180109;?

法律状态：公开;?

描述信息：公开;?

**62、一种具有功率放大能力的储能电感器**

摘要：本发明公开了一种具有功率放大能力的储能电感器，其技术特征在于，包括有铁芯、线圈与集磁装置。本发明的优点：1、揭示了电感器存在输出功率大于输入功率的超自然现象，破解了关于输出大于输入的公知问题；2、提高了人们重新认知自然和勇于改造自然的能力；3、可在工业电子领域，在离子体物理、受控核聚变、电磁推进、重复脉冲的大功率激光器、高功率雷达、强流带电粒子束的产生及强脉冲电磁辐射等领域发挥极为重要的应用。

公开（公告）号：[CN107564669A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jCBd81GBOQK2r4kAd0KKkg&local=zh)

公开（公告）日：2018-01-09

申请号：CN201610532100.8

申请日：2016-06-30

申请人：李扬远

法律状态：法律状态公告日：20180109;?

法律状态：公开;?

描述信息：公开;?

**63、一种机载激光雷达数据植被提取方法**

摘要：本发明提出一种机载激光雷达数据植被提取方法，该方法包括以下步骤：(一)机载激光雷达点云的预处理；(二)机载激光雷达点云的预分割；(三)分割单元特征选取；(四)基于核函数的软间隔SVM分类；(五)基于先验知识的数据植被粗分类结果的优化。本发明的优点：1)该方法不需要融合多光谱影像、高光谱影像等其他数据源，具有很强的普适性。2)该方法保证了激光雷达点云空间自相关性，有效防止分类算法破坏这种空间属性，保证植被和非植被点的可分性，提高了植被的探测率。3)该算法可以有效地将建筑周边及立体墙面点、建筑屋顶不规则物体点和植被密集区域的地面点与植被分离，达到精确提取城区中植被的目的。

公开（公告）号：[CN106199557A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jLwC4g9625nGr4kAd0KKkg&local=zh)

公开（公告）日：2016-12-07

申请号：CN201610483426.6

申请日：2016-06-24

申请人：南京林业大学

法律状态：法律状态公告日：20161207;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170104;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01S 7/48;申请日:20160624;?

法律状态公告日：20180710;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20181211;?

法律状态：专利实施许可合同备案的生效、变更及注销;?

描述信息：专利实施许可合同备案的生效IPC(主分类):G01S 7/48;合同备案号:2018320000334;让与人:南京林业大学;受让人:南京毅唛普软件科技有限公司;发明名称:一种机载激光雷达数据植被提取方法申请公布日:20161207;授权公告日:20180710;许可种类:普通许可;备案日期:20181119;?

法律状态公告日：20181221;?

法律状态：专利实施许可合同备案的生效、变更及注销;?

描述信息：专利实施许可合同备案的生效IPC(主分类):G01S 7/48;合同备案号:2018320000354;让与人:南京林业大学;受让人:江苏铨铨信息科技有限公司;发明名称:一种机载激光雷达数据植被提取方法申请公布日:20161207;授权公告日:20180710;许可种类:普通许可;备案日期:20181127;?

**64、一种利用核聚变发电的方法及系统**

摘要：本发明公开了一种利用核聚变发电的方法及系统，本发明利用工作在非临界状态下微型核聚变产生的能量提升水位，然后利用水的重力势能进行发电；采用聚变靶和激光点火实现核聚变，向聚变靶的玻璃管端部输入激光，利用激光冲击点火技术使氘丸发生聚变，每次氘丸的爆炸当量对核反应井是安全的，在这种不破坏反应井的情况下，通过每一次的微型核爆炸使反应井中水位提升并流入外部的环形水库中，环形水库底部设有发电装置，利用环形水库底部与海平面水位的高程差进行发电，本发明提供了一种无限的、清洁的、安全的利用核聚变的新能源发电系统。

公开（公告）号：[CN106024071A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2j78EHIl9ZbyWr4kAd0KKkg&local=zh)

公开（公告）日：2016-10-12

申请号：CN201610435906.5

申请日：2016-06-17

申请人：上海师范大学

法律状态：法律状态公告日：20161012;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20161109;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/00;申请日:20160617;?

法律状态公告日：20180116;?

法律状态：授权;?

描述信息：授权;?

**65、一种用环形磁场将放电电弧约束在一条直线上的装置**

摘要：本发明公开了一种用环形磁场将放电电弧约束在一条直线上的装置。该发明可用于以下三个方面：(1)在气体激光器中运用该装置可将气体放电电弧约束在轴心极细的一条直线上，其效果就是将放电气体介质压缩到轴心极细的直线上，因而将以2次幂的方式提高单位面积上的激光功率。(2)在核聚变系统中运用该装置，用高电压和大电流将核聚变物质电离并产生放电电弧，并将其压缩到轴心极细的直线上，产生高温高压，再将(1)中所述的大功率激光能量作用于同轴的高温高压聚变物质，从而点燃核聚变，最终实现受控核聚变。(3)采用同样结构的装置，用高压使二个针状石墨电极放电，放电电弧被约束在轴心极细的直线上，制造出长碳纳米管。

公开（公告）号：[CN107481908A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2g0zWeP48sEA2r4kAd0KKkg&local=zh)

公开（公告）日：2017-12-15

申请号：CN201610414387.4

申请日：2016-06-08

申请人：侯卫东

法律状态：法律状态公告日：20171215;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20180109;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01J 3/22;申请日:20160608;?

**66、一种磁约束核聚变实验装置的等离子体密度测量方法**

摘要：本发明公开了一种磁约束核聚变实验装置的等离子体密度测量计算方法，包括以下步骤；S1、使用HCN激光干涉仪产生两组光束；S2、通过放电实验对D1和D2分别进行采样，并将D1和D2分解为一段段数据；S3、在可编程逻辑门阵列内画出相同功能的A区域和B区域；S4、A区域接收数据1，B区域待命；S5、A区域处理数据1，并将结果送入存储和显示设备中，同时B区域接收数据2；S6、A区域接收数据3覆盖数据1，同时B区域处理数据2，并将结果送入存储和显示设备中；S7、重复S5?S6，直到实验过程结束。本发明系统响应速度快，响应时间确定，硬件电路结构简单，不易受干扰，易于维护和更换，成本低，通用性好。

公开（公告）号：[CN105842116A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jYYjGGaRJjTGr4kAd0KKkg&local=zh)

公开（公告）日：2016-08-10

申请号：CN201610373636.X

申请日：2016-05-26

申请人：合肥工业大学

法律状态：法律状态公告日：20160810;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160907;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 9/24;申请日:20160526;?

**67、超声换能耦合激光辐照优化透明导电薄膜性能的方法**

摘要：本发明涉及激光表面处理及薄膜材料制备领域，特指一种利用超声换能和超短脉冲激光辐照相互配合实现透明导电薄膜性能优化的一种方法。将透明导电薄膜置于超声换能器表面，在对透明导电薄膜进行激光辐照的同时，超声换能器在垂直于激光辐照的方向上振动，使得透明导电薄膜沿表面法向高频小振幅振动，使得薄膜样品表面与激光焦点的距离作周期性微小变化，扩大使得透明导电薄膜性能优化的激光参数范围，薄膜表面更容易获得退火作用；透明导电薄膜表面吸收激光能量熔化的同时，振动输入的能量能保证薄膜表面熔化区域在凝固过程中提前形核并增加结晶核心，细化晶粒，从而提高薄膜的致密度，改善薄膜的表面微观结构，最终实现薄膜性能的优化。

公开（公告）号：[CN105762233A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2isdqPmvrpqbWr4kAd0KKkg&local=zh)

公开（公告）日：2016-07-13

申请号：CN201610240708.3

申请日：2016-04-18

申请人：江苏大学

法律状态：法律状态公告日：20160713;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160810;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01L 31/18;申请日:20160418;?

法律状态公告日：20170905;?

法律状态：授权;?

描述信息：授权;?

**68、一种室外场景三维点云采集系统**

摘要：本发明是一种基于激光雷达的室外场景三维点云采集系统，属于计算机视觉领域。本发明解决的问题是：利用单线雷达102，相机103，通过同步模块104同步采集，在计算机101中利用相机的运动轨迹拼接雷达数据，解决了单线雷达室外场景测量中的尺度求解问题。本发明的主要算法的核心部分在于分别利用图像和雷达形成的点云进行点云融合，迭代求解尺度。本发明提出的方法能够简单、廉价的获取比较准确的室外场景三维模型。

公开（公告）号：[CN105844700A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hUIs3ODkjO2mr4kAd0KKkg&local=zh)

公开（公告）日：2016-08-10

申请号：CN201610149194.0

申请日：2016-03-14

申请人：南京大学

法律状态：法律状态公告日：20160810;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160907;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G06T 17/00;申请日:20160314;?

法律状态公告日：20190111;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G06T 17/00申请公布日:20160810;?

**69、FUEL TANK MANUFACTURING METHOD**

摘要：According to a method of manufacturing a fuel tank using polyketone of the present invention, the method comprises : a cover injection step for injection-molding an upper cover and a lower cover by using an injection-molding apparatus; a cover assembling step for respectively placing on upper and lower parts, the upper cover and the lower cover which have been injection-molded in the cover injection step; and a cover fusion step for fusing the contact surface between the upper cover and the lower cover assembled in the cover assembling step by using a laser. The present invention has a structure which can be automated and enables mass-production, the structure having two parts, the upper and lower covers, which are simultaneously molded, taken out, and assembled by a machine, and fused. According to the present invention, the production cost can be significantly reduced, and since the starting material, polyketone, can satisfy the required strength without an additional reinforcing material, the fuel tank can be made light-weight.

公开（公告）号：[KR101673575B1](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczshuy24XIlSkhl3Z10vNpVJ&local=zh)

公开（公告）日：2016-11-07

申请号：KR1020160019304

申请日：2016-02-18

申请人：JPC AUTOMOTIVE CO LTD

法律状态：法律状态公告日：20160218;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 101673575B1法律状态公告日：20161101;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101673575B1

**70、热核聚变发生方法及系统**

摘要：本发明公开了一种热核聚变发生方法及系统。其中，方法包括：预先设置内层含有热核材料的腔体，并且所述腔体上开有至少一个激光注入孔；激光通过所述激光注入孔向所述腔体注入，并烧蚀所述腔体的内层热核材料，产生向所述腔体中心膨胀的冕区等离子体；所述冕区等离子体在所述腔体中心汇聚，并将等离子体动能转化为等离子体的离子内能，形成高温高密的汇聚等离子体；所述汇聚等离子体发生核聚变反应，释放能量。本发明实施例中提供的技术方案能够提高点火热斑的温度，实现稳定的高的聚变产出。

公开（公告）号：[CN105575444A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2h83j0M6y9Jc2r4kAd0KKkg&local=zh)

公开（公告）日：2016-05-11

申请号：CN201610083015.8

申请日：2016-02-06

申请人：北京应用物理与计算数学研究所

法律状态：法律状态公告日：20160511;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160608;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/00;申请日:20160206;?

法律状态公告日：20171107;?

法律状态：授权;?

描述信息：授权;?

**71、一种大型双层薄壁D型截面真空室扇形段成环工艺方法**

摘要：本发明属于磁约束受控热核聚变真空设备制造领域，具体涉及一种大型双层薄壁D型截面真空室扇形段成环工艺方法。具体而言，本发明通过D型段焊接内支撑工装，解决了内壳组对固定、检测和各段拼焊背面氩气保护问题，保证了20个扇形段尺寸一致性；利用激光投线仪和槽钢划线样板保证各条槽钢分布线位置的准确；采用机械消除应力方法降低了内壳与槽钢焊接应力，控制了内壳变形；通过对称跳焊塞焊外壳与槽钢，后拼焊外壳各瓣，控制了外壳塞焊变形和塞焊时外壳窜动错位；通过制作外壳检测工装，控制了塞焊过程外壳变形，检测外壳整体型面尺寸；通过振动时效，平衡了应力分布，稳定了型面尺寸。

公开（公告）号：[CN107020439A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jnRpPDxfopc2r4kAd0KKkg&local=zh)

公开（公告）日：2017-08-08

申请号：CN201610068952.6

申请日：2016-02-01

申请人：西安核设备有限公司

法律状态：法律状态公告日：20170808;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170919;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23K 9/16;申请日:20160201;?

法律状态公告日：20190108;?

法律状态：授权;?

描述信息：授权;?

**72、一种核聚变反应系统**

摘要：本发明是一种核聚变反应系统，涉及核聚变、激光、环保、能源、军事领域。用以解决当前核聚变反应装置输出能量大于产出能量，实用性差等缺点。本系统分为三个部分，①激光点火装置，②核聚变反应炉，③二氧化碳碳化室。首先将低能激光经过高能激光光纤耦合系统耦合成1.8兆焦能量的高能激光，然后用高能激光轰击固态气体靶心，使其在高强压高温度下发生核聚变反应，然后，用释放出来的热量进行二氧化碳的碳化和环保发电，以及军事领域的应用。

公开（公告）号：[CN105427896A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gW0VLEtFYh5mr4kAd0KKkg&local=zh)

公开（公告）日：2016-03-23

申请号：CN201610004533.6

申请日：2016-01-07

申请人：李卓

法律状态：法律状态公告日：20160323;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160518;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/11;申请日:20160107;?

法律状态公告日：20180316;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G21B 1/11申请公布日:20160323;?

**73、Laser amplification apparatus, laser apparatus, and laser nuclear fusion**

摘要：The laser amplification apparatus is provided with a plurality of plate-shaped laser medium components (M1 to M4) which are disposed to be aligned along a thickness direction, and prisms (P1 to P3) which optically couples the laser medium components. Each of the laser medium components is provided with a main surface to which a seed light is incident, and a side surface which surrounds the main surface. An excitation light is incident from at least one side surface of a specific laser medium component among the plurality of laser medium components. The excitation light is incident through the prism to a side surface of the laser medium component adjacent to the prism.

公开（公告）号：[GB201708157D0](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FPX4b%2FhqSH7VbMeYrAgyQSz&local=zh)

公开（公告）日：2017-07-05

申请号：GB1708157

申请日：2015-11-18

申请人：HAMAMATSU PHOTONICS KK

**74、LASER AMPLIFICATION APPARATUS, LASER APPARATUS, AND LASER NUCLEAR FUSION REACTOR**

摘要：The laser amplification apparatus is provided with a plurality of plate-shaped laser medium components (M1 to M4) which are disposed to be aligned along a thickness direction, and prisms (P1 to P3) which optically couples the laser medium components. Each of the laser medium components is provided with a main surface to which a seed light is incident, and a side surface which surrounds the main surface. An excitation light is incident from at least one side surface of a specific laser medium component among the plurality of laser medium components. The excitation light is incident through the prism to a side surface of the laser medium component adjacent to the prism.

公开（公告）号：[US20170330636A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rEKH44yLEuoNzkJJEbMdX8W&local=zh)

公开（公告）日：2017-11-16

申请号：US15527373

申请日：2015-11-18

申请人：HAMAMATSU PHOTONICS K K

法律状态：法律状态公告日：20170608;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2017330636A1New Owner:;HAMAMATSU PHOTONICS K.K., JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SEKINE, TAKASHI;KATO, YOSHINORI;TAKEUCHI, YASUKI;AND OTHERS;SIGNING DATES FROM 20170522 TO 20170529;REEL/FRAME:042642/0409

**75、LASER AMPLIFICATION APPARATUS, LASER APPARATUS, AND LASER NUCLEAR FUSION REACTOR**

摘要：This laser amplification apparatus includes : a plurality of plate-like laser medium components M1 to M4 disposed so as to be aligned along the thickness direction; and prisms P1 to P3 configured to optically couple the laser medium components. Each of the laser medium components includes : a main surface on which seed light is incident; and side surfaces that surround the main surface. Excitation light is incident on at least one of the side surfaces of a certain laser medium component among the plurality of laser medium components, and the excitation light is incident on a side surface of a laser medium component adjacent thereto via a corresponding one of the prisms.

公开（公告）号：[WO2016080466A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU6oi3dthFw15vNkPtwy7rjn&local=zh)

公开（公告）日：2016-05-26

申请号：WOJP15082463

申请日：2015-11-18

申请人：HAMAMATSU PHOTONICS K K

法律状态：法律状态公告日：20160713;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2016080466A1Corresponding Publication Number:;15860688Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20170517;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2016080466A1Corresponding Publication Number:;15527373Corresponding Authority:;US法律状态公告日：20170518;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2016080466A1Corresponding Publication Number:;112015005208Corresponding Authority:;DE法律状态公告日：20170522;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2016080466A1Corresponding Publication Number:;201708157Corresponding Authority:;GBCorresponding Kind:;AFree Text Description:;PCT FILING DATE = 20151118法律状态公告日：20171213;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2016080466A1Corresponding Publication Number:;15860688Corresponding Authority:;EPCorresponding Kind:;A1

**76、利用伽码激光或伽码射线实现可控核聚变的方法与装置**

摘要：一种利用伽码激光或伽码射线的可控核聚变方法与装置，其特征是，靶球由具有激发态的、质量较小的原子组成；利用伽码激光或伽码射线将靶球原子核激发到它的一个能量较高、寿命较长的激发态；用普通激光对靶球加热，并对由于伽码激光或伽码射线及普通激光辐照而形成的靶核为激发态的等离子体作惯性约束；也可以用磁场约束这种等离子体；可以用对称辐射脉冲激光尾波依次周期性地加速这种等离子体，以促其核反应。这种核聚变方法可显著地降低聚变温度，增大散核反应射界面，更容易满足劳逊判据，从而更容易实现可控核聚变。

公开（公告）号：[CN106710639A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2i2nICk8%2FcEjmr4kAd0KKkg&local=zh)

公开（公告）日：2017-05-24

申请号：CN201510815095.7

申请日：2015-11-17

申请人：陈世浩

法律状态：法律状态公告日：20170524;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20181218;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/23;?

**77、High power fiber amplifier laser pump signal combiner for high efficiency and application**

摘要：A high efficiency optical combiner minimizes core region distortions in the area where fusion splicing between an input tapered fiber bundle (or any other type of “cladding-less” input fiber) and output fiber are joined. The thickness of the output fiber' s glass cladding layer in the splice region is reduced (if not removed altogether) so that a core-to-core splice is formed and any necked-down region where the glass flows to join the core regions (while also joining the outer diameters) is essentially eliminated. The reduction of distortions in the core region of the splice improves the transmission efficiency between an input tapered fiber bundle and output fiber, reaching a level of about 99%. This high efficiency optical combiner is particularly well-suited for applications where a number of pump sources are combined and applied as an input to a fiber laser or amplifier.

公开（公告）号：[JP6370286B2](https://www.incopat.com/detail/init2?formerQuery=rFv9HsWAtTDzzKjIcEyDuvR0OjOTHMZL&local=zh)

公开（公告）日：2018-08-08

申请号：JP2015222734

申请日：2015-11-13

申请人：オーエフエス ファイテル エルエルシー

法律状态：法律状态公告日：20160323;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20160323法律状态公告日：20170228;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20170228法律状态公告日：20170302;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20170228法律状态公告日：20170531;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20170531法律状态公告日：20171102;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20171102法律状态公告日：20180302;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20180302法律状态公告日：20180312;?

状态代码：A911;?

法律状态：TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A911Effective Date:;20180309法律状态公告日：20180522;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20180522法律状态公告日：20180525;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20180525法律状态公告日：20180611;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2016110103A 法律状态公告日：20180614;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20180614法律状态公告日：20180719;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2016110103A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20180710法律状态公告日：20180720;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2016110103A Corresponding Publication Number:;6370286Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150

**78、Method and device for the control of exposure of a selective sintering device or a laser fusion device**

摘要：A method for controlling the exposure of a selective laser sintering or laser melting apparatus. The method includes providing a selective laser sintering apparatus or laser melting apparatus that uses successive solidification of layers of a powder-type construction material that can be solidified using radiation. The apparatus comprises an irradiation device for irradiating layers of the construction material that has a plurality of scanners that can separately be actuated, simultaneously irradiating the construction material, the separate detection of irradiation times of each scanner and/or the irradiation areas detected by each scanner, and storing the detected irradiation times and/or irradiation areas; comparing the irradiation times and/or irradiation areas of the scanners with each other; re-determining the surface sections of a powder layer to be irradiated by each scanner so the irradiation times for each scanner are approximated to each other and/or the irradiation areas of each scanner are aligned.

公开（公告）号：[ES2686793T3](https://www.incopat.com/detail/init2?formerQuery=VPiOqd3v2yIcp9f5sHIb8vR0OjOTHMZL&local=zh)

公开（公告）日：2018-10-19

申请号：ES15801125

申请日：2015-11-05

申请人：CL SCHUTZRECHTSVERWALTUNGS GMBH

**79、NEUTRON SOURCE BASED ON A COUNTER-BALANCING PLASMA BEAM CONFIGURATION**

摘要：A system for generating a source of neutrons from a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The reaction system has at least four particle beam emitters supported spatially around oriented toward a common focal region of the reaction chamber for directing the plurality of plasma beams that are spatially symmetrical in three dimensional space. Each of the plasma beams are directed towards a plasma region in the geometric center. A stable collapse of the plasma region permits a controllable and sufficiently long confinement time, which in combination with necessary temperature and density conditions may ignite and sustain fusion reactions and achieve a net energy output. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction. The thermonuclear reaction system may be used as a neutron source for nuclear power reactors.

公开（公告）号：[CA2962693A1](https://www.incopat.com/detail/init2?formerQuery=bfqTGHSWJCCCRF6xkkcsrfR0OjOTHMZL&local=zh)

公开（公告）日：2016-04-07

申请号：CA2962693

申请日：2015-10-01

申请人：ZHENG XIAN JUN

**80、基于均衡式等离子体束配置的中子源**

摘要：一种用于由热核聚变反应生成中子源的系统，包括一个反应室和若干粒子束发射器。反应系统具有至少四个粒子束发射器，被空间支撑在反应室的一个公共聚焦区域周围且被定向成朝向该公共聚焦区域，以引导在三维空间中空间对称的多个等离子体束。等离子体束中的每个被引导朝向几何中心中的一个等离子体区域。该等离子体区域的稳定塌缩允许可控的且足够长的约束时间，该约束时间结合必需的温度条件和密度条件可引燃并维持聚变反应并实现净能量输出。可选地，激光束或其他输入能量设备也可被定向在公共聚焦区域周围并朝向该公共聚焦区域，以将高能激光束引导到等离子体球处，从而引发辅助聚变反应。该热核反应系统可以被用作核电反应堆的中子源。

公开（公告）号：[CN107004451A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iO%2Brl56orUPWr4kAd0KKkg&local=zh)

公开（公告）日：2017-08-01

申请号：CN201580065417.9

申请日：2015-10-01

申请人：曾宪俊

法律状态：法律状态公告日：20170801;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170825;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21G 4/02;申请日:20151001;?

**81、NEUTRON SOURCE BASED ON A COUNTER-BALANCING PLASMA BEAM CONFIGURATION**

摘要：A system for generating a source of neutrons from a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The reaction system has at least four particle beam emitters supported spatially around oriented toward a common focal region of the reaction chamber for directing the plurality of plasma beams that are spatially symmetrical in three dimensional space. Each of the plasma beams are directed towards a plasma region in the geometric center. A stable collapse of the plasma region permits a controllable and sufficiently long confinement time, which in combination with necessary temperature and density conditions may ignite and sustain fusion reactions and achieve a net energy output. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction. The thermonuclear reaction system may be used as a neutron source for nuclear power reactors.

公开（公告）号：[US20170294238A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rF0kVDlzFFVQYsGkO06SUdj&local=zh)

公开（公告）日：2017-10-12

申请号：US15516046

申请日：2015-10-01

申请人：Xian Jun ZHENG

**82、NEUTRON SOURCE BASED ON A COUNTER-BALANCING PLASMA BEAM CONFIGURATION**

摘要：A system for generating a source of neutrons from a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The reaction system has at least four particle beam emitters supported spatially around oriented toward a common focal region of the reaction chamber for directing the plurality of plasma beams that are spatially symmetrical in three dimensional space. Each of the plasma beams are directed towards a plasma region in the geometric center. A stable collapse of the plasma region permits a controllable and sufficiently long confinement time, which in combination with necessary temperature and density conditions may ignite and sustain fusion reactions and achieve a net energy output. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction. The thermonuclear reaction system may be used as a neutron source for nuclear power reactors.

公开（公告）号：[WO2016049768A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU6d3hMX0QQvS%2FNkPtwy7rjn&local=zh)

公开（公告）日：2016-04-07

申请号：WOCA15050987

申请日：2015-10-01

申请人：ZHENG Xian Jun

法律状态：法律状态公告日：20160518;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2016049768A1Corresponding Publication Number:;15846536Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20170327;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2016049768A1Corresponding Publication Number:;2962693Corresponding Authority:;CA法律状态公告日：20170331;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2016049768A1Corresponding Publication Number:;15516046Corresponding Authority:;US法律状态公告日：20170403;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2016049768A1Designated State Authority:;DE法律状态公告日：20171025;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2016049768A1Corresponding Publication Number:;15846536Corresponding Authority:;EPCorresponding Kind:;A1

**83、一种核电站上充泵转子激光修复工艺**

摘要：本发明公开了一种核电站上充泵转子激光修复工艺，其包括以下步骤：S1、确定上充泵转子的修复内容；S2、用激光器将熔覆材料熔覆在待修复部位并且超出尺寸；S3、将多余的熔覆材料车到距离要求尺寸0.05mm时，使用着色探伤剂确认待修复部位是否存在缺陷，如有缺陷并处理掉，继续将修复面精车到要求尺寸；S4、使用着色探伤剂将整个修复面进行确认缺陷。本发明使用机械手控制激光器熔覆比人工堆焊更加的方便，效率高，激光能量集中可以彻底清除着色探伤剂残留，并且为后续的使用增加保障系数。本发明提供的工艺，其工艺简单易于操作，对上充泵转子的修复全面彻底，节约了生产的成本。

公开（公告）号：[CN105154873A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jgmYfOh0EL4Wr4kAd0KKkg&local=zh)

公开（公告）日：2015-12-16

申请号：CN201510595015.1

申请日：2015-09-17

申请人：中核核电运行管理有限公司

法律状态：法律状态公告日：20151216;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160113;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C23C 24/10;申请日:20150917;?

法律状态公告日：20180921;?

法律状态：发明专利申请公布后的驳回;?

描述信息：发明专利申请公布后的驳回IPC(主分类):C23C 24/10申请公布日:20151216;?

**84、NUCLEAR FUSION TARGET AND NUCLEAR FUSION DEVICE**

摘要：PROBLEM TO BE SOLVED : To provide a nuclear fusion target which can achieve nuclear fusion reaction with improved efficiency.SOLUTION : A nuclear fusion target 4 is used for making nuclear fusion reaction occur by irradiation with energy rays (laser beams), the nuclear fusion target having metal nanoparticles 42 in a CD shell 41.SELECTED DRAWING : Figure 2COPYRIGHT : (C)2017, JPO&INPIT

公开（公告）号：[JP2017058181A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaTuiMz4556H2GuxfaWZrjp&local=zh)

公开（公告）日：2017-03-23

申请号：JP2015181647

申请日：2015-09-15

申请人：KYOTO UNIV

**85、一种托卡马克壁材料侵蚀与再沉积的测量装置**

摘要：本发明涉及核聚变与光学诊断技术领域，提供一种托卡马克壁材料侵蚀与再沉积的测量装置，包括：激光入射单元、干涉单元、相移单元、图像采集单元以及时序控制单元；所述激光入射单元包括第一激光器、第二激光器、透反镜、第一孔阑、空间滤波器和凸透镜；所述干涉单元包括依次设置的分束镜和反射镜；所述相移单元包括依次设置的压电陶瓷和压电陶瓷控制箱；所述图像采集单元包括工业相机；所述时序控制单元包括数据采集控制箱。本发明能够实现对托卡马克壁材料侵蚀与再沉积的在线、无损、高精度、高灵敏度、三维及定量监测。

公开（公告）号：[CN105203501A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gohkxY9Sy6Fmr4kAd0KKkg&local=zh)

公开（公告）日：2015-12-30

申请号：CN201510583398.0

申请日：2015-09-14

申请人：大连理工大学

法律状态：法律状态公告日：20151230;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160127;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/45;申请日:20150914;?

法律状态公告日：20180904;?

法律状态：授权;?

描述信息：授权;?

**86、一种聚变反应热斑区质子成像方法及标定装置和实验装置**

摘要：本发明提供了一种聚变反应热斑区质子成像方法及标定装置和实验装置, 使用由永磁铁制造的微型磁四极透镜对聚变反应热斑区产生的质子进行成像，以获得热斑压缩状态信息。该方法包括四个步骤：在标定装置中进行的质子成像微型磁四极透镜的标定、在实验装置中进行的微型磁四极透镜物距和像距的调节、等效光学透镜瞄准以及在线实验诊断。本发明适用于激光驱动惯性约束聚变、等离子体放电中子源、Z箍缩等装置中聚变反应热斑区域形状的诊断。本发明对质子源进行直接成像，无需编码和解码过程，不引入数字噪声，相对于编码成像方法，具有更大的接收立体角，可以在低1~2个数量级的质子产额条件下，实现相同的空间分辨率。

公开（公告）号：[CN105280246A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2idFH5vOgoiJWr4kAd0KKkg&local=zh)

公开（公告）日：2016-01-27

申请号：CN201510573724.X

申请日：2015-09-11

申请人：中国工程物理研究院激光聚变研究中心

法律状态：法律状态公告日：20160127;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160224;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/25;申请日:20150911;?

法律状态公告日：20170510;?

法律状态：授权;?

描述信息：授权;?

**87、一种固体磁制冷材料、制备方法及磁制冷器**

摘要：本发明公开了一种固体磁制冷材料、制备方法及磁制冷器，适用于几K至十几K极低温，该材料的化学式为Yb1-xHoxMnO3，其中0.05&lt; x&lt; 0.95，这种材料为六方晶系，空间群为P63cm，采用固相反应法烧结得到。随着Ho掺杂量的增加，该材料的晶格常数a单调增加。通过对Yb1-xHoxMnO3的施加外磁场而诱导产生AFM-FM相变，产生的磁熵变，可实现磁制冷作用，该材料的这种相变是二级相变。应用本发明的Yb1-xHoxMnO3固体磁制冷材料制成的固体磁制冷器，可工作于极低温度下，可应用于氦液化、空间探测器、卫星、激光聚焦核聚变等尖端领域。

公开（公告）号：[CN105112025A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ieKMVngmPRRGr4kAd0KKkg&local=zh)

公开（公告）日：2015-12-02

申请号：CN201510575569.5

申请日：2015-09-10

申请人：南通大学; 史敏

法律状态：法律状态公告日：20151202;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20151230;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C09K 5/14;申请日:20150910;?

法律状态公告日：20180406;?

法律状态：授权;?

描述信息：授权;?

**88、Linear converging/diverging fusion reactor and operating method for achieving clean fusion reactions**

摘要：A fusion reactor is provided for achieving ultra-high plasma densities required for achieving clean, neutron-free, fusion reactions. This is achieved by designating the reactor with a linear geometry containing an internal plasma flow duct that converges to a point along its central longitudinal axis surrounded by a diverging containment solenoid with increasing wall thickness that generates an increasing axial magnetic field. This field compresses the plasma to ultra high densities as it is magnetically pulled toward the fusion ignition point by the solenoid' s magnetic field gradient. Ignition is achieved by a plurality of high power phased-coherent laser beams converging to the ignition point. A secondary solenoid is mounted around the ignition point that magnetically deflects and focuses the ionized reaction products into a directed beam of high energy charged particles which is fed into an MHD generator thereby converting the fusion power of the reactor directly into electric power.

公开（公告）号：[US20170062078A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rFcRS5fhdeBhIsGkO06SUdj&local=zh)

公开（公告）日：2017-03-02

申请号：US14756291

申请日：2015-08-24

申请人：Michael Minovitch

**89、包括几个弯曲同心管的连接装置**

摘要：本发明涉及一种用于连接涡轮机构件，诸如喷射器到用于供给流体，诸如燃料的系统的连接装置(14)，该连接装置(14)包括界定用于供给所述构件的导管(20、22、24)的几个同心管(26、28、30)，所述同心管沿至少一个方向弯曲，其特征在于，它由包括至少所述管(26、28、30)的单一部件制成。

公开（公告）号：[CN106662330A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jZrQ5jH96RSmr4kAd0KKkg&local=zh)

公开（公告）日：2017-05-10

申请号：CN201580043279.4

申请日：2015-08-19

申请人：赛峰航空器发动机

法律状态：法律状态公告日：20170510;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170822;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):F23R 3/28;申请日:20150819;?

**90、一种透紫外、高损伤阈值氟磷酸盐激光玻璃及其制备方法**

摘要：本发明提出一种可作为透紫外窗口材料的高损伤阈值氟磷酸盐激光玻璃及其制备方法。该制备方法以碱金属氧化物、碱土金属氧化物、氧化铝、氧化锌和五氧化二磷为主要原料成分，添加少量稀土氟化物，通过高温熔化、澄清、均化后，用漏注法成型制备玻璃毛坯，再经过退火处理，获得高损伤阈值氟磷酸盐激光玻璃材料。该玻璃材料可替代熔石英材料，加工为透镜、平面窗口和棱镜等光学元器件应用于高能、高功率激光系统，解决现有高能、高功率系统中熔石英等紫外光学元件的激光损伤问题，进一步提高激光器的负载输出能力，并有望作为透紫外光学元件用于激光驱动惯性约束核聚变试验的高功率激光器中。

公开（公告）号：[CN105000801A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2g3PcscqSttlWr4kAd0KKkg&local=zh)

公开（公告）日：2015-10-28

申请号：CN201510426743.X

申请日：2015-07-20

申请人：中国科学院西安光学精密机械研究所

法律状态：法律状态公告日：20151028;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20151125;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C03C 3/247;申请日:20150720;?

法律状态公告日：20170829;?

法律状态：授权;?

描述信息：授权;?

**91、一种双侧蚀刻高温高压印刷电路板换热器**

摘要：本发明涉及一种双侧蚀刻通道高温高压板式换热器，由换热芯体，芯体区分为入口段、核心换热段及出口段三部分，均流段，热流体进口与出口，冷流体进口与出口构成。该换热器利用光化学蚀刻、激光刻蚀和机加工等方式对一定厚度的换热板双侧加工流道，第一换热板与第二换热板间隔布置，进口分配段采用融合式通道的新型结构，有利于使换热器内流体分布更加均匀。本发明可以提高换热器的换热效率，有效避免现有通道尖角处热应力损害，增大换热器流通截面积，提高换热器的紧凑度，改善尖角处热应力分布避免应力集中导致的塑性变形，提高换热器内流体均匀性分布，改进换热器的安全性能，延长其使用寿命。

公开（公告）号：[CN105043144A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gsjH3Lc7gVSGr4kAd0KKkg&local=zh)

公开（公告）日：2015-11-11

申请号：CN201510324622.4

申请日：2015-06-12

申请人：西安交通大学

法律状态：法律状态公告日：20151111;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20151209;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):F28D 9/00;申请日:20150612;?

法律状态公告日：20190104;?

法律状态：发明专利申请公布后的驳回;?

描述信息：发明专利申请公布后的驳回IPC(主分类):F28D 9/00申请公布日:20151111;?

**92、METHOD FOR MANUFACTURING FUEL CONTAINER FOR LASER FUSION**

摘要：This invention pertains to a method for manufacturing a fuel container for laser fusion, said method including the following steps : a droplet formation step in which, using a compound nozzle (3) comprising both a first nozzle (6) and a second nozzle (7) that has a discharge opening that surrounds a discharge opening (61) in the first nozzle, water (8) and an organic liquid (9A, 9B) that contains an organic solvent are simultaneously discharged into a stabilizing liquid (13) from the first nozzle and the second nozzle, respectively, forming a droplet (12) comprising water enclosed within the organic liquid; an organic-solvent removal step in which the organic solvent is removed from the droplet; and a water removal step in which the water enclosed within the organic liquid that formed the droplet is removed. The organic liquid is obtained by dissolving a first organic polymer and a second organic polymer in an organic solvent. Polymers that are capable of phase separation with respect to each other are used as the first and second organic polymers.

公开（公告）号：[WO2016002365A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU79MBXeHEBasvNkPtwy7rjn&local=zh)

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申请号：WOJP15064096

申请日：2015-05-15

申请人：HAMAMATSU PHOTONICS K K

法律状态：法律状态公告日：20160217;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2016002365A1Corresponding Publication Number:;15814895Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20161230;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2016002365A1Corresponding Publication Number:;15323116Corresponding Authority:;US法律状态公告日：20170103;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2016002365A1Designated State Authority:;DE法律状态公告日：20170117;?

状态效果：+;?

状态代码：REEP;?

法律状态：REQUEST FOR ENTRY INTO THE EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2016002365A1Corresponding Publication Number:;2015814895Corresponding Authority:;EP

**93、METHOD FOR LASER ATOMIC EMISSION SPECTRAL ANALYSIS OF HAIR**

摘要：FIELD : medicine.SUBSTANCE : invention relates to spectral analysis and can be used in biological and clinical diagnostic laboratories for monitoring state of health of patients. Method for laser nuclear emission spectral analysis of hair includes treatment of analysed sample at stages of water washing, drying and thermal treatment at next tool method of determining content of metals using pilot laser for accurate selection of radiation zone of inspected sample. At that, during whole process of treatment analysed sample controlled part stays in capsule volume less than 10 mql, and stages of heat treatment are combined and reduced to few minutes at state of sample to its carbonisation at 285 ± 5 °C, in process of which recorded losses of volatile components contained in exhaust gases with hydrocarbon matrix, using their source of excitation of six-jet plasmatron that is followed by laser irradiation of charred test in subsequent staged treatment spectrum analytic signals obtained during implementation of both methods of spectra excitation.EFFECT : higher accuracy of hair analysis due to control chemical composition of exhaust gases.1 cl, 1 dwg

公开（公告）号：[RU2589960C1](https://www.incopat.com/detail/init2?formerQuery=Bs76jwMO8e4DVqHYPyhftPR0OjOTHMZL&local=zh)

公开（公告）日：2016-07-10

申请号：RU2015116410

申请日：2015-04-29

申请人：federalnoe gosudarstvennoe avtonomnoe obrazovatelnoe uchrezhdenie vysshego professionalnogo obrazovaniya "Kazanskij (Privolzhskij) federalnyj universitet" (FGAOUVPO KFU) (RU)

**94、METHOD FOR PREPARING LARGE SIZE YB-YAG LASER CRYSTAL THROUGH KYROPOULOS METHOD**

摘要：Disclosed is a method for preparing a large size Yb-YAG laser crystal through Kyropoulos method, and the steps thereof include furnace charging, material melting, crystal seeding, necking down, shouldering, equal-diameter growth, cooling and annealing. During shouldering, the rotating speed of the crystal is zero, and in the shouldering and the subsequent stages thereafter, the crystal does not rotate. The pulling speed is controlled in a range of 0.05-0.3 mm/h, the weight increase rate is controlled in a range of 10-250 g/h, and after the crystal diameter grows to a desired diameter, the shouldering process is completed. During the equal-diameter growth, the heating power is adjusted to uniformly increase the crystal weight at an increase rate of 250-900 g/h until the weight does not increase any more, at which time the crystal growth is completed. A Yb-YAG crystal grown by the inventive method has prominent advantages of a large size, a low defect density, no core, a high utilization rate, a low cost, etc., and can meet the requirements of large size Yb-YAG crystals for large-scale high-power laser devices.

公开（公告）号：[WO2016078321A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU6%2BIlUodKn7dvNkPtwy7rjn&local=zh)

公开（公告）日：2016-05-26

申请号：WOCN15077069

申请日：2015-04-21

申请人：CHINA ELECTRONICS TECHNOLOGY GROUP CORPORATION NO 26 RESEARCH INSTITUTE

法律状态：法律状态公告日：20160706;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2016078321A1Corresponding Publication Number:;15860724Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20170522;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2016078321A1Designated State Authority:;DE法律状态公告日：20171213;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2016078321A1Corresponding Publication Number:;15860724Corresponding Authority:;EPCorresponding Kind:;A1

**95、FUSION POWER BASED ON A SYMMETRICAL PLASMA BEAM CONFIGURATION**

摘要：A thermonuclear reaction system for generating a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The reaction system has at least four particle beam emitters supported spatially around oriented toward a common focal region of the reaction chamber for directing at least four plasma beams that are spatially symmetrical in three dimensional space. Each of the plasma beams are directed towards a plasma region in the geometric center. A stable collapse of the plasma region permits a controllable and sufficiently long confinement time, which in combination with necessary temperature and density conditions may ignite and sustain fusion reactions and achieve a net energy output. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high- energy laser beams at the plasma ball to assist with instigation of the fusion reaction.

公开（公告）号：[CA2887762A1](https://www.incopat.com/detail/init2?formerQuery=zZ400cM2Y6HCZON7faBZJfR0OjOTHMZL&local=zh)

公开（公告）日：2015-10-10

申请号：CA2887762

申请日：2015-04-10

申请人：ZHENG XIAN JUN; LIU WILLY

**96、FUSION POWER BASED ON A SYMMETRICAL PLASMA BEAM CONFIGURATION**

摘要：A thermonuclear reaction system for generating a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The reaction system has at least four particle beam emitters supported spatially around oriented toward a common focal region of the reaction chamber for directing at least four plasma beams that are spatially symmetrical in three dimensional space. Each of the plasma beams are directed towards a plasma region in the geometric center. A stable collapse of the plasma region permits a controllable and sufficiently long confinement time, which in combination with necessary temperature and density conditions may ignite and sustain fusion reactions and achieve a net energy output. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction.

公开（公告）号：[US20150294743A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rHdEElLFpjwFoqqxKR9kPS0&local=zh)

公开（公告）日：2015-10-15

申请号：US14683645

申请日：2015-04-10

申请人：Xian Jun Zheng; Willy Liu

**97、SEGMENTED TURBINE GAS TURBINE ENGINE**

摘要：The invention concerns a turbine nozzle (12) for a gas turbine engine, comprising a plurality of fixed guide vanes (14) all having the same aerodynamic profile and extending radially between an outer ferrule (18) and an inner ferrule (20), an inner pin (22) extending radially inwards from the inner ferrule and intended to be sealingly fixed to a roller bearing housing, and an outer pin (24) extending radially outwards from the outer ferrule and intended to be sealingly fixed to an outer casing, the guide vanes, the inner and outer ferrules and the inner and outer pins being produced from one and the same part, in such a way as to form a one-piece structure.

公开（公告）号：[FR3033828A1](https://www.incopat.com/detail/init2?formerQuery=GLnafOqFmuT5M1Z7SO3iqvR0OjOTHMZL&local=zh)

公开（公告）日：2016-09-23

申请号：FR15052256

申请日：2015-03-19

申请人：TURBOMECA

法律状态：法律状态公告日：20160302;?

状态效果：+;?

状态代码：PLFP;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; FR 3033828A1Fee Payment-year:;2法律状态公告日：20160923;?

状态代码：PLSC;?

法律状态：SEARCH REPORT READY描述信息：Docdb Publication Number:; FR 3033828A1Effective Date:;20160923法律状态公告日：20170210;?

状态效果：+;?

状态代码：PLFP;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; FR 3033828A1Fee Payment-year:;3法律状态公告日：20170901;?

状态代码：CD;?

法律状态：CHANGE OF NAME OR COMPANY NAME描述信息：Docdb Publication Number:; FR 3033828A1New Owner:;SAFRAN HELICOPTER ENGINES, FREffective Date:;20170727法律状态公告日：20180220;?

状态效果：+;?

状态代码：PLFP;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; FR 3033828A1Fee Payment-year:;4

**98、ACRWT TG systam**

摘要：Image in accordance with the signal depleted and [...] in the maximum powerartificialitypetroleum , coal , natureA FIFO warming of villages and smog and [...][...][...] and reorganization and [...] of a [...] seek increase of efficiency and stability in elder brother lifenaturetechniquetechniqueartificiality and a fusing a is [...][...][...] a 12 25 a back flow of each marker a collapsible shift power e. naturally, such as 1 (1) ～ (8) such as a bovine absolute i.e. [...]occurrence to [...]nature the artificiality and [...] absolute i.e. [...][...]invention a fusion (specification) is a [1] the absolute [...]nature of information to be processed in the repositioning as avoiding which water absorptive auxiliary be friendly (marker collapsible shift reference 1). A [...]naturesun , [...] , month , [...]vIP[...] by [...] to, torque is generated [...][...][...]enclosure chart 1 of phenomenon of (1) ～ (8) is affecting [...] avoid. stereochemically fused high affinity. [2] water 700 density to emptiness[...]emptiness of wet liquid to flow down live on. we for [...] above [...]emptiness ' re only shamming for hemming the in 700 of water not feels a bodily sensation of the [...] of living, a US [...]eve that the storm is to better utilize the, I know proverb that it lives, five which is a people For small size tests at sea state windless clears [...][...][...] raised tried off to best avoiding the change of tide when the marine fish hypercholesterolemia yearmonthseason[...][...] in wiper always[...]nature[...] in (enclosure chart 1) for the ground terminal of the [3] fusion [...] finger signal of (1) (2) (3) (4) jacket type foundation pile using weather and ocean[...][...]techniques[...] and fabrication techniques car combustiblae [...] chemosorptive molecules constituting the layer (5) (6) (7) principle cost of rollers a pivoting rail and [...]hydraulic turbine and hydraulic turbine[...] of a blade, is uniformized to stator motion ([...][...] laser motion of auxiliary wings of aircraft) [4] unmelted [...] law (1) a (absolute [...]) nature[...] unmelted in basiclegitimacy rule (of valid of) 1234 laws built in our [...] based type jacket to hydraulic turbine in [...][...] root file For [...] the light cancerthe outside column file [...][...] there is erected a construction, such as 1 (2) in stator [...] a inside[...]space counter " A conical the outside[...] cars by " Rail the within outsideAlong the lowering and lifting a collision, and to install [...] to movement (3) stator [...] car The the outsidehydraulic turbine rail [...][...] shape ring for under and at is. Cost to the rollers at under rail decreased and thereby aberration according to the principles of Was to cause the lever to shift the [...] does wandered off for (4) [...]underhydraulic turbine the 1. also is the small animal and laid on the Also 2. hydraulic turbine such as a A lock primer rotation is. (5) hydraulic turbineThe aberration frame Aberrations wing [...] and a stator Reinforcing-bar securely is composed of Suspended is suspended from the wing hydraulic turbine[...] the To solution [...][...][...] and an open at one [...] of [...] of 1. [...][...] of 1 closes the stator [...] such as Aberrations wing A stator motion is a [...][...] ([...][...] laser motion of auxiliary wings of aircraft) in aberrations even [...]fixedrotation in aging [...] is lock primer is Specification reference ※ [...] stator motion [or] aberration portion, and at [5] effect (1) preventing FIFO warming villages and would degrade lifestyle fossil fuel effect (2) protection from nuclear (3) electricitydepartment revolution and the industry to retain lifestyles (4) adjacent watersuninhabited island[...]baseSolve civil affair of construction powerline tower and base[...] and (5) arrival time[...]unmannedpower plantindividual[...] (6) 12 25 [...][...]tourist industry rhythmic change device change working hours of [6] embodiment (1) scientisttechnique[...] of specialized engineer [...]commissions[...]president configuration and (2) and a cooperation Weather green (3) UN fund g. C. F. ( ) [...][...] (4) peripheral nation[...] smog and Configured

公开（公告）号：[KR1020150089977A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczuvF78ppB5vqy%2BNzpPVdHSk&local=zh)

公开（公告）日：2015-08-05

申请号：KR1020150036064

申请日：2015-03-16

申请人：LIM YON SU

**99、neutron-free generating nuclear fusion reactions without auxiliary fields**

摘要：Summary : proton-boron 11 fusion without primary neutrons generate with spherical ignition after patent application DE102012025244with 890 [...] - picoseconds laser pulses and additional fields according to DE102013013140the improved operation of fusion power stations. according to invention HB11 fusion fuel be used in place of the ancillary areas with difficult to be introduced in order to achieve high- energy outputs auxiliary fields

公开（公告）号：[DE102015002507A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4926bblNjJF9fZBG6crWiVjY8&local=zh)

公开（公告）日：2016-09-08

申请号：DE102015002507

申请日：2015-03-02

申请人：Heinrich Hora

法律状态：法律状态公告日：20171003;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102015002507A1

**100、EAST托卡马克远红外激光偏振干涉仪中频值稳频方法**

摘要：EAST托卡马克远红外偏振激光干涉仪中频值稳频方法属于托卡马克实验诊断的远红外激光偏振干涉仪中频稳频技术领域，其特征在于, 在以单片机为核心的稳频系统中，以与当前中频信号的中心频率值在设定周期内的平均值与设定值之间的偏差Δf为基础，调用PID算法来求取控制激光器的控制器上的施加在压电陶瓷上的电压Vp，使得在30分钟内中频信号中心频率在设定值850kHz下的波动幅度小于5kHz，其变化幅度小于6％，比没有稳定系统的参与时中频信号的中心频率变化了90kHz要稳定得多，使得在较长时间范围内聚变等离子体内部磁场测量时穿过等离子体的两束偏振光的相位差的误差从0.002°降为0.0001°，频差更稳定。

公开（公告）号：[CN104795725A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jjYibEPAz8kWr4kAd0KKkg&local=zh)

公开（公告）日：2015-07-22

申请号：CN201510024821.3

申请日：2015-01-19

申请人：清华大学; 中国科学院合肥物质科学研究院

法律状态：法律状态公告日：20150722;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150819;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01S 3/139;申请日:20150119;?

法律状态公告日：20171219;?

法律状态：授权;?

描述信息：授权;?

**101、Device for generative manufacture three-dimensional components**

摘要：Device for the additive production of three-dimensional components (2), namely a laser melting device or laser sintering device, in which a component (2) is produced by successive solidifying of individual layers (3) made from solidifiable construction material, by the effect of radiation (4), through melting of the construction material (5), wherein the dimensions and/or temperature of the melt area (6) generated by a point-shaped or line-shaped energy input can be captured by a sensor device (8) of a process monitoring system, and sensor values for evaluation of a component quality can be deduced therefrom, wherein the radiation (9) created by the melt area and used for the generation of the sensor values passes through the scanner used for the melt energy input, and is guided from there to the sensor device (8) of the process monitoring system, wherein an optical focus tracking device (20) is arranged in the radiation path used for generation of the sensor values between the scanner (10) and the sensor device (8) of the process monitoring system, which optical focus tracking device can be controlled by electronic machine data for focus tracking.

公开（公告）号：[DE102015000102A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc49245ytcPddj8ITYk6gsgoZEw&local=zh)

公开（公告）日：2016-07-14

申请号：DE102015000102

申请日：2015-01-14

申请人：CL Schutzrechtsverwaltungs GmbH

法律状态：法律状态公告日：20160429;?

状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102015000102A1法律状态公告日：20161129;?

状态代码：R079;?

法律状态：AMENDMENT OF IPC MAIN CLASS描述信息：Docdb Publication Number:; DE102015000102A1Free Text Description:;PREVIOUS MAIN CLASS: B29C0067000000Ipc:;B29C0064106000

**102、, Arrangement for a fusion reactor after inertia inclusion Method"**

摘要：Fusion reactor characterized in that by the high electron source (17) generated electron current (16), by the electrostatically or electromagnetically effective lens has the flows (11) can be focused, through the reaction space (6), the preferably a tubular or spherical vacuum chamber (2), in the direction anode (19), the chemically physically with the refractive transmission X-ray lens (18) having a thickness in the nm range is connected by the electrons of the electron current and therefore (16) is penetrated, are focused to be ignited are focused to generate some μm n penetrate into the anode then migrate (19) and here the X-rays (21), via the focusing effect of the refractive X-ray lens the (18) in direction reaction center (15), wherein the via the deuterium injector (9) and the tritium injector (10) in the pipe connection (7) by ionisation by impact, the electrons of the electron current injected reactants deuterium and tritium (16) ionized gases in the direction cathode as an effective high performance electron source (17), or her of the electrostatically or electromagnetically effective lens (8) in direction reaction center (15) and here in a plane placed over at least three (3, 14, ) high performance laser.

公开（公告）号：[DE102015000116A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc49245ytcPddj8IeLvzGA1xH9L&local=zh)

公开（公告）日：2016-07-07

申请号：DE102015000116

申请日：2015-01-07

申请人：Rüdiger Ufermann

法律状态：法律状态公告日：20150107;?

状态代码：R086;?

法律状态：NON-BINDING DECLARATION OF LICENSING INTEREST描述信息：Docdb Publication Number:; DE102015000116A1法律状态公告日：20170801;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102015000116A1

**103、激光受激发射损耗三维超分辨分光瞳差动共焦成像方法与装置**

摘要：本发明属于光学精密成像测试技术领域，涉及一种激光受激发射损耗三维超分辨分光瞳差动共焦成像方法与装置。本发明的核心思想是将分光瞳激光差动共焦探测技术和激光受激发射损耗成像技术有机融合，集成了分光瞳差动共焦探测技术的高分辨、高散射抑制特性，通过激光差动共焦技术提高轴向分辨能力，通过受激发射损耗显微技术改善横向分辨能力，继而提高系统的空间分辨力和抗样品散射能力。该装置包括激发激光系统、第一双色镜、四分之一波片、测量物镜、样品、扫描工作台、淬灭激光系统、光束整形系统、第二双色镜、分光瞳差动共焦探测系统及数据处理模块。本发明具有高空间分辨、高散射样品抑制的三维超分辨成像与检测能力，在微纳米技术领域具有广泛的应用前景。

公开（公告）号：[CN104482880A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iDfwfbQaF9O2r4kAd0KKkg&local=zh)

公开（公告）日：2015-04-01

申请号：CN201410790656.8

申请日：2014-12-17

申请人：北京理工大学

法律状态：法律状态公告日：20150401;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150429;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01B 11/24;申请日:20141217;?

法律状态公告日：20170711;?

法律状态：授权;?

描述信息：授权;?

**104、激光受激发射损耗三维超分辨差动共焦成像方法与装置**

摘要：本发明属于光学精密成像测试技术领域，涉及一种激光受激发射损耗三维超分辨差动共焦成像方法与装置。本发明的核心思想是将激光差动共焦探测技术和激光受激发射损耗成像技术有机融合，通过激光差动共焦技术提高轴向分辨能力，通过受激发射损耗显微技术改善横向分辨能力，继而提高系统的空间分辨力。该装置包括激发激光系统、第一双色镜、四分之一波片、物镜、样品、扫描工作台、淬灭激光系统、光束整形系统、第二双色镜、差动共焦探测系统及数据处理系统。本发明具有高空间分辨的三维超分辨成像与检测能力，在微纳米技术领域具有广泛的应用前景。

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申请日：2014-12-17

申请人：北京理工大学

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描述信息：公开;?

法律状态公告日：20150429;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01B 11/24;申请日:20141217;?

法律状态公告日：20170801;?

法律状态：授权;?

描述信息：授权;?

**105、用于通过基于激光的核聚变生成电能的方法以及激光聚变反应堆**

摘要：一种用于生成电能的方法，其包括以下步骤：提供聚变燃料(1)，所述聚变燃料(1)被保持在圆柱形反应室(2)内的磁场中；在所述聚变燃料(1)中引发核聚变，其中聚变火焰是由具有小于10ps的脉冲持续时间和大于1拍瓦的功率的聚变激光脉冲(4)产生；以及将在所述核聚变期间从所产生的原子核释放的能量转化成发电厂电力，其中所述磁场具有大于或等于1千特斯拉的场强，并且所述核聚变对于产生所述聚变火焰的所述聚变激光脉冲(4)的每激光能量具有大于500的能量产量。本发明还描述了被配置用于生成电能的核聚变反应堆。

公开（公告）号：[CN106463183A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gqqBVwGrFT12r4kAd0KKkg&local=zh)

公开（公告）日：2017-02-22

申请号：CN201480077324.3

申请日：2014-12-05

申请人：海因里希 霍拉; UJK管理股份有限公司

法律状态：法律状态公告日：20170222;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170322;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 3/00;申请日:20141205;?

法律状态公告日：20180427;?

法律状态：授权;?

描述信息：授权;?

**106、Method for generating electrical energy by laser-based nuclear fusion and laser fusion reactor**

摘要：A method for generating electrical energy, comprising the steps of providing a fusion fuel (1), the fusion fuel (1) being held in a magnetic field within a cylindrical reaction chamber (2), initiating nuclear fusion in the fusion fuel (1), in which a fusion flame is produced by fusion laser pulses (4) having a pulse duration of less than 10 ps and a power of more than 1 petawatt, and converting the energy that is released during the nuclear fusion from the nuclei that are produced into power plant power, wherein the magnetic field has a field strength which is greater than or equal to 1 kilotesla and the nuclear fusion has an energy yield of more than 500 per laser energy of the fusion laser pulses (4) that produce the fusion flame. Also described is a nuclear fusion reactor which is configured for generating electrical energy.

公开（公告）号：[GB201617367D0](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FP9MTpgV1%2BxKLMeYrAgyQSz&local=zh)

公开（公告）日：2016-11-30

申请号：GB1617367

申请日：2014-12-05

申请人：HORA HEINRICH AND UJK MANAGEMENT GMBH

法律状态：法律状态公告日：20161116;?

状态代码：789A;?

法律状态：REQUEST FOR PUBLICATION OF TRANSLATION (SECT. 89(A)/1977)描述信息：Docdb Publication Number:; GB 201617367D0Designated State Authority:;GBCorresponding Publication Number:;2015144190Corresponding Authority:;WO

**107、Using the laser beam generating method by laser fusion reactors and nuclear fusion**

摘要：A method for generating electrical energy, comprising the steps of providing a fusion fuel (1), the fusion fuel (1) being held in a magnetic field within a cylindrical reaction chamber (2), initiating nuclear fusion in the fusion fuel (1), in which a fusion flame is produced by fusion laser pulses (4) having a pulse duration of less than 10 ps and a power of more than 1 petawatt, and converting the energy that is released during the nuclear fusion from the nuclei that are produced into power plant power, wherein the magnetic field has a field strength which is greater than or equal to 1 kilotesla and the nuclear fusion has an energy yield of more than 500 per laser energy of the fusion laser pulses (4) that produce the fusion flame. Also described is a nuclear fusion reactor which is configured for generating electrical energy.

公开（公告）号：[JP2017513018A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYrQvN42b9gEWGuxfaWZrjp&local=zh)

公开（公告）日：2017-05-25

申请号：JP2017500128

申请日：2014-12-05

申请人：ホラ、ハインリッヒ; ユージェイケイ マネージメント ゲーエムベーハー

法律状态：法律状态公告日：20171128;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2017513018A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20171128法律状态公告日：20180130;?

状态代码：RD02;?

法律状态：NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2017513018A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7422Effective Date:;20180130

**108、Method for Generating Electrical Energy by Laser-Based Nuclear Fusion and Laser Reactor**

摘要：A method for generating electrical energy, comprising the steps of providing a fusion fuel (1), the fusion fuel (1) being held in a magnetic field within a cylindrical reaction chamber (2), initiating nuclear fusion in the fusion fuel (1), in which a fusion flame is produced by fusion laser pulses (4) having a pulse duration of less than 10 ps and a power of more than 1 petawatt, and converting the energy that is released during the nuclear fusion from the nuclei that are produced into power plant power, wherein the magnetic field has a field strength which is greater than or equal to 1 kilotesla and the nuclear fusion has an energy yield of more than 500 per laser energy of the fusion laser pulses (4) that produce the fusion flame. Also described is a nuclear fusion reactor which is configured for generating electrical energy.

公开（公告）号：[US20170125129A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGvWBPWwaHONcO9V9sT8HBf&local=zh)

公开（公告）日：2017-05-04

申请号：US15126740

申请日：2014-12-05

申请人：Heinrich Hora; UJK Management GMBH

**109、METHOD FOR GENERATING ELECTRICAL ENERGY BY LASER-BASED NUCLEAR FUSION AND LASER FUSION REACTOR**

摘要：A method for generating electrical energy comprises the steps of providing a fusion fuel (1), wherein the fusion fuel (1) is held in a magnetic field in a cylindrical reaction space (2), initiating nuclear fusion in the fusion fuel (1), wherein a fusion flame is produced by fusion laser pulses (4) with a pulse duration of less than 10 ps and a power of more than 1 petawatt, and converting the energy released during the nuclear fusion from the nuclei produced into power plant power, wherein the magnetic field has a field strength which is greater than or equal to 1 kilotesla, and the nuclear fusion has an energy efficiency of more than 500 per laser energy initiating the fusion flame of the fusion laser pulses (4). A nuclear fusion reactor which is configured for generating electrical energy is also described.

公开（公告）号：[WO2015144190A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU7st%2FA%2BRytZgfNkPtwy7rjn&local=zh)

公开（公告）日：2015-10-01

申请号：WOEP14003281

申请日：2014-12-05

申请人：HORA HEINRICH; UJK MAN GMBH

法律状态：法律状态公告日：20151111;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;14820743Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20160916;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;2017500128Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20160916;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;15126740Corresponding Authority:;US法律状态公告日：20160923;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;112014006495Corresponding Authority:;DE法律状态公告日：20161013;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;201617367Corresponding Authority:;GBCorresponding Kind:;AFree Text Description:;PCT FILING DATE = 20141205法律状态公告日：20161013;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;1617367.6Corresponding Authority:;GB法律状态公告日：20161208;?

状态代码：REG;?

法律状态：REFERENCE TO NATIONAL CODE描述信息：Docdb Publication Number:; WO 2015144190A1Designated State Authority:;DEDesignated State Event Code:;R225Designated State Description:;PUBLICATION OF MENTION OF WO PUBLICATIONCorresponding Publication Number:;112014006495Corresponding Authority:;DE法律状态公告日：20170419;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2015144190A1Corresponding Publication Number:;14820743Corresponding Authority:;EPCorresponding Kind:;A1

**110、一种低温多晶硅薄膜的制备方法**

摘要：本发明公开了一种低温多晶硅薄膜的制备方法，具体步骤为：在基板上先后形成缓冲层和非晶硅层；通过元素掺杂技术对非晶硅层进行区域选择性掺杂，在非晶硅层中形成掺杂区域和非掺杂区域相间的周期性结构；对上述非晶硅层进行激光晶化，得到低温多晶硅薄膜。非晶硅层接受激光束照射，掺杂区域和非掺杂区域因对激光能量吸收能力不同而形成完全熔融区域和非完全熔融区域，完全熔融区域和非完全熔融区域存在横向温度梯度，从而促进和控制晶核的超级横向晶化，增大了晶粒尺寸。本发明通过掺杂的方法，构建超级横向晶化条件，有利于成长大尺寸的晶粒；同时具有改变非晶硅层吸收能力的作用，采用固体激光器等廉价激光器用于晶化、降低了制备成本。

公开（公告）号：[CN104505340A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gIt3wjUEq%2BIGr4kAd0KKkg&local=zh)

公开（公告）日：2015-04-08

申请号：CN201410702037.9

申请日：2014-11-28

申请人：信利(惠州)智能显示有限公司

法律状态：法律状态公告日：20150408;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150617;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01L 21/205;申请日:20141128;?

法律状态公告日：20171226;?

法律状态：授权;?

描述信息：授权;?

**111、一种利用超快激光实现难连接材料之间连接的方法**

摘要：本发明公开了一种利用超快激光实现难连接材料之间连接的方法。该方法包括如下步骤：(1)用超短脉冲激光烧蚀材料A，经过激光烧蚀去除，在所述材料A的表面得到微纳米结构；(2)用腐蚀液去除所述材料A的具有所述微纳米结构的表面上的杂质；(3)在惰性气氛或真空环境中，使材料B发生变形进而发生并流动填充所述材料A的所述微纳米结构，然后通过机械结合的方式使所述材料A与所述材料B进行结合，即实现两种材料之间的连接；所述材料A的熔点和硬度均高于所述材料B。本发明方法为一种灵活、高效率、适用范围广的增强材料连接强度的新方法。本发明的应用包括但不限于核聚变反应堆面向等离子体材料、电接触材料、热沉材料、电子封装和新型复合材料的开发。

公开（公告）号：[CN104439956A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hscFz5DTneKmr4kAd0KKkg&local=zh)

公开（公告）日：2015-03-25

申请号：CN201410658225.6

申请日：2014-11-18

申请人：清华大学

法律状态：法律状态公告日：20150422;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23P 15/00;申请日:20141118;?

法律状态公告日：20150325;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170419;?

法律状态：授权;?

描述信息：授权;?

**112、LASER AMPLIFICATION DEVICE, LASER DEVICE, AND LASER NUCLEAR FUSION REACTOR**

摘要：PROBLEM TO BE SOLVED : To provide a laser amplification device capable of outputting a high output laser beam, a laser device including the same, and a laser nuclear fusion reactor.SOLUTION : A laser amplification device includes : a plurality of tabular laser medium components M1 to M4 disposed by being lined up in a thickness direction; and prisms P1 to P3 for optically coupling a laser medium component. Each individual laser medium component includes : a principal plane on which seed light is incident; and side faces surrounding the principal plane. Among a plurality of laser medium components, at least from one side face of a specific laser medium component, excitation light is incident. The excitation light is incident through a prism on a side face of the neighboring laser medium component.SELECTED DRAWING : Figure 1COPYRIGHT : (C)2016, JPO&INPIT

公开（公告）号：[JP2016100359A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXbx9whKtPHWJmGuxfaWZrjp&local=zh)

公开（公告）日：2016-05-30

申请号：JP2014233729

申请日：2014-11-18

申请人：HAMAMATSU PHOTONICS KK

法律状态：法律状态公告日：20170627;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2016100359A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20170627法律状态公告日：20171219;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2016100359A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20171219法律状态公告日：20180214;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2016100359A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20180214法律状态公告日：20180508;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2016100359A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20180508

**113、Method and apparatus for controlling exposure of a selective laser fusion devicelaser inter -or**

摘要：A method for controlling the exposure of a selective laser sintering or laser melting apparatus. The method includes providing a selective laser sintering apparatus or laser melting apparatus that uses successive solidification of layers of a powder-type construction material that can be solidified using radiation. The apparatus comprises an irradiation device for irradiating layers of the construction material that has a plurality of scanners that can separately be actuated, simultaneously irradiating the construction material, the separate detection of irradiation times of each scanner and/or the irradiation areas detected by each scanner, and storing the detected irradiation times and/or irradiation areas; comparing the irradiation times and/or irradiation areas of the scanners with each other; re-determining the surface sections of a powder layer to be irradiated by each scanner so the irradiation times for each scanner are approximated to each other and/or the irradiation areas of each scanner are aligned.

公开（公告）号：[DE102014016679A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4924snvd9rbxaokBQ%2BeMz7k99&local=zh)

公开（公告）日：2016-05-12

申请号：DE102014016679

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申请人：CL Schutzrechtsverwaltungs GmbH

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状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102014016679A1法律状态公告日：20151021;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014016679A1法律状态公告日：20180627;?

状态代码：R083;?

法律状态：AMENDMENT OF/ADDITIONS TO INVENTOR(S)描述信息：Docdb Publication Number:; DE102014016679A1

**114、强激光涡旋反射镜**

摘要：一种强激光涡旋反射镜，其特征在于：在光学玻璃或熔融石英基底上通过光刻的方法刻蚀出N瓣扇区N个台阶的微结构，第n个台阶对应的刻蚀深度为其中l为该涡旋反射镜携带涡旋的拓扑荷；n＝1, 2, …, N，N取为2的高阶幂次值，如N＝4，8，16，32等。然后通过在该微结构上镀有45度入射下的高效率、高损伤阈值介质反射膜即构成强激光涡旋反射镜。从而使得45度入射的强激光通过该涡旋反射镜反射后变成45度出射的携带拓扑荷为l的涡旋强激光。这种具有涡旋相位波前的超强激光对于惯性约束核聚变具有重要的科学研究意义及潜在的实用价值。

公开（公告）号：[CN104297825A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2g6BSY8E4IDhGr4kAd0KKkg&local=zh)

公开（公告）日：2015-01-21

申请号：CN201410553468.3

申请日：2014-10-17

申请人：中国科学院上海光学精密机械研究所

法律状态：法律状态公告日：20150218;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 5/08;申请日:20141017;?

法律状态公告日：20150121;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20170405;?

法律状态：授权;?

描述信息：授权;?

**115、Method for setting up and adjusting a building board**

摘要：The invention relates to a method for setting up and adjusting a building board [...]laser fusion device in a 1, 3 or 4 in which powdery Building material onto a surface of a building panel building material layer already solidified by the action of radiant energy and a 25 applied, in particular laser radiation selectively for the production of a component is solidified 2, wherein before the beginning of the construction process the building board is placed on a vertically movable carrier [...]laser fusion plant 5 of 4, wherein the upwardly facing surface of the building board 5 4 forward or backward after it is applied to the carrier by a camera device 20 is provided with a visible optical pattern 21, the building material with the pattern 20 provided with 4 1 3 in the SLM-Device [...] building panel is coated in such a way that the surface of the building board 25 is covered from a homogeneous building material layer 4 subsequently by successively incrementally raising of the carrier 5 in layers wherein the powder is at or after each drawing a 25 building material layer withdrawn and the layer 21 is detected by the camera device 25 the remaining building material layer, by resuming the layerwise drawing water powder layers so long, to 26 the defined by a building material remainder layer, on the upwardly facing surface of the building board is recognizable by the camera device 20 21 4 applied pattern, by starting the construction process and/or a further applied thereon by solidifying the building material remainder layerbuilding material layer 26, after the camera device 20 has detected by the defined pattern 26 translucent building material remainder layer 21.

公开（公告）号：[DE102014014888A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4925Lvkmdu%2FGCjbvW7A6HhRCR&local=zh)

公开（公告）日：2016-04-14

申请号：DE102014014888

申请日：2014-10-13

申请人：CL Schutzrechtsverwaltungs GmbH

法律状态：法律状态公告日：20141031;?

状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102014014888A1法律状态公告日：20150915;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014014888A1

**116、Device For Neutron Generation**

摘要：The present invention relates to a neutron generator. A micro-nozzle is used to spray low-temperature heavy water into a vacuum chamber at high pressure to generate heavy water snow particles having a very wide outer area to ensure excellent laser beam absorption efficiency. The heavy water snow particles are used as a projection target of a laser beam to increase the temperature of plasma to ensure high energy distribution of the deuterium ions generated in a Coulomb explosion to increase the nuclear fusion reaction probability of the deuterium, thereby increasing the neutron emission amount. The present invention can also collect the remaining snow and vapor in a low-temperature cooling container on the floor in the form of ice to remove the collected snow and vapor, thereby constantly maintaining the degree of vacuum in the vacuum chamber. Accordingly, the present invention can generate neutrons reliably and consistently.COPYRIGHT KIPO 2016

公开（公告）号：[KR101574203B1](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkcztX8aML%2BAXyUxl3Z10vNpVJ&local=zh)

公开（公告）日：2015-11-27

申请号：KR1020140137530

申请日：2014-10-13

申请人：KOREA ATOMIC ENERGY RESEARCH INSTITUTE

法律状态：法律状态公告日：20151112;?

状态效果：+;?

状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 101574203B1法律状态公告日：20151127;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101574203B1

**117、一种自支撑单级衍射光栅的制作方法**

摘要：本发明提供了一种自支撑单级衍射光栅的制作方法。该方法是采用聚焦离子束直写技术在不透光金属自支撑吸收体薄膜上加工出单级衍射透射式光栅。通过设置图形放大倍数、加工电压、加工电流和加工深度来控制单级衍射光栅特征结构的几何精度；利用图形的高精度拼接技术来扩大单级衍射光栅的有效面积，从而满足单级衍射光栅对其几何参数精度和点阵结构面积的要求。聚焦离子束直写技术无需掩膜，是由聚焦状态的离子束对加工表面的点状轰击来达到加工目的，具有无需支撑膜、工艺简化、操作方便等优点。采用本发明制作的自支撑单级衍射量子点阵光栅在惯性约束核聚变激光等离子体诊断和光谱分析测试等领域具有极其重要的应用价值。

公开（公告）号：[CN104181624A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jCUKI8iJDdRmr4kAd0KKkg&local=zh)

公开（公告）日：2014-12-03

申请号：CN201410448329.4

申请日：2014-09-04

申请人：中国工程物理研究院激光聚变研究中心

法律状态：法律状态公告日：20141203;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20141231;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 5/18;申请日:20140904;?

法律状态公告日：20170606;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G02B 5/18申请公布日:20141203;?

**118、SAFETY MONITORING SYSTEM OF NUCLEAR EQUIPMENT WITH INTERGRATING SYSTEM OF LASER ULTRASONIC AND SHEAROGRAPHY**

摘要：Disclosed is a safety diagnosing system for a nuclear plant pipe integrated with a laser ultrasonic wave and a shearography machine. The safety diagnosing system for a nuclear plant pipe integrated with a laser ultrasonic wave and a shearography machine according to an embodiment of the present invention comprises : a pulse laser oscillator to oscillate a pulse laser beam emitted onto a target object to generate an ultrasonic wave; a first light division unit to divide the pulse laser beam into a first laser beam and a second laser beam before the pulse laser beam is emitted onto the target object; a CCD camera unit to receive the first laser beam reflected from the target object to acquire deformation information of the target object through a shearography machine; a continuous wave oscillator to oscillate a continuous wave laser beam to an area identical to an area onto which the second laser beam is emitted to detect the ultrasonic wave; a laser interferometer unit to detect the ultrasonic wave propagating inside the target object in accordance with a change in light intensity caused by interfering the second laser beam reflected from the target object and the continuous wave laser beam; and an information processing unit to measure a location, a size, and a depth of a defect of the target object based on the deformation information acquired by the CCD camera unit and ultrasonic wave information acquired by the laser interferometer unit.COPYRIGHT KIPO 2015

公开（公告）号：[KR101538908B1](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkcztjfVpvcvCEDhl3Z10vNpVJ&local=zh)

公开（公告）日：2015-07-17

申请号：KR1020140113789

申请日：2014-08-29

申请人：LED PACK; INDUSTRIAL COOPERATION FOUNDATION CHONBUK NATIONAL UNIVERSITY

法律状态：法律状态公告日：20150716;?

状态效果：+;?

状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 101538908B1法律状态公告日：20150717;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101538908B1

**119、低能大流强材料辐照装置**

摘要：本发明公开了一种低能大流强材料辐照装置，其技术方案的要点是：它包括送气系统、气压监测装置2、等离子体产生系统、样品台13、激光加热系统6、测温系统9、真空抽气系统5、水冷循环系统4和供电系统。利用本发明对材料表面进行处理，可以有效地模拟核聚变堆的辐照环境进而研究辐照后材料的的特性、结构以及功能的变化。

公开（公告）号：[CN104157321A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gtpyG6sZJvOmr4kAd0KKkg&local=zh)

公开（公告）日：2014-11-19

申请号：CN201410378270.6

申请日：2014-08-04

申请人：大连民族学院

法律状态：法律状态公告日：20141119;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20141217;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21K 5/00;申请日:20140804;?

法律状态公告日：20170215;?

法律状态：授权;?

描述信息：授权;?

**120、Device for generative manufacture three-dimensional objects**

摘要：The invention relates to a device for generative manufacture of three-dimensional objects from powdered build material 1 2 3 in particular, including the use of radiant energy, especially [...]laser fusion device , with a housing 4 and at least one housed therein process chamber 5, in which at least one is arranged with a 6 elevatorshiftable platform build chamber, to which the building material can be applied by means of radiant energy provided to solidify and wherein a beam 7 3 8 9 a radiation source is directed via a scanner building material layer on the be fused, and in which at least one 10 for applying the build material on to the construction platform building material creation device or an already solidified or part-solidifiedbuilding material layer is provided, wherein the device has a plurality of handling stations 1 15, and to be substantially adjacent to one another are arranged individually or together as the handling modules opposite to the at least one build chamber slidably, rotatably or pivotably, but are arranged coupled to the latter.

公开（公告）号：[DE102014010931A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4926aqwjX0itDnFsiAp%2FtqBpy&local=zh)

公开（公告）日：2016-01-28

申请号：DE102014010931

申请日：2014-07-28

申请人：CL Schutzrechtsverwaltungs GmbH

法律状态：法律状态公告日：20140818;?

状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102014010931A1法律状态公告日：20150521;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014010931A1

**121、LASER NUCLEAR FUSION FUEL CONTAINER MANUFACTURING METHOD**

摘要：PROBLEM TO BE SOLVED : To provide a laser nuclear fusion fuel container that is suited for mass production and that can be manufactured as a multilayer fuel container high in surface accuracy and excellent in uniformity among layers.SOLUTION : A laser nuclear fusion fuel container manufacturing method comprises : a liquid droplet forming step of simultaneously discharging water 8 from a first nozzle 6 and organic liquids 9A and 9B each containing an organic solvent from a second nozzle 7 into a stabilization liquid 13 using a combined nozzle 3 that includes the first nozzle 6 and the second nozzle 7 having a discharge port surrounding a discharge port 61 of the first nozzle 6, and forming liquid droplets 12 in each of which the water 8 is covered with the organic liquids 9A, 9B; an organic solvent removing step of removing the organic solvent from the liquid droplets 12; and a water removing step of removing the water 8 covered with the organic liquids 9A, 9B forming the liquid droplets 12. The organic liquids 9A, 9B are liquids obtained by dissolving a first organic polymer and a second organic polymer in the organic solvent, and the first organic polymer and the second organic polymer capable of phase separation from each other are used.COPYRIGHT : (C)2016, JPO&INPIT

公开（公告）号：[JP2016014626A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZCn9Eg5RjjbGGuxfaWZrjp&local=zh)

公开（公告）日：2016-01-28

申请号：JP2014137679

申请日：2014-07-03

申请人：HAMAMATSU PHOTONICS KK

法律状态：法律状态公告日：20170228;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2016014626A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20170228法律状态公告日：20180206;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2016014626A 法律状态公告日：20180220;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2016014626A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20180220法律状态公告日：20180301;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2016014626A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20180222法律状态公告日：20180302;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2016014626A Corresponding Publication Number:;6297938Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150

**122、**

摘要：The invention relates to a method for carrying out a thermonuclear synthesis reaction and to devices for carrying out said method, and can be used in power engineering, in transport, and also for protecting the Earth from meteorites and asteroids. The essence of the method consists in that, first of all, negatively charged deuterium ions are accelerated to a high velocity under the action of an electric field due to a spark discharge. The direction of movement of some of the deuterium ions is changed to the opposite direction by a laser radiation pulse. Movement of said ions towards the main portion of the ions causes a thermonuclear synthesis reaction. The time of penetration of the first laser radiation beams into the reaction zone is synchronized with the first deuterium ions with the aid of a movable conical prism arranged in the centre of a working-medium internal cavity of a laser assembly in the thermonuclear reactor. Use of this thermonuclear reactor allows a move away from ecologically harmful power plants. The deflecting device comprises a steel cylinder, in the centre of which an immovable conical prism and a laser assembly are located. The spark discharge is used for ionizing the deuterium and accelerating the ions, and for exciting the working medium of the laser, which causes a thermonuclear reaction, leading to detonation of the steel cylinder and to a change in the motion trajectory of the meteorite or asteroid.

公开（公告）号：[UA96412U](https://www.incopat.com/detail/init2?formerQuery=SsZN083WnQrWYyKQhFqwQA%3D%3D&local=zh)

公开（公告）日：2015-02-10

申请号：UA201407498

申请日：2014-07-03

**123、一种在线清洗和检测聚变装置第一镜的方法与装置**

摘要：本发明属于一种核聚变等离子体诊断系统，具体涉及一种基于激光和光学技术的真空室中光学元件的在线清洗方法和装置。它包括脉冲激光器、两维振镜系统、CCD相机和辅助光源及光路传输系统，其中，两维振镜系统、光束变换系统、双色分束器、聚变装置诊断窗口、第一镜、聚变装置真空室沿着一条直线设置，聚变装置真空室上开有聚变装置诊断窗口，两维振镜系统的一侧设置有脉冲激光器，双色分束器的一侧设有辅助光源，辅助光源的外侧设有CCD相机。其优点是，通过选择合适的激光参数，利用激光与第一镜表面污染物相互作用，产生热膨胀，在短的时间内爆炸并气化蒸发，脱离镜面达到清洁作用。

公开（公告）号：[CN105195468A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iO4D4J4GnR4Gr4kAd0KKkg&local=zh)

公开（公告）日：2015-12-30

申请号：CN201410294098.6

申请日：2014-06-25

申请人：核工业西南物理研究院

法律状态：法律状态公告日：20151230;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20160127;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B08B 7/00;申请日:20140625;?

法律状态公告日：20170818;?

法律状态：授权;?

描述信息：授权;?

**124、Device for generative manufacture three-dimensional objects from powdered build material**

摘要：A device for the additive manufacturing of three-dimensional objects from powdery construction material by introducing radiation energy, in particular a laser sintering and/or laser melting device, comprising at least one housing having a process chamber, in which process chamber a construction space or an exchangeable container having a vertically movable construction platform is arranged, to which construction platform the powdery construction material provided for solidification by radiation energy can be applied, characterized by a memory chip, which can be removed from the process chamber of the device with the exchangeable container and/or the constructed object and which can be read out by an electronic reading device and on which production data, which belong to the additive manufacturing process, and/or subsequent processing steps and/or processing stations for automatically controlling processing apparatuses and/or transport paths and/or storage positions and/or data from controlling active elements of the exchangeable container itself are stored.

公开（公告）号：[DE102014007408A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4924Lpeim1dMM1aWH%2BscXh2G%2B&local=zh)

公开（公告）日：2015-11-26

申请号：DE102014007408

申请日：2014-05-21

申请人：CL Schutzrechtsverwaltungs GmbH

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状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102014007408A1法律状态公告日：20150722;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014007408A1

**125、APPLICATION OF COMPRESSED MAGNETIC FIELDS TO THE IGNITION AND THERMONUCLEAR BURN OF INERTIAL CONFINEMENT FUSION TARGETS**

摘要：Application of axial seed magnetic fields in the range 20-100 T that compress to greater than 10, 000 T (100 MG) under typical NIF implosion conditions may significantly relax the conditions required for ignition and propagating burn in NIF ignition targets that are degraded by hydrodynamic instabilities. Such magnetic fields can : (a) permit the recovery of ignition, or at least significant alpha particle heating, in submarginal NIF targets that would otherwise fail because of adverse hydrodynamic instability growth, (b) permit the attainment of ignition in conventional cryogenic layered solid-DT targets redesigned to operate under reduced drive conditions, (c) permit the attainment of volumetric ignition in simpler, room-temperature single-shell DT gas capsules, and (d) ameliorate adverse hohlraum plasma conditions during laser drive and capsule compression. In general, an applied magnetic field should always improve the ignition condition for any NIF ignition target design.

公开（公告）号：[US20140348283A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGGrNcDu8cBkoqqxKR9kPS0&local=zh)

公开（公告）日：2014-11-27

申请号：US14278611

申请日：2014-05-15

申请人：Lawrence Livermore National Security LLC

法律状态：法律状态公告日：20140516;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2014348283A1New Owner:;LAWRENCE LIVERMORE NATIONAL SECURITY, LLC, CALIFORFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:PERKINS, LINDSAY JOHN;HAMMER, JIM H.;MOODY, JOHN D.;AND OTHERS;SIGNING DATES FROM 20140428 TO 20140514;REEL/FRAME:032912/0446法律状态公告日：20150102;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2014348283A1New Owner:;U.S. DEPARTMENT OF ENERGY, DISTRICT OF COLUMBIAFree Text Description:;CONFIRMATORY LICENSE;ASSIGNOR:LAWRENCE LIVERMORE NATIONAL SECURITY, LLC;REEL/FRAME:034614/0353Effective Date:;20140520

**126、A PROCESS FOR MAKING NUCLEAR FUSION ENERGY**

摘要：A process for making nuclear fusion occur by compressing a prescribed fusion-fuel using lasers (22) or other means. The fusion fuel comprises a catalytic material mixed with a deuteride of an alkaline earth metal or alkali metal. The catalytic material may comprise a mixture or a compound containing red phosphorus, and a transition metal from Period 4 or Period 5 of the Periodic table. The fusion-fuel is cheap and easy to manufacture, and the technology for compression is already available. There is a realistic prospect of commercially producing nuclear fusion energy.

公开（公告）号：[EP2994916A1](https://www.incopat.com/detail/init2?formerQuery=1GFhD3KgFnDPsLXmnWjnLfR0OjOTHMZL&local=zh)

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申请号：EP14723852

申请日：2014-05-06

申请人：Wayte Richard Charles

法律状态：法律状态公告日：20160316;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2994916A1Effective Date:;20150908法律状态公告日：20160316;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2994916A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20160316;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 2994916A1Countries Concerned:;BA;ME;法律状态公告日：20160810;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2994916A1法律状态公告日：20170524;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 2994916A1Effective Date:;20170502法律状态公告日：20170829;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;DEDesignated State Event Code:;R079Designated State Description:;AMENDMENT OF IPC MAIN CLASSCorresponding Publication Number:;602014022314Corresponding Authority:;DEFree Text Description:;PREVIOUS MAIN CLASS: G21B0001190000Ipc:;G21B0003000000法律状态公告日：20171004;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2994916A1Ipc:;G21B 3/00 20060101AFI20170829BHEP法律状态公告日：20171108;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2994916A1Effective Date:;20171012法律状态公告日：20180314;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2994916A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180314;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20180315;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20180315;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;979594Corresponding Authority:;ATEffective Date:;20180315法律状态公告日：20180404;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20180412;?

状态代码：REG;?

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状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;5法律状态公告日：20180718;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20180314法律状态公告日：20180725;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180614法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;CYFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180731;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ESPayment Date:;20180601Fee Payment-year:;5法律状态公告日：20180731;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;DEPayment Date:;20180518Fee Payment-year:;5法律状态公告日：20180815;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;979594Corresponding Authority:;ATEffective Date:;20180314法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180614法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;RSFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180615法律状态公告日：20180831;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;FRPayment Date:;20180517Fee Payment-year:;5法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ROFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;EEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ALFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ITPayment Date:;20180720Fee Payment-year:;5法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;GBPayment Date:;20180625Fee Payment-year:;5法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;SKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;SMFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;CZFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180314法律状态公告日：20181214;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;CHDesignated State Event Code:;PLDesignated State Description:;PATENT CEASED法律状态公告日：20181217;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;DEDesignated State Event Code:;R097Designated State Description:;NO OPPOSITION FILED AGAINST GRANTED PATENT, OR EPO OPPOSITION PROCEEDINGS CONCLUDED WITHOUT DECISIONCorresponding Publication Number:;602014022314Corresponding Authority:;DE法律状态公告日：20181231;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2994916A1Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180716

**127、A Process for Making Nuclear Fusion Energy**

摘要：A process for making nuclear fusion occur by compressing a prescribed fusion-fuel using lasers (22) or other means. The fusion fuel comprises a catalytic material mixed with a deuteride of an alkaline earth metal or alkali metal. The catalytic material may comprise a mixture or a compound containing red phosphorus, and a transition metal from Period 4 or Period 5 of the Periodic table. The fusion-fuel is cheap and easy to manufacture, and the technology for compression is already available. There is a realistic prospect of commercially producing nuclear fusion energy.

公开（公告）号：[US20160307650A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rFNa4JDsCQMmcPRaceoSxX2&local=zh)

公开（公告）日：2016-10-20

申请号：US14778569

申请日：2014-05-06

申请人：Richard Charles WAYTE

**128、A PROCESS FOR MAKING NUCLEAR FUSION ENERGY**

摘要：A process for making nuclear fusion occur by compressing a prescribed fusion-fuel using lasers (22) or other means. The fusion fuel comprises a catalytic material mixed with a deuteride of an alkaline earth metal or alkali metal. The catalytic material may comprise a mixture or a compound containing red phosphorus, and a transition metal from Period 4 or Period 5 of the Periodic table. The fusion-fuel is cheap and easy to manufacture, and the technology for compression is already available. There is a realistic prospect of commercially producing nuclear fusion energy.

公开（公告）号：[WO2014181097A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU7SDosc2A7Y5vNkPtwy7rjn&local=zh)

公开（公告）日：2014-11-13

申请号：WOGB14051386

申请日：2014-05-06

申请人：WAYTE Richard Charles

法律状态：法律状态公告日：20141224;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2014181097A1Corresponding Publication Number:;14723852Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20150908;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2014181097A1Corresponding Publication Number:;2014723852Corresponding Authority:;EP法律状态公告日：20150918;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2014181097A1Corresponding Publication Number:;14778569Corresponding Authority:;US法律状态公告日：20151106;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2014181097A1Designated State Authority:;DE

**129、Device for generative manufacture three-dimensional objects**

摘要：The invention relates to a device for generative manufacture of three-dimensional objects from powdered build material 2 1 3 including the use of radiant energy, especially [...]laser fusion device , with a housing 5 with a housed therein process chamber 6, 8 is arranged in which a construction space 7 with a elevatorshiftable construction platform, onto which the powder-like building material can be applied by means of radiant energy provided to solidify 3, wherein a laser beam over a scanner 10 9 11 12 is directed to the at least one protective glass and be fused powder layer, wherein in the beam path of the laser system is arranged at least partially transparent disc 4 at least one 13, the beam coming from the laser system from the reflected and 4 9 12 14 is penetrated by a 15 at least partially reflected radiation fractions melt pool of the powder layer.

公开（公告）号：[DE102014005915A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4925G%2BTO4UnbGBDSq5uFbLDZI&local=zh)

公开（公告）日：2015-10-29

申请号：DE102014005915

申请日：2014-04-25

申请人：CL Schutzrechtsverwaltungs GmbH

法律状态：法律状态公告日：20140513;?

状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102014005915A1法律状态公告日：20150428;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014005915A1法律状态公告日：20180123;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014005915A1

**130、FUSION POWER BASED ON A SYMMETRICAL PLASMA BEAM CONFIGURATION**

摘要：A thermonuclear reaction system for generating a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The reaction system has at least four particle beam emitters supported spatially around oriented toward a common focal region of the reaction chamber for directing at least four plasma beams that are spatially symmetrical in three dimensional space. Each of the plasma beams are directed towards a plasma region in the geometric center. A stable collapse of the plasma region permits a controllable and sufficiently long confinement time, which in combination with necessary temperature and density conditions may ignite and sustain fusion reactions and achieve a net energy output. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high- energy laser beams at the plasma ball to assist with instigation of the fusion reaction.

公开（公告）号：[CA2848670A1](https://www.incopat.com/detail/init2?formerQuery=zZ400cM2Y6ELr2fsl92AZ%2FR0OjOTHMZL&local=zh)

公开（公告）日：2015-10-10

申请号：CA2848670

申请日：2014-04-10

申请人：ZHENG XIAN JUN; LIU ZHENG

**131、Device for generative manufacture three-dimensional objects**

摘要：The invention relates to a device for generative manufacture of three-dimensional objects from powdered build material including the use of radiant energy, especially laser fusion deviceLasersinterund /or, with a housing having a process chamber, in which a construction space is arranged with a elevatorshiftable construction platform, can be applied to the radiant energy provided by means for solidifying a powdery building material, wherein the building material in thin powder layers Beschichtervorrichtung with a downwardly directed by a, can be moved horizontally over the construction platform or previously deposited layers, wherein the downward coating member is formed as cross-sectionally saw-tooth-like silicone drawing up lip 1, 2 facing in the direction of travel on its front side so as to form a fillet 3 during the coating operation is formed on the opposite rear face is convex bulged concavely formed and 4.

公开（公告）号：[DE102014004634A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4927GMhj4xvJFtzs13M5dXLHE&local=zh)

公开（公告）日：2015-10-01

申请号：DE102014004634

申请日：2014-04-01

申请人：CL Schutzrechtsverwaltungs GmbH

法律状态：法律状态公告日：20140415;?

状态效果：+;?

状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102014004634A1法律状态公告日：20150513;?

状态代码：R016;?

法律状态：RESPONSE TO EXAMINATION COMMUNICATION描述信息：Docdb Publication Number:; DE102014004634A1

**132、High efficiency laser fusion with magnet canalization**

摘要：A method for generating electrical energy, comprising the steps of providing a fusion fuel (1), the fusion fuel (1) being held in a magnetic field within a cylindrical reaction chamber (2), initiating nuclear fusion in the fusion fuel (1), in which a fusion flame is produced by fusion laser pulses (4) having a pulse duration of less than 10 ps and a power of more than 1 petawatt, and converting the energy that is released during the nuclear fusion from the nuclei that are produced into power plant power, wherein the magnetic field has a field strength which is greater than or equal to 1 kilotesla and the nuclear fusion has an energy yield of more than 500 per laser energy of the fusion laser pulses (4) that produce the fusion flame. Also described is a nuclear fusion reactor which is configured for generating electrical energy.

公开（公告）号：[DE102014004032A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4926EsWjJOAbqBaUT%2F6EY1%2Boz&local=zh)

公开（公告）日：2015-09-24

申请号：DE102014004032

申请日：2014-03-23

申请人：Heinrich Hora

法律状态：法律状态公告日：20140323;?

状态代码：R086;?

法律状态：NON-BINDING DECLARATION OF LICENSING INTEREST描述信息：Docdb Publication Number:; DE102014004032A1法律状态公告日：20160923;?

状态效果：-;?

状态代码：R118;?

法律状态：APPLICATION DEEMED WITHDRAWN DUE TO CLAIM FOR DOMESTIC PRIORITY描述信息：Docdb Publication Number:; DE102014004032A1

**133、高空间分辨双轴差动共焦图谱显微成像方法与装置**

摘要：本发明属于光谱测量技术领域，涉及一种高空间分辨双轴差动共焦图谱成像方法与装置。本发明的核心思想是融合双轴差动共焦显微和光谱探测技术，采用分割焦斑差动探测实现几何位置的精密成像，简化了传统差动共焦显微系统的光路结构，继承了双轴显微技术的大视场、大工作距的优势，实现了系统高空间分辨图谱合一的探测。本发明不仅具有高空间分辨力，还具有三维层析几何成像、光谱探测和微区图谱层析成像三种模式，为微区光谱探测提供了一种新的解决途径，在生物医学、物理材料学等领域有广泛的应用前景。

公开（公告）号：[CN103926197B](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gJOuUSAOkvE2r4kAd0KKkg&local=zh)

公开（公告）日：2016-02-03

申请号：CN201410100592.4

申请日：2014-03-18

申请人：北京理工大学

法律状态：法律状态公告日：20140716;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20140813;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/01;申请日:20140318;?

法律状态公告日：20160203;?

法律状态：授权;?

描述信息：授权;?

**134、ACRWT TG systam**

摘要：Image in accordance with the signal depleted and [...] in the maximum powerartificialitypetroleum , coal , natureA FIFO warming of villages and smog and [...][...][...] and reorganization and [...] of a [...] seek increase of efficiency and stability in elder brother lifenaturetechniquetechniqueartificiality and a fusing a is [...][...][...] a 12 25 a back flow of each marker a collapsible shift power e. naturally, such as 1 (1) ～ (8) such as a bovine absolute i.e. [...]occurrence to [...]nature the artificiality and [...] absolute i.e. [...][...]invention a fusion (specification) is a [1] the absolute [...]nature of information to be processed in the repositioning as avoiding which water absorptive auxiliary be friendly (marker collapsible shift reference 1). A [...]naturesun , [...] , month , [...]vIP[...] by [...] to, torque is generated [...][...][...]enclosure chart 1 of phenomenon of (1) ～ (8) is affecting [...] avoid. stereochemically fused high affinity. [2] water 700 density to emptiness[...]emptiness of wet liquid to flow down live on. we for [...] above [...]emptiness ' re only shamming for hemming the in 700 of water not feels a bodily sensation of the [...] of living, a US [...]eve that the storm is to better utilize the, I know proverb that it lives, five which is a people For small size tests at sea state windless clears [...][...][...] raised tried off to best avoiding the change of tide when the marine fish hypercholesterolemia yearmonthseason[...][...] in wiper always[...]nature[...] in (enclosure chart 1) for the ground terminal of the [3] fusion [...] finger signal of (1) (2) (3) (4) jacket type foundation pile using weather and ocean[...][...]techniques[...] and fabrication techniques car combustiblae [...] chemosorptive molecules constituting the layer (5) (6) (7) principle cost of rollers a pivoting rail and [...]hydraulic turbine and hydraulic turbine[...] of a blade, is uniformized to stator motion ([...][...] laser motion of auxiliary wings of aircraft) [4] unmelted [...] law (1) a (absolute [...]) nature[...] unmelted in basiclegitimacy rule (of valid of) 1234 laws built in our [...] based type jacket to hydraulic turbine in [...][...] root file For [...] the light cancerthe outside column file [...][...] there is erected a construction, such as 1 (2) in stator [...] a inside[...]space counter " A conical the outside[...] cars by " Rail the within outsideAlong the lowering and lifting a collision, and to install [...] to movement (3) stator [...] car The the outsidehydraulic turbine rail [...][...] shape ring for under and at is. Cost to the rollers at under rail decreased and thereby aberration according to the principles of Was to cause the lever to shift the [...] does wandered off for (4) [...]underhydraulic turbine the 1. also is the small animal and laid on the Also 2. hydraulic turbine such as a A lock primer rotation is. (5) hydraulic turbineThe aberration frame Aberrations wing [...] and a stator Reinforcing-bar securely is composed of Suspended is suspended from the wing hydraulic turbine[...] the To solution [...][...][...] and an open at one [...] of [...] of 1. [...][...] of 1 closes the stator [...] such as Aberrations wing A stator motion is a [...][...] ([...][...] laser motion of auxiliary wings of aircraft) in aberrations even [...]fixedrotation in aging [...] is lock primer is Specification reference ※ [...] stator motion [or] aberration portion, and at [5] effect (1) preventing FIFO warming villages and would degrade lifestyle fossil fuel effect (2) protection from nuclear (3) electricitydepartment revolution and the industry to retain lifestyles (4) adjacent watersuninhabited island[...]baseSolve civil affair of construction powerline tower and base[...] and (5) arrival time[...]unmannedpower plantindividual[...] (6) 12 25 [...][...]tourist industry rhythmic change device change working hours of [6] embodiment (1) scientisttechnique[...] of specialized engineer [...]commissions[...]president configuration and (2) and a cooperation Weather green (3) UN fund g. C. F. ( ) [...][...] (4) peripheral nation[...] smog and Configured

公开（公告）号：[KR1020140080462A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczssZCWMNB65o9%2BpqQ0uZJye&local=zh)

公开（公告）日：2014-06-30

申请号：KR1020140011004

申请日：2014-01-28

申请人：LIM YON SU

**135、NUCLEAR FUSION POWER REACTOR WHICH PERFORMS SELF-IGNITION BY USING SEMICONDUCTOR LASER AS IGNITION MEANS FOR SELF-IGNITION CONDITIONS OF NUCLEAR FUSION POWER REACTOR WHICH DOES NOT EMIT NEUTRONS AT ALL WITH D-H E3 OR B11 -P AS NUCLEAR FUSION FUEL USING LASER BEAM OR SEMICONDUCTOR LASER**

摘要：PROBLEM TO BE SOLVED : To provide an optimum pellet structure and a pellet inputting method regarding a nuclear fusion fuel pellet using a self-magnetic field confinement of a heating current after uranium foil nuclear fission by antihydrogen beams in a nuclear fusion reactor power generation system which does not emit neutron.SOLUTION : A nuclear fusion power generation system is configured such that an ultra-low temperature fuel pellet 1 including an antihydrogen beam tube 2, a degraded uranium foil 5, a metal cell 4, and a nuclear fusion liquid fuel 3 arranges the degraded uranium foil 5 on a surface that connects two balls in a spectacle shape so as to be irradiated by an antihydrogen beam generation device 18 at the center of a vacuum vessel 6 and collided against a uranium 238 in the fuel pellet. After nuclear fission, a nuclear fusion plasma 10 of the nuclear fusion fuel 3 including heavy hydrogen/helium 3 and the like is confined in the center part of the vacuum vessel 6, and the power is generated by the heat in a blanket 7 that sucks nuclear fusion energy using a cylindrical magnetic field generated by the current passing through the antihydrogen beam tube 2.COPYRIGHT : (C)2015, JPO&INPIT

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公开（公告）日：2015-07-16

申请号：JP2014004139

申请日：2014-01-14

申请人：NAGAURA YOSHIAKI

**136、METHOD FOR FORMING ELECTRODE BY LASER MELTING TO ZnO NANOROD ARRAY**

摘要：PROBLEM TO BE SOLVED : To form an electrode on the edge faces of rod-shaped zinc oxide fine particles by orientating the edge faces of the fine particles by a simple method.SOLUTION : A thin film of zinc oxide is formed on a substrate, with the thin film as the nucleus, a base is added to a zinc salt aqueous solution to form a plurality of rod-shaped zinc oxide fine particles vertically oriented to the substrate, the edge faces of the oriented zinc oxide fine particles are irradiated with a laser, and the vicinities of the edge faces are melted to form continuous edge faces. Further, an electrode film made of a metal or an alloy is formed on the continuous edge faces of the rod-shaped zinc oxide fine particles.COPYRIGHT : (C)2015, JPO&INPIT

公开（公告）号：[JP2015117171A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZL3KLjWv60gWGuxfaWZrjp&local=zh)

公开（公告）日：2015-06-25

申请号：JP2013263145

申请日：2013-12-20

申请人：NAGOYA INSTITUTE OF TECHNOLOGY

**137、METHOD OF INCREASING EFFICIENCY OF ENERGY CONVERSION THERMONUCLEAR SYNTHESIS AND DEVICE FOR ITS IMPLEMENTATION**

摘要：FIELD : power engineering.SUBSTANCE : in the proposed method an absorbing coolant generates a solid curtain around a source of ionising radiation, which is realised by means of the proposed device. The device comprises a body (1) of a reaction chamber, where laser beams (2) are introduced via windows (3), an absorbing coolant layer (4), the first wall (5), focusing on a thermonuclear target (6), delivered by a target delivery mechanism (7), fixed in an input cylindrical channel (8), which is followed by a spherical channel (9) and an output cylindrical channel (10). After initiation of a thermonuclear reaction, ionizing radiation passes via the first wall, being absorbed in the coolant layer, and further may not leave the reaction chamber, being spread along trajectories of laser radiation.EFFECT : increased efficiency of conversion of energy of a flow of ionizing radiation released in process of a thermonuclear reaction into thermal energy in a reactor with inertial plasma retention.2 cl, 1 dwg

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公开（公告）日：2015-06-10

申请号：RU2013153645

申请日：2013-12-03

申请人：Полтавец Марк Андреевич

**138、Simultaneous measurement method and system of plasma ion distribution using multi-energy filter array**

摘要：The present invention relates to a plasma ion distribution measurement method and system using an X-ray multi-energy filter array capable of accurately measuring an ion spatial distribution which is a source of X-ray generation in a plasma by acquiring analysis images of an X-ray of various wavelengths generated in the plasma by energy (wavelength range) simultaneously using a multi-energy filter array integrated on a plurality of pin holes, and monitoring the ion spatial distribution in real time. According to an embodiment of the present invention, the analysis images of the X-ray of various wavelengths emitted from the plasma generated in different ions in the plasma are effectively acquired simultaneously in a single measurement using the pin hole array on which the multi-energy filter is integrated, and thus the X-ray at each energy (wavelength range) can be simultaneously analyzed to accurately measure the ion spatial distribution in the plasma. Additionally, the analysis images of the X-ray of various wavelengths by energy (wavelength range) can be acquired in real time using the pin holes on which the multi-energy filter is integrated to conveniently monitor a change in spatial distribution of the ions present in the plasma.COPYRIGHT KIPO 2015

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申请人：KOREA ELECTROTECHNOLOGY RESEARCH INSTITUTE

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法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20150060383A 法律状态公告日：20150208;?

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状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 20150060383A 法律状态公告日：20161221;?

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状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 20150060383A

**139、TARGET PULSE COLLISION TYPE NUCLEAR FUSION REACTOR**

摘要：PROBLEM TO BE SOLVED : To solve the problem that a conventional nuclear fusion experimental reactor has a tokamak system shut by a magnetic flux, an inertia (implosion) system irradiating a fuel pellet served as a target with a laser and the like, but these systems are still on the stage of an experimental reactor and are far from a level practically used (for power), and any of pulse collision type nuclear fusion reactors for power applied several times in the past has defects of uncertainty of collision probability.SOLUTION : The problem of uncertainty of collision probability is solved by adding a pulse droplet target to a pulse collision type nuclear fusion reactor for power.COPYRIGHT : (C)2015, JPO&INPIT

公开（公告）号：[JP2015081914A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXb23PaIQRL9Z2GuxfaWZrjp&local=zh)

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申请人：FUJIWARA MINORU

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法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2015081914A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20150317

**140、激光核聚变装置以及核聚变生成方法**

摘要：本发明能够比较容易地控制提供给靶的中心部的等离子体的能量。本发明的激光核聚变装置具备：将靶壳(Tg1)提供给腔室(2)的靶壳供给装置(3)、监视靶壳(Tg1)的姿势和位置的靶壳监视装置(4)、将压缩用激光(LS1)照射于靶壳(Tg1)的压缩用激光输出装置(5a)等、继压缩用激光(LS1)之后将加热用激光(LS3)照射于靶壳(Tg1)的加热用激光输出装置(6)，在靶壳(Tg1)，具有中空的球壳状的形状，在内侧设置有大致球状的空隙(Sp)，设置有连接外侧和空隙(Sp)的至少一个贯通孔(H1)，靶壳(Tg1)的外表面(Sf1)包含压缩用激光的照射被预定的照射区域(Ar1, Ar2)。

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申请日：2013-10-10

申请人：浜松光子学株式会社; 学校法人光产业创成大学院大学; 丰田自动车株式会社

法律状态：法律状态公告日：20150624;?

法律状态：公开;?

描述信息：公开;?

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法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/15;申请日:20131010;?

法律状态公告日：20160316;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):G21B 1/15;登记生效日:20160226;变更事项:申请人;变更前权利人:浜松光子学株式会社;变更后权利人:浜松光子学株式会社;变更事项:地址;变更前权利人:日本静冈县;变更后权利人:日本静冈县;变更事项:申请人;变更前权利人:学校法人光产业创成大学院大学 丰田自动车株式会社;变更后权利人:丰田自动车株式会社;?

法律状态公告日：20170315;?

法律状态：授权;?

描述信息：授权;?

**141、LASER FUSION DEVICE AND NUCLEAR FUSION GENERATING METHOD**

摘要：To relatively easily control energy to be supplied to plasma positioning at a center of a target, a target shell supply device 3 that supplies a target shell Tg1 to a chamber 2, a target shell monitoring device 4 that monitors an attitude and a position of the target shell Tg1, a compression laser output device 5a that irradiates the target shell Tg1 with a compression laser light LS1, and a heating laser output device 6 that irradiates the target shell Tg1 with a heating laser light LS3 following the compression laser light LS1 are provided. The target shell Tg1 has a hollow spherical shell shape, includes an approximately spherical space Sp on an inner side thereof, includes at least one through hole H1 connecting an outer side thereof and the space Sp, and includes, on an outer surface Sf1 thereof, irradiation areas Ar1 and Ar2 to be irradiated with compression laser lights.

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申请日：2013-10-10

申请人：Hamamatsu Photonics K K; The Graduate School For The Creationon Of New Photonics Industries; TOYOTA JIDOSHA KABUSHIKI KAISHA

法律状态：法律状态公告日：20150826;?

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状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2911153A1Effective Date:;20150511法律状态公告日：20150826;?

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状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2911153A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20150826;?

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法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 2911153A1Countries Concerned:;BA;ME;法律状态公告日：20160113;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN APPLICATION描述信息：Docdb Publication Number:; EP 2911153A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA法律状态公告日：20160113;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN APPLICATION描述信息：Docdb Publication Number:; EP 2911153A1New Owner:;HAMAMATSU PHOTONICS K.K.法律状态公告日：20160120;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2911153A1法律状态公告日：20160525;?

状态效果：+;?

状态代码：RA4;?

法律状态：DESPATCH OF SUPPLEMENTARY SEARCH REPORT描述信息：Docdb Publication Number:; EP 2911153A1Effective Date:;20160428法律状态公告日：20160525;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2911153A1Ipc:;G21B 1/19 20060101ALI20160415BHEP法律状态公告日：20160525;?

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状态代码：INTG;?

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状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2911153A1Ipc:;G21B 1/15 20060101AFI20170120BHEP法律状态公告日：20170301;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2911153A1Ipc:;G21B 1/19 20060101ALI20170120BHEP法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;ISHII KATSUHIRO法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;HANAYAMA RYOHEI法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;NISHIMURA YASUHIKO法律状态公告日：20170301;?

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法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;SATOH NAKAHIRO法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;SUNAHARA ATSUSHI法律状态公告日：20170301;?

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法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;KOMEDA OSAMU法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;FUJITA KAZUHISA法律状态公告日：20170301;?

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法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;MORI YOSHITAKA法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;KURITA TAKASHI法律状态公告日：20170301;?

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法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;KITAGAWA YONEYOSHI法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;SEKINE TAKASHI法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;NAKAMURA NAOKI法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;OKIHARA SHINICHIRO法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;AZUMA HIROZUMI法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;KAWASHIMA TOSHIYUKI法律状态公告日：20170301;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2911153A1Inventor Name:;KAN HIROFUMI法律状态公告日：20170705;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2911153A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20170705;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20170714;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20170715;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;907092Corresponding Authority:;ATEffective Date:;20170715法律状态公告日：20170726;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20170817;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602013023238Corresponding Authority:;DE法律状态公告日：20170922;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;5法律状态公告日：20171031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;GBPayment Date:;20170804Fee Payment-year:;5法律状态公告日：20171108;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20170705法律状态公告日：20171115;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;907092Corresponding Authority:;ATEffective Date:;20170705法律状态公告日：20171127;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20171005法律状态公告日：20180131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;DEPayment Date:;20171011Fee Payment-year:;5法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;RSFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ISFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20171105法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20171005法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20171006法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180406;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;DEDesignated State Event Code:;R097Designated State Description:;NO OPPOSITION FILED AGAINST GRANTED PATENT, OR EPO OPPOSITION PROCEEDINGS CONCLUDED WITHOUT DECISIONCorresponding Publication Number:;602013023238Corresponding Authority:;DE法律状态公告日：20180430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ROFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;CZFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;SMFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;SKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;ITFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;MCFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;EEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180531;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;CHDesignated State Event Code:;PLDesignated State Description:;PATENT CEASED法律状态公告日：20180613;?

状态效果：+;?

状态代码：26N;?

法律状态：NO OPPOSITION FILED描述信息：Docdb Publication Number:; EP 2911153A1Effective Date:;20180406法律状态公告日：20180725;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;IEDesignated State Event Code:;MM4ADesignated State Description:;PATENT LAPSED法律状态公告日：20180726;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;DEDesignated State Event Code:;R084Designated State Description:;DECLARATION OF WILLINGNESS TO LICENCECorresponding Publication Number:;602013023238Corresponding Authority:;DE法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;LIFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20171031法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;LUFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20171010法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;CHFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20171031法律状态公告日：20180815;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;GBDesignated State Event Code:;746Designated State Description:;REGISTER NOTED 'LICENCES OF RIGHT' (SECT. 46/1977)Effective Date:;20180719法律状态公告日：20180822;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;BEDesignated State Event Code:;MMEffective Date:;20171031法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;BEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20171031法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;SIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170705法律状态公告日：20180913;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;6法律状态公告日：20180928;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;MTFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20171010法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;IEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20171010法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2911153A1Designated State Authority:;FRPayment Date:;20180913Fee Payment-year:;6

**142、LASER FUSION DEVICE AND NUCLEAR FUSION GENERATING METHOD**

摘要：To relatively easily control energy to be supplied to plasma positioning at a center of a target, a target shell supply device 3 that supplies a target shell Tg1 to a chamber 2, a target shell monitoring device 4 that monitors an attitude and a position of the target shell Tg1, a compression laser output device 5a that irradiates the target shell Tg1 with a compression laser light LS1, and a heating laser output device 6 that irradiates the target shell Tg1 with a heating laser light LS3 following the compression laser light LS1 are provided. The target shell Tg1 has a hollow spherical shell shape, includes an approximately spherical space Sp on an inner side thereof, includes at least one through hole H1 connecting an outer side thereof and the space Sp, and includes, on an outer surface Sf1 thereof, irradiation areas Ar1 and Ar2 to be irradiated with compression laser lights.

公开（公告）号：[KR1020150072418A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczt6%2F75YkDXsTzRvGok0vOzd&local=zh)

公开（公告）日：2015-06-29

申请号：KR1020157012192

申请日：2013-10-10

申请人：HAMAMATSU PHOTONICS KK; GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS IND; TOYOTA MOTOR CO LTD

法律状态：法律状态公告日：20150605;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 101646478B1法律状态公告日：20151104;?

状态代码：N231;?

法律状态：NOTIFICATION OF CHANGE OF APPLICANT描述信息：Docdb Publication Number:; KR 101646478B1法律状态公告日：20160125;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 101646478B1法律状态公告日：20160714;?

状态效果：+;?

状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 101646478B1法律状态公告日：20160801;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101646478B1

**143、LASER FUSION DEVICE AND NUCLEAR FUSION GENERATING METHOD**

摘要：A target shell monitoring device 4 that monitors an attitude and a position of the target shell Tg1, a compression laser output device 5a that irradiates the target shell Tg1 with a compression laser light LS1, and a heating laser output device 6 that irradiates the target shell Tg1 with a heating laser light LS3 following the compression laser light LS1 are provided. The target shell Tg1 has a hollow spherical shell shape, includes an approximately spherical space Sp on an inner side thereof, includes at least one through hole H1 connecting an outer side thereof and the space Sp, and includes, on an outer surface Sf1 thereof, irradiation areas Ar1 and Ar2 to be irradiated with compression laser lights.

公开（公告）号：[US20150270019A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rEdBd3kpjxqeMO9V9sT8HBf&local=zh)

公开（公告）日：2015-09-24

申请号：US14434893

申请日：2013-10-10

申请人：HAMAMATSU PHOTONICS K K; THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES; TOYOTA JIDOSHA KABUSHIKI KAISHA

法律状态：法律状态公告日：20151103;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;HAMAMATSU PHOTONICS K.K., JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES;REEL/FRAME:036945/0206Effective Date:;20151021法律状态公告日：20151103;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA, JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES;REEL/FRAME:036945/0206Effective Date:;20151021法律状态公告日：20160211;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA, JAPANFree Text Description:;CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNOR'S AND ADDING THE SECOND ASSIGNEE'S DATA PREVIOUSLY RECORDED ON REEL 036945 FRAME 0206. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNORS:SEKINE, TAKASHI;KURITA, TAKASHI;KAWASHIMA, TOSHIYUKI;AND OTHERS;SIGNING DATES FROM 20150323 TO 20151217;REEL/FRAME:037807/0014法律状态公告日：20160211;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONFree Text Description:;CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNOR'S AND ADDING THE SECOND ASSIGNEE'S DATA PREVIOUSLY RECORDED ON REEL 036945 FRAME 0206. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNORS:SEKINE, TAKASHI;KURITA, TAKASHI;KAWASHIMA, TOSHIYUKI;AND OTHERS;SIGNING DATES FROM 20150323 TO 20151217;REEL/FRAME:037807/0014法律状态公告日：20160211;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;HAMAMATSU PHOTONICS K.K., JAPANFree Text Description:;CORRECTIVE ASSIGNMENT TO CORRECT THE ASSIGNOR'S AND ADDING THE SECOND ASSIGNEE'S DATA PREVIOUSLY RECORDED ON REEL 036945 FRAME 0206. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNORS:SEKINE, TAKASHI;KURITA, TAKASHI;KAWASHIMA, TOSHIYUKI;AND OTHERS;SIGNING DATES FROM 20150323 TO 20151217;REEL/FRAME:037807/0014法律状态公告日：20160322;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;HAMAMATSU PHOTONICS K.K., JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES;REEL/FRAME:038065/0940Effective Date:;20160304法律状态公告日：20160322;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2015270019A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA, JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES;REEL/FRAME:038065/0940Effective Date:;20160304

**144、LASER FUSION DEVICE AND NUCLEAR FUSION GENERATING METHOD**

摘要：The purpose of the present invention is to allow comparatively easy control of energy supplied to plasma at the center of a target. A laser fusion device comprises : a target shell supplying device (3) for supplying a target shell (Tg1) to a chamber (2); a target shell monitoring device (4) for monitoring the orientation and position of the target shell (Tg1); a compressing laser output device (5a) and the like for irradiating the target shell (Tg1) with a compressing laser beam (LS1); and a heating laser output device (6) for irradiating the target shell (Tg1), after the compressing laser beam (LS1), with a heating laser beam (LS3). The target shell (Tg1) has a hollow spherical shape, the interior thereof is provided with a substantially spherical cavity (Sp), at least one through-hole (H1) is provided to connect the exterior and the cavity (Sp), and the outer surface (Sf1) of the target shell (Tg1) includes an irradiation region (Ar1, Ar2) where the compressing laser beam irradiation is expected to hit.

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公开（公告）日：2014-04-24

申请号：WOJP13077652

申请日：2013-10-10

申请人：HAMAMATSU PHOTONICS K K; THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES; TOYOTA JIDOSHA KABUSHIKI KAISHA

法律状态：法律状态公告日：20140611;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2014061562A1Corresponding Publication Number:;13846705Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20150410;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2014061562A1Corresponding Publication Number:;14434893Corresponding Authority:;US法律状态公告日：20150416;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2014061562A1Designated State Authority:;DE法律状态公告日：20150508;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2014061562A1Corresponding Publication Number:;20157012192Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20150511;?

状态效果：+;?

状态代码：REEP;?

法律状态：REQUEST FOR ENTRY INTO THE EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2014061562A1Corresponding Publication Number:;2013846705Corresponding Authority:;EP法律状态公告日：20150511;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2014061562A1Corresponding Publication Number:;2013846705Corresponding Authority:;EP

**145、量子束生成装置、量子束生成方法及激光核聚变装置**

摘要：提供能够自动地连续进行量子束生成的量子束生成装置、量子束生成方法和激光核聚变装置。具备将靶(2a)供给至腔室(3a)的靶供给装置(4a)、监视位于腔室(3a)的内侧的靶(2a)的靶监视装置(5a)、对位于腔室(3a)的内侧的靶(2a)照射激光(8a)的激光照射装置(6a)和控制装置(7a)。靶供给装置(4a)在由控制装置(7a)控制的射出时机将靶(2a)沿腔室(3a)的内侧的预先设定的射出方向(3d)射出，控制装置(7a)算出激光(8a)的照射点(4d)，算出靶(2a)向照射点(4d)的到达时机，基于照射点(4d)和到达时机而向激光照射装置(6a)照射激光。

公开（公告）号：[CN104813412A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hgBigTx2eHuGr4kAd0KKkg&local=zh)

公开（公告）日：2015-07-29

申请号：CN201380061797.X

申请日：2013-10-04

申请人：浜松光子学株式会社; 学校法人光产业创成大学院大学; 丰田自动车株式会社

法律状态：法律状态公告日：20150729;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150826;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21K 5/04;申请日:20131004;?

法律状态公告日：20160316;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):G21K 5/04;登记生效日:20160226;变更事项:申请人;变更前权利人:浜松光子学株式会社;变更后权利人:浜松光子学株式会社;变更事项:地址;变更前权利人:日本静冈县;变更后权利人:日本静冈县;变更事项:申请人;变更前权利人:学校法人光产业创成大学院大学 丰田自动车株式会社;变更后权利人:丰田自动车株式会社;?

法律状态公告日：20170329;?

法律状态：授权;?

描述信息：授权;?

**146、DEVICE FOR QUANTUM BEAM GENERATION, METHOD FOR QUANTUM BEAM GENERATION, AND DEVICE FOR LASER FUSION**

摘要：Provided are a device for quantum beam generation and a method for quantum beam generation capable of implementing automatic continuous quantum beam generation, and a device for laser fusion. The device has a target supply unit 4a for supplying a target 2a to a chamber 3a, a target monitor 5a for monitoring the target 2a present inside the chamber 3a, a laser light irradiator 6a for irradiating the target 2a present inside the chamber 3a, with laser light 8a, and a controller 7a. The target supply unit 4a emits the target 2a at a timing for emitting, that is controlled by the controller 7a, into a preset emission direction 3d inside the chamber 3a, and the controller 7a calculates an irradiation point 4d with the laser light 8a, calculates a timing for arriving of the target 2a at the irradiation point 4d, and makes the laser light irradiator 6a irradiate the target with the laser light, based on the irradiation point 4d and the timing for arriving.

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申请号：EP13857800

申请日：2013-10-04

申请人：HAMAMATSU PHOTONICS KK; TOYOTA MOTOR CO LTD

法律状态：法律状态公告日：20151007;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2927909A1Effective Date:;20150622法律状态公告日：20151007;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2927909A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20151007;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 2927909A1Countries Concerned:;BA;ME;法律状态公告日：20160120;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN APPLICATION描述信息：Docdb Publication Number:; EP 2927909A1New Owner:;HAMAMATSU PHOTONICS K.K.法律状态公告日：20160120;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN APPLICATION描述信息：Docdb Publication Number:; EP 2927909A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA法律状态公告日：20160302;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2927909A1法律状态公告日：20160727;?

状态效果：+;?

状态代码：RA4;?

法律状态：DESPATCH OF SUPPLEMENTARY SEARCH REPORT描述信息：Docdb Publication Number:; EP 2927909A1Effective Date:;20160627法律状态公告日：20160727;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2927909A1Ipc:;G21B 1/23 20060101ALI20160621BHEP法律状态公告日：20160727;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2927909A1Ipc:;G21K 5/04 20060101AFI20160621BHEP法律状态公告日：20160727;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2927909A1Ipc:;G21K 5/10 20060101ALI20160621BHEP法律状态公告日：20160727;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2927909A1Ipc:;G21B 1/03 20060101ALI20160621BHEP法律状态公告日：20171108;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 2927909A1Effective Date:;20171006法律状态公告日：20180425;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2927909A1Effective Date:;20180328法律状态公告日：20180912;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2927909A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180912;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20180914;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20181003;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20181004;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602013043682Corresponding Authority:;DE法律状态公告日：20181015;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;1041544Corresponding Authority:;ATEffective Date:;20181015法律状态公告日：20181022;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;6法律状态公告日：20190116;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20180912法律状态公告日：20190125;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2927909A1Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT

**147、The omnidirectional light focus device using laser**

摘要：The present invention relates to a nuclear fusion device using a laser. The present invention relates to an omnidirectional light focus device using a laser to condense a laser beam at the center of a light focus chamber. To improve the efficiency of a nuclear fusion device, it has a combination shape manufactured by cutting the shape of the light focus chamber to condense a laser into two focus parts in an ellipsoid. The omnidirectional light focus device using a laser according to the present invention, includes : a light focus chamber combined by cutting an ellipsoid, a laser beam generator for generating a laser beam, a 1/2 mirror for sending the direction of the laser beam to the left and right of the light focus chamber, a reflector which emits the laser beam passing through the 1/2 mirror to the light focus chamber, and an incident lens which diffuses the laser beam emitted from the reflector to the light focus chamber.COPYRIGHT KIPO 2015

公开（公告）号：[KR1020150039931A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczuSynoyD6FOAboFgCilfsgm&local=zh)

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申请号：KR1020130118333

申请日：2013-10-04

申请人：JEONG SEUNG TAE

法律状态：法律状态公告日：20131004;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 101567953B1法律状态公告日：20140825;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 101567953B1法律状态公告日：20150203;?

状态效果：+;?

状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 101567953B1法律状态公告日：20151104;?

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状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101567953B1法律状态公告日：20181023;?

状态代码：FPAY;?

法律状态：ANNUAL FEE PAYMENT描述信息：Docdb Publication Number:; KR 101567953B1Payment Date:;20181023Fee Payment-year:;4

**148、DEVICE FOR QUANTUM BEAM GENERATION, METHOD FOR QUANTUM BEAM GENERATION, AND DEVICE FOR LASER FUSION**

摘要：Proton beam that is capable of automatically and continuously generating a proton beam generating device digital beam generating method and, provides laser fusion device. Target (2a) a chamber (3a) supplied to the target via the supply device (4a) and a, chamber (3a) connections to the inside of the target (2a) for monitoring the target monitoring device (5a) and a, chamber (3a) connections to the inside of the target (2a) a laser beam (8a) by the irradiation of the laser light radiation device (6a) and a, control device (7a) has a. Target supply device (4a) the, control device (7a) of the light is controlled by in such timing target (2a) a chamber (3a) preset in inside direction (3d) the triangular shapes of, control device (7a) the, laser beam (8a) the irradiation point of (4d) is calculated, the irradiation point (4d) to target (2a) calculates the timing of arrival of, the irradiation point (4d) and arrival the laser light radiation device (6a) to product is irradiated with a laser beam.

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申请日：2013-10-04

申请人：HAMAMATSU PHOTONICS K K; TOYOTA JIDOSHA KABUSHIKI KAISHA

法律状态：法律状态公告日：20151104;?

状态代码：N231;?

法律状态：NOTIFICATION OF CHANGE OF APPLICANT描述信息：Docdb Publication Number:; KR 20150088284A

**149、DEVICE FOR QUANTUM BEAM GENERATION, METHOD FOR QUANTUM BEAM GENERATION, AND DEVICE FOR LASER FUSION**

摘要：Provided are a device for quantum beam generation capable of continuously generating a quantum beam automatically, a method for quantum beam generation, and a device for laser fusion. A quantum beam generating device comprises a target supplying device (4a) to supply a target (2a) to a chamber (3a), a target monitoring device (5a) to monitor the target (2a) in the chamber (3a), a laser beam emitting device (6a) to expose the target (2a) in the chamber (3a) to a laser beam (8a), and a control device (7a). The target supplying device (4a) emits the target (2a) in a preset emission direction (3d) in the chamber (3a) for which the emission timing is controlled by the control device (7a). The control device (7a) calculates an exposure point (4d) for the laser beam (8a), calculates when the target (2a) arrives at the exposure point (4d), and causes the laser beam emitting device (6a) to emit a laser beam on the basis of the exposure point (4d) and the arrival timing.

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申请日：2013-10-04

申请人：HAMAMATSU PHOTONICS K K; THE GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES; TOYOTA JIDOSHA KABUSHIKI KAISHA

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状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2014083940A1Corresponding Publication Number:;13857800Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20150522;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2014083940A1Corresponding Publication Number:;14646765Corresponding Authority:;US法律状态公告日：20150527;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2014083940A1Designated State Authority:;DE法律状态公告日：20150619;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2014083940A1Corresponding Publication Number:;20157016458Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20150622;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2014083940A1Corresponding Publication Number:;2013857800Corresponding Authority:;EP

**150、Fixed target for nuclear fusion, apparatus for making nuclear fusion with this fixed target and method of making nuclear fusion with this apparatus**

摘要：In the present invention, there is disclosed a fixed target for nuclear fusion comprising a substrate of solid silicon or gallium nitride, from which a first layer (110A) enriched with first particles and a second layer (110B) enriched with second particles are made. The enriching first particles are represented particularly by hydrogen particles, while the enriching second particles are represented particularly by particles of boron or lithium. Apparatus for making nuclear fusion consists of the above-described fixed target (110) arranged in the path of a laser beam emitted by a laser system, which provides pre-pulses for making a first plasma (P1) in front of the target (110) first layer (110A) and main pulses for making a second plasma (P2), through the passage of which the main pulse is focused onto the target (110), where it accelerates at least some of the first particles for making their fusion reaction with at least some of the second particles of the fixed target (110). A method of making nuclear fusion with the above-described apparatus is characterized in that a fixed target (110) is irradiated by a laser pre-pulse from a laser system and this laser pre-pulse creates at least first plasma (P1) in front of the target (110) first layer (110A), whereupon for the nuclear fusion, said fixed target (110) is irradiated by a main laser pulse from the laser system, which concentrates through the passage of at least one first plasma (P1) to the target (110) such that the concentrated main laser pulse accelerates the first particles of the target (110) in order to create fusion reactions of these accelerated first particles with at least some of the target (110) second particles.

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公开（公告）日：2016-11-30

申请号：CZ20130596

申请日：2013-07-30

申请人：FYZIKÁLNÍ ÚSTAV AV ČR V V I

**151、Laser fusion system and method**

摘要：The invention describes a system, a method and a target for producing nuclear fusion reactions. A laser is used to irradiate a single temporally shaped laser pulse comprising a pre-pulse and a main pulse or at least two consecutive laser pulses onto the target. A first of the plurality of consecutive laser pulses or a prepulse of the single laser pulse is used to generate a first plasma in front of the target. The system is configured such that this first plasma is capable to focus the second laser pulse or main iaser pulse onto the target, i.e. to reduce the focal spot size compared to the first or pre-pulse. The plasma initiates a so-called selffocusing of the second or main laser pulse onto the target. The focused second or main laser pulse can then be used to accelerate first particles such that these accelerated first particles produce nuclear fusion reactions with second particles contained in the target.

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申请号：EP13466015

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申请人：Fyzikální ústav AV CR v v i; Fondazione Bruno Kessler

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状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2833365A1Effective Date:;20130730法律状态公告日：20150204;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2833365A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20150204;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 2833365A1Countries Concerned:;BA;ME;法律状态公告日：20151028;?

状态效果：+;?

状态代码：R17P;?

法律状态：REQUEST FOR EXAMINATION FILED (CORRECTION)描述信息：Docdb Publication Number:; EP 2833365A1Effective Date:;20130814法律状态公告日：20160928;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 2833365A1Effective Date:;20160831法律状态公告日：20171101;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2833365A1Effective Date:;20171005法律状态公告日：20180321;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2833365A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180321;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20180329;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20180415;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;981911Corresponding Authority:;ATEffective Date:;20180415法律状态公告日：20180418;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20180419;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602013034652Corresponding Authority:;DE法律状态公告日：20180720;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;6法律状态公告日：20180725;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20180321法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;CYFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180621法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20180810;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT法律状态公告日：20180815;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;981911Corresponding Authority:;ATEffective Date:;20180321法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180622法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;RSFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180621法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ROFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ALFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;EEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;FRPayment Date:;20180720Fee Payment-year:;6法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ITPayment Date:;20180703Fee Payment-year:;6法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;DEPayment Date:;20180718Fee Payment-year:;6法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;SKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;SMFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;CZFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321法律状态公告日：20181130;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;GBPayment Date:;20180717Fee Payment-year:;6法律状态公告日：20181231;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180723法律状态公告日：20190102;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;DEDesignated State Event Code:;R097Designated State Description:;NO OPPOSITION FILED AGAINST GRANTED PATENT, OR EPO OPPOSITION PROCEEDINGS CONCLUDED WITHOUT DECISIONCorresponding Publication Number:;602013034652Corresponding Authority:;DE法律状态公告日：20190131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2833365A1Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180321

**152、REACTOR AND METHOD FOR IMPLEMENTING A NUCLEAR FUSION REACTION**

摘要：The invention concerns a reactor (2) for implementing a nuclear fusion reaction, comprising : -a heat transfer liquid containing (4) first (10) and second (12) atomic elements in solution; - a bubble generator (6) capable of creating a bubble (14) in the heat transfer liquid, said bubble enclosing a gaseous medium (15) containing at least the first atomic element; - a laser source (8) designed to apply a femtosecond laser pulse (18) to the heat transfer liquid, directed at the bubble and having a duration of less than 100fs and an intensity greater than 1014 W.cm-2, to trigger a coulomb explosion in the gaseous medium, said explosion accelerating atomic nucleii of said first atomic elements to trigger a nuclear fusion reaction between atomic nucleii of the first and second atomic elements.

公开（公告）号：[WO2014019929A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU4pWSFfYyURj%2FNkPtwy7rjn&local=zh)

公开（公告）日：2014-02-06

申请号：WOEP13065703

申请日：2013-07-25

申请人：UNIV LYON 1 CLAUDE BERNARD; CENTRE NAT RECH SCIENT; ECOLE SUP CHIMIE PHYS ELECTRONIQ LYON CPE LYON; COMMISSARIAT ENERGIE ATOMIQUE; UNIV BORDEAUX 1

法律状态：法律状态公告日：20140326;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2014019929A1Corresponding Publication Number:;13741754Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20150203;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2014019929A1Designated State Authority:;DE法律状态公告日：20151118;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2014019929A1Corresponding Publication Number:;13741754Corresponding Authority:;EPCorresponding Kind:;A1

**153、neutron-free generating nuclear fusion reactions**

摘要：Summary : After proton-boron 11 fusion without primary neutron generation with spherical ignition after patent application DE102012025244with 890 [...]picoseconds laser pulses with a yield of 39 or less power of is possible, according to the invention be achieved with fewer laser output yields far beyond 500 relativistic by combination with a method with electron beams.

公开（公告）号：[DE102013013140A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4926zjrX6ltxGqBdVLSKFxWgN&local=zh)

公开（公告）日：2015-01-15

申请号：DE102013013140

申请日：2013-07-11

申请人：Heinrich Hora

法律状态：法律状态公告日：20160202;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102013013140A1

**154、A process for making nuclear fusion energy**

摘要：A process for making nuclear fusion occur by compressing a prescribed fusion-fuel using lasers (22) or other means. The fusion fuel comprises a catalytic material mixed with a deuteride of an alkaline earth metal or alkali metal. The catalytic material may comprise a mixture or a compound containing red phosphorus, and a transition metal from Period 4 or Period 5 of the Periodic table. The fusion-fuel is cheap and easy to manufacture, and the technology for compression is already available. There is a realistic prospect of commercially producing nuclear fusion energy.

公开（公告）号：[GB201308127D0](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FPyPpYd9TOE%2BLMeYrAgyQSz&local=zh)

公开（公告）日：2013-06-12

申请号：GB1308127

申请日：2013-05-06

申请人：WAYTE RICHARD C

法律状态：法律状态公告日：20140702;?

状态效果：-;?

状态代码：AT;?

法律状态：APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 201308127D0

**155、一种紧凑型阵列式高通量大口径光学聚焦与频率转换系统**

摘要：一种紧凑型阵列式高通量大口径光学聚焦与频率转换系统，它涉及一种高通量大口径光学聚焦与频率转换系统。本发明的目的是为了解决紧凑型单束高通量大口径光学聚焦与频率转换系统结构稳定性差及多个紧凑型单束高通量大口径光学聚焦与频率转换系统占用空间大的问题。窗口模块、倍频聚焦模块、连接段、拆装操作段、取样模块和过渡法兰沿光束传播方向依次排列，窗口模块与倍频聚焦模块连接，倍频聚焦模块与连接段连接，连接段与拆装操作段连接，拆装操作段与取样模块连接，取样模块与过渡法兰连接，过渡法兰与聚变装置连接。本发明用于激光核聚变装置的光学终端。

公开（公告）号：[CN103235387A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hK2O0gemklDWr4kAd0KKkg&local=zh)

公开（公告）日：2013-08-07

申请号：CN201310156287.2

申请日：2013-04-28

申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130904;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 7/00;申请日:20130428;?

法律状态公告日：20130807;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150304;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G02B 7/00;变更事项:发明人;变更前:梁迎春 卢礼华 苏瑞峰 于福利 张庆春;变更后:卢礼华 苏瑞峰 于福利 张庆春 梁迎春;?

法律状态公告日：20151028;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G02B 7/00;变更事项:发明人;变更前:卢礼华 苏瑞峰 于福利 张庆春 梁迎春;变更后:卢礼华 赵航 苏瑞峰 于福利 张庆春 梁迎春;?

法律状态公告日：20160210;?

法律状态：授权;?

描述信息：授权;?

**156、一种鼠笼式高精度四维调整机构及其四自由度调整方法**

摘要：一种鼠笼式高精度四维调整机构，它涉及一种高精度调整机构。本发明的目的是为了解决惯性约束激光核聚变装置中楔形透镜模块内各种光学元件姿态的高精度调整问题。通过调整透镜鼠笼姿态调整前/后支撑组件中四周的鼠笼滑块调整钉座板上的调整钉实现鼠笼内光学元件的上下、左右移动2自由度调节；通过调整透镜鼠笼姿态调整前支撑组件上螺钉实现鼠笼内光学元件的俯仰、偏摆2自由度调节；本发明实现了楔形透镜模块中光学元件姿态的4自由度高精度调整。实现了系统光学轴线与机械轴线的重合，保证大口径光学聚焦与频率转换系统通过机械接口集成到激光惯性约束核聚变装置上时，其光学精度能够满足装置的设计要求，避免繁杂的在线光学调整。

公开（公告）号：[CN103235394A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hFv5p0Ahb9D2r4kAd0KKkg&local=zh)

公开（公告）日：2013-08-07

申请号：CN201310156210.5

申请日：2013-04-28

申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130904;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 7/04;申请日:20130428;?

法律状态公告日：20130807;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150121;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G02B 7/04;变更事项:发明人;变更前:梁迎春 于福利 郭永博 卢礼华 张庆春;变更后:于福利 郭永博 卢礼华 张庆春 梁迎春;?

法律状态公告日：20150204;?

法律状态：授权;?

描述信息：授权;?

**157、一种开放型阵列式高通量大口径光学聚焦与频率转换系统**

摘要：一种开放型阵列式高通量大口径光学聚焦与频率转换系统，它涉及一种高通量大口径光学聚焦与频率转换系统。本发明的目的是为了解决开放型单束高通量大口径光学聚焦与频率转换系统结构稳定性差及多个开放型单束高通量大口径光学聚焦与频率转换系统占用空间大的问题。倍频模块、倍频模块支承架、光管道、透镜模块支承架、透镜模块和取样模块沿光束传播方向依次排列，倍频模块后端与倍频模块支承架前端连接，倍频模块支承架后端与光管道前端连接，光管道后端与透镜模块支承架前端连接，透镜模块支承架后端与透镜模块前端连接，透镜模块后端与取样模块前端方连接，取样模块后端圆法兰与聚变装置连接。本发明用于激光核聚变装置的光学终端。

公开（公告）号：[CN103268777A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jfGK15NEJYrmr4kAd0KKkg&local=zh)

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申请号：CN201310156757.5

申请日：2013-04-28

申请人：哈尔滨工业大学

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法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130925;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/23;申请日:20130428;?

法律状态公告日：20150204;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G21B 1/23;变更事项:发明人;变更前:梁迎春 于福利 苏瑞峰 陈家轩 张庆春;变更后:于福利 苏瑞峰 陈家轩 张庆春 梁迎春;?

法律状态公告日：20160504;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G21B 1/23申请公布日:20130828;?

**158、一种混频晶体四维高精度调整机构**

摘要：一种混频晶体四维高精度调整机构，它涉及一种高通量大口径高精度光学元件频率转换装置。本发明为了实现我国惯性约束激光核聚变装置中，频率转换模块中混频晶体能够在狭小的空间内实现混频晶体的在线四维高精度调整的问题。本发明的混频机构设置在倍频箱体内，偏摆调角框的下端可转动设置在俯仰调整框内，混频间距调整架的侧壁可转动设置在俯仰调整框的侧壁下部，偏振态调整框镶嵌在偏摆调角框端面上，混频间隙调整基座设置在混频间距调整架的下方，且混频间隙调整基座与混频间距调整架之间设有混频平移调整机构，偏振态调整机构设置在偏振态调整框上。本发明用于混频晶体的姿态调整。

公开（公告）号：[CN103278997A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iTETOfl%2BaIimr4kAd0KKkg&local=zh)

公开（公告）日：2013-09-04

申请号：CN201310156653.4

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申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130904;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20131009;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02F 1/37;申请日:20130428;?

法律状态公告日：20150304;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G02F 1/37;变更事项:发明人;变更前:梁迎春 于福利 郭永博 卢礼华 张庆春;变更后:卢礼华 于福利 郭永博 张庆春 梁迎春;?

法律状态公告日：20151028;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G02F 1/37;变更事项:发明人;变更前:卢礼华 于福利 郭永博 张庆春 梁迎春;变更后:卢礼华 赵航 于福利 郭永博 张庆春 梁迎春;?

法律状态公告日：20160120;?

法律状态：授权;?

描述信息：授权;?

**159、一种无裂纹锆合金的制备工艺**

摘要：本发明属于金属储氢材料领域，涉及一种无裂纹储氘锆合金的制备工艺。其特征在于：以一种工业用锆合金作为原料，在一定温度和压力范围内进行吸氘反应，然后以一定的冷却速率降温到一定温度后炉冷，得到储氘量在2.3%~4.0%(mass%)的无宏观裂纹的锆合金。本发明工艺简单、成本低廉、储氘量高、表面无裂纹。本发明的储氘锆合金在核融合反应、机载舰载激光武器、轻水反应堆核燃料棒以及民用方面的示踪元素、中子散射及核磁共振等国防和核能工程领域具有较广阔的前景。

公开（公告）号：[CN103205603A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2h5nCwdPcbCF2r4kAd0KKkg&local=zh)

公开（公告）日：2013-07-17

申请号：CN201310143639.0

申请日：2013-04-23

申请人：北京科技大学

法律状态：法律状态公告日：20130814;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C22C 16/00;申请日:20130423;?

法律状态公告日：20130717;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150408;?

法律状态：授权;?

描述信息：授权;?

**160、METHOD OF GENERATING ELECTROMAGNETIC RADIATION AND VOLUME FREE ELECTRON LASER THEREFOR**

摘要：The invention relates to electronics, in particular, to technology of generation and stimulation of coherent electromagnetic radiation and can be used for development and production of free electron lasers (FEL), based on interaction electron beam with an electrodynamic structure, having a periodic space modulation of electromagnetic properties, for example dielectric permittivity. As the result of stimulated radiation of relativistic free electrons making both forward and oscillatory movements, in the field of outside forces, stimulation and generation of coherent electromagnetic radiation in a wide range of wave length occurs. Creation of radiation sources for radars (centimeter and millimeter ranges), radiation sources for spectroscopic and medico-biologic studies (submillimeter and optical range), radiation sources for treating material surfaces, powerful coherent radiation sources in a wide frequency range for wireless power transformation and information, lasers for heating thermonuclear plasma in thermonuclear reactors are the preferable uses of said radiation technology. According to the proposed invention the method of generating electromagnetic radiation comprises creating a spatially modulated electrodynamic system, comprising, as minimum, one photon crystal; forming at least one electron beam; spatial orientation of the electrodynamic system relative to the electron beam and leading thereof through the electrodynamic system, the method is characterised in that the photon crystal of the spatially modulated electrodynamic system is created with spatial periods, changing so that at each part of said photon crystal synchronization conditions are fulfilled. The technical result of said utility model is carrying out the method of generating electromagnetic radiation and creation of spatial FEL, having higher, compared to the prototype, effectiveness of the beam interaction with the photon crystal, greater zone length of the effective interaction of the electron beam with the photon crystal and, as a result, greater energy of the generated radiation pulse.

公开（公告）号：[EA26069B1](https://www.incopat.com/detail/init2?formerQuery=8QH2SMPYLWebfxB1bRFJVA%3D%3D&local=zh)

公开（公告）日：2017-02-28

申请号：EA201300660

申请日：2013-04-19

申请人：PRIVATE RES AND PRODUCTION UNITARY ENTPR CNIRT (PRIVATE ENTPR CNIRT)

**161、一种测量材料耐烧蚀特性的方法**

摘要：本发明涉及核聚变领域，公开了一种测量材料耐烧蚀特性的方法，本方法将激光诱导击穿光谱LIBS和石英晶体微天平QCM相结合，LIBS诊断烧蚀出物种的种类以及各物种百分比，QCM推算出总烧蚀量，再将二者的测量结果相结合，得出各成分的烧蚀率。本发明将LIBS和QCM相结合，弥补了LIBS定量分析比较困难，QCM不能进行物质分辨的不足，用LIBS诊断烧蚀出物种的种类以及各物种百分比，用QCM推算出总烧蚀量；再将LIBS和QCM二者的测量结果相结合，得出各成分的烧蚀率，为评估已使用的和寻找更适合托卡马克稳定运行的第一壁材料提供一种可行的检测手段。

公开（公告）号：[CN103149112A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jgtGWY0bsg0Gr4kAd0KKkg&local=zh)

公开（公告）日：2013-06-12

申请号：CN201310115263.2

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申请人：大连理工大学

法律状态：法律状态公告日：20130612;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130717;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 5/02;申请日:20130403;?

法律状态公告日：20150107;?

法律状态：授权;?

描述信息：授权;?

**162、一种测量材料耐烧蚀特性的装置**

摘要：本发明涉及核聚变领域，公开了一种测量材料耐烧蚀特性的装置包括：真空系统、激光烧蚀系统、激光诱导击穿光谱(LIBS)测量系统、石英晶体微天平(QCM)测量系统。本发明基于激光烧蚀技术、LIBS技术、QCM测膜厚技术，作为离子枪轰击测量的补充，利用激光烧蚀的方法评估材料的耐烧蚀特性，能够得出材料各个组成成分的烧蚀率，为评估已使用的和寻找更适合托卡马克稳定运行的第一壁材料提供一种可行的检测手段。

公开（公告）号：[CN103196774A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gHD8HFq6o7l2r4kAd0KKkg&local=zh)

公开（公告）日：2013-07-10

申请号：CN201310113830.0

申请日：2013-04-03

申请人：大连理工大学

法律状态：法律状态公告日：20130710;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130807;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 5/02;申请日:20130403;?

法律状态公告日：20150218;?

法律状态：授权;?

描述信息：授权;?

**163、一种测量材料耐烧蚀特性的装置**

摘要：本实用新型涉及核聚变领域，公开了一种测量材料耐烧蚀特性的装置包括：真空系统、激光烧蚀系统、激光诱导击穿光谱(LIBS)测量系统、石英晶体微天平(QCM)测量系统。本实用新型基于激光烧蚀技术、LIBS技术、QCM测膜厚技术，作为离子枪轰击测量的补充，利用激光烧蚀的方法评估材料的耐烧蚀特性，能够得出材料各个组成成分的烧蚀率，为评估已使用的和寻找更适合托卡马克稳定运行的第一壁材料提供一种可行的检测手段。

公开（公告）号：[CN203148803U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORPy7mOfvwuTJWr4kAd0KKkg&local=zh)

公开（公告）日：2013-08-21

申请号：CN201320162119.X

申请日：2013-04-03

申请人：大连理工大学

法律状态：法律状态公告日：20130821;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20160525;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G01N 5/02;申请日:20130403;授权公告日:20130821;终止日期:20150403;?

**164、METHOD OF INITIATING NUCLEAR REACTION OF SYNTHESIS OF AND DEVICE FOR ITS IMPLEMENTATION**

摘要：FIELD : physics.SUBSTANCE : disclosed method of initiating a nuclear fusion reaction includes use of two targets, selecting as material of the first target deuterated polyethylene (CD)with thickness lin the range of 1-10 mcm, generating deuterium ions from the back side of the ionised material of the first target under the action, on the front surface of said target, of a high-contrast laser beam of relativistic intensity and ultra-short duration with energy in the range of 10-500 J and contrast in the range of 10-10. The method provides acceleration of deuterium ions towards the second target to expose the surface layer thereof to the accelerated deuterium ions. The second target is a titanium target, the front surface of which is pre-activated with helium ionsHe. The second target is placed in a vacuum at a distance of 10-50 mm from the first target and deuterium ions moving towards its surface are accelerated to an energy which is sufficient to conduct the reaction D+He?He+p+18.3 MeV to obtain ?-particles (He) and protons p.EFFECT : use of the invention with interaction of intense laser pulses with solid-state targets enables to lower special requirements for radiation safety when designing an apparatus for initiating nuclear fusion reactions.3 cl, 2 dwg

公开（公告）号：[RU2013114678A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4IqxpoOitttg2GuxfaWZrjp&local=zh)

公开（公告）日：2014-10-10

申请号：RU2013114678

申请日：2013-04-01

申请人：Федеральное государственное унитарное предприятие "Центральный научно-исследовательский институт машиностроения" (ФГУП ЦНИИмаш)

**165、一种同时分幅扫描超高速光电摄影系统**

摘要：本发明公布了一种同时分幅扫描超高速光电摄影系统，所述系统包括：中继成像单元、光学分光系统、扫描成像系统、分幅成像系统、精密延时及控制系统、高压供电及脉冲产生模块、控制计算机；被测目标通过中继成像单元和光学分光系统同时成像到扫描成像系统和分幅成像系统，通过精密延时及控制系统和高压供电及脉冲产生模块控制同步成像；本发明在超高速过程测试领域具有广阔的应用前景，完全能够为电磁内爆等离子体放电、受控核聚变、激光与物质相互作用、高压火花放电、材料微喷和界面不稳定性等纳秒到百纳秒时间范围超快过程的研究提供高质量的数字化图像。

公开（公告）号：[CN103197499A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hLT%2BAMwR9hiGr4kAd0KKkg&local=zh)

公开（公告）日：2013-07-10

申请号：CN201310089490.2

申请日：2013-03-20

申请人：中国工程物理研究院流体物理研究所

法律状态：法律状态公告日：20130710;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130807;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G03B 39/00;申请日:20130320;?

法律状态公告日：20170308;?

法律状态：授权;?

描述信息：授权;?

**166、一种同时分幅扫描超高速光电摄影系统**

摘要：本实用新型公布了一种同时分幅扫描超高速光电摄影系统，所述系统包括：中继成像单元、光学分光系统、扫描成像系统、分幅成像系统、精密延时及控制系统、高压供电及脉冲产生模块、控制计算机；被测目标通过中继成像单元和光学分光系统同时成像到扫描成像系统和分幅成像系统，通过精密延时及控制系统和高压供电及脉冲产生模块控制同步成像；本实用新型在超高速过程测试领域具有广阔的应用前景，完全能够为电磁内爆等离子体放电、受控核聚变、激光与物质相互作用、高压火花放电、材料微喷和界面不稳定性等纳秒到百纳秒时间范围超快过程的研究提供高质量的数字化图像。

公开（公告）号：[CN203178667U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORMG%2B9ZaLJAYDGr4kAd0KKkg&local=zh)

公开（公告）日：2013-09-04

申请号：CN201320128414.3

申请日：2013-03-20

申请人：中国工程物理研究院流体物理研究所

法律状态：法律状态公告日：20130904;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20170503;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G03B 39/00;申请日:20130320;授权公告日:20130904;终止日期:20160320;?

**167、PRODUCTION OF ENERGY VIA LASER-INITIATED ANEUTRONIC NUCLEAR FUSION REACTIONS**

摘要：The invention relates to the production of energy with laser beams, involving : a) exciting a fuel target (4) into a plasma state using a first set of laser beams (1); b) bombarding the fuel target in the plasma state with particles generated using a second set of laser beams (2), the fuel and the particles being chosen so that the interaction between the fuel target in the plasma state and the particles produce non-thermal equilibrium aneutronic nuclear reactions; and c) recovering energy from the ions generated by the aneutronic nuclear reactions.

公开（公告）号：[WO2013144482A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU5kg2a5YGzxXvNkPtwy7rjn&local=zh)

公开（公告）日：2013-10-03

申请号：WOFR13050558

申请日：2013-03-18

申请人：ECOLE POLYTECH

法律状态：法律状态公告日：20131120;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2013144482A1Corresponding Publication Number:;13715339Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20140929;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2013144482A1Designated State Authority:;DE法律状态公告日：20150429;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2013144482A1Corresponding Publication Number:;13715339Corresponding Authority:;EPCorresponding Kind:;A1

**168、一种检测托卡马克钨第一壁灰尘沉积层成分及厚度的装置**

摘要：本发明涉及核聚变与光学诊断领域，特别涉及一种检测托卡马克钨第一壁灰尘沉积层成分及厚度的装置，包括：太赫兹波发射装置、太赫兹波探测装置、激光测距探头、测温探头、太赫兹时域-频域转换模块、数据库模块、结果输出模块；所述激光测距探头、测温探头与数据库模块数据连接；所述太赫兹波发射装置向托卡马克钨第一壁探测区域射入太赫兹波，托卡马克钨第一壁探测区域反射回的太赫兹波由太赫兹波探测装置接收，太赫兹波探测装置与太赫兹时域-频域转换模块、数据库模块、结果输出模块依次数据连接。本发明利用反射太赫兹时域谱技术结合计算机数据库，能够在线、同步且无接触无损伤的检测托卡马克钨第一壁灰尘沉积层成分及厚度。

公开（公告）号：[CN103115893A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gaCx6jYF6By2r4kAd0KKkg&local=zh)

公开（公告）日：2013-05-22

申请号：CN201310035747.6

申请日：2013-01-30

申请人：大连理工大学

法律状态：法律状态公告日：20130619;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/35;申请日:20130130;?

法律状态公告日：20130522;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150722;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G01N 21/35申请公布日:20130522;?

**169、检测托卡马克钨第一壁灰尘沉积层成分及厚度的装置**

摘要：本实用新型涉及核聚变与光学诊断领域，特别涉及一种检测托卡马克钨第一壁灰尘沉积层成分及厚度的装置，包括：太赫兹波发射装置、太赫兹波探测装置、激光测距探头、测温探头、太赫兹时域-频域转换模块、数据库模块、结果输出模块；所述激光测距探头、测温探头与数据库模块数据连接；所述太赫兹波发射装置向托卡马克钨第一壁探测区域射入太赫兹波，托卡马克钨第一壁探测区域反射回的太赫兹波由太赫兹波探测装置接收，太赫兹波探测装置与太赫兹时域-频域转换模块、数据库模块、结果输出模块依次数据连接。本实用新型利用反射太赫兹时域谱技术结合计算机数据库，能够在线、同步且无接触无损伤的检测托卡马克钨第一壁灰尘沉积层成分及厚度。

公开（公告）号：[CN203053859U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORPshDwT7jdF82r4kAd0KKkg&local=zh)

公开（公告）日：2013-07-10

申请号：CN201320051871.7

申请日：2013-01-30

申请人：大连理工大学

法律状态：法律状态公告日：20130710;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20170329;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G01N 21/35;申请日:20130130;授权公告日:20130710;终止日期:20160130;?

**170、激光差动共焦图谱显微成像方法与装置**

摘要：本发明属于光学显微成像及光谱测量技术领域，涉及一种高空间分辨激光差动共焦图谱成像方法与装置。本发明的核心思想是融合差动共焦探测和光谱探测技术，并利用二向色分光系统(13)对瑞利光和拉曼散射光进行无损分离，其中，拉曼散射光进行光谱探测，瑞利光进行几何位置探测，利用差动共焦曲线(43)过零点与焦点位置精确对应这一特性，通过过零点触发来精确捕获激发光斑焦点位置的光谱信息，实现高空间分辨的光谱探测，构成一种可实现样品微区高空间分辨光谱探测的方法和装置。本发明具有定位准确，高空间分辨，光谱探测灵敏度高和测量聚焦光斑尺寸可控等优点，在生物医学、法庭取证等领域有广泛的应用前景。

公开（公告）号：[CN103091299A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ikjikF9ORsBWr4kAd0KKkg&local=zh)

公开（公告）日：2013-05-08

申请号：CN201310026956.4

申请日：2013-01-21

申请人：北京理工大学

法律状态：法律状态公告日：20130612;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01N 21/65;申请日:20130121;?

法律状态公告日：20130508;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150121;?

法律状态：授权;?

描述信息：授权;?

**171、一种测量部分相干高斯光束波前相位半径的方法**

摘要：本发明涉及一种测量部分相干高斯光束波前相位半径的方法，待测的部分相干高斯光束具有高斯关联特性。将待测光束经薄透镜聚焦后产生球面波前相位，采用关联器系统测量得到光束的初始横向相干宽度，采用光束分析仪分别测量得到光束的初始横向束腰宽度和出射面上的横向束腰宽度，经计算处理得到待测光束波前相位半径。本发明所提供测量的典型的部分相干光束，在自由光通讯、生物医疗、非线性介质、激光惯性约束核聚变等领域拥有广泛的应用前景，所提供的部分相干高斯光束波前相位半径的测量方法不需要使用价格昂贵的哈特曼波前探测传感器，测量条件简单，结果可靠，成本低廉。

公开（公告）号：[CN103063162A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2j1jDEYbo8Mfmr4kAd0KKkg&local=zh)

公开（公告）日：2013-04-24

申请号：CN201310010442.X

申请日：2013-01-11

申请人：苏州大学

法律状态：法律状态公告日：20130424;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130529;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01B 11/255;申请日:20130111;?

法律状态公告日：20150923;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20181228;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G01B 11/255;授权公告日:20150923;终止日期:20180111;?

**172、Core fusion reactor is interacted with spherical geometry for fuel to spherical symmetrical laser pulse of less than ten picoseconds duration, where energy flux density is greater than ten megajoule per centimeter square**

摘要：Summary : fusion reactors would require producing driven by means of irradiation of laser pulses of picosecond plasma blocks generated by of ultra high plasma acceleration [...][...] or moderately compressed nuclear fuel power on duration and, wherein problems of lateral [...]reaction losses be avoided by spherical geometry of the laser pulses, and wherein the reaction of hydrogen with boron -11 provides nuclear energy, in which energy is generated in the burning of coal as less radioactivity per obtained.

公开（公告）号：[DE102012025244A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4927EFIGUqeDuNDUHEibM9AbG&local=zh)

公开（公告）日：2014-07-03

申请号：DE102012025244

申请日：2012-12-29

申请人：Heinrich Hora

法律状态：法律状态公告日：20121229;?

状态代码：R086;?

法律状态：NON-BINDING DECLARATION OF LICENSING INTEREST描述信息：Docdb Publication Number:; DE102012025244A1

**173、一种基于正交轴系的高精度大口径电动反射镜架**

摘要：一种基于正交轴系的高精度大口径电动反射镜架，它涉及一种电动反射镜架。本发明为了解决在对大口径激光束的传输方向进行引导的过程不够精准且难于控制，完成对激光光束的准直引导和光束近场调整的灵活性差的问题。机架通过转轴与俯仰轴框连接，俯仰轴框相对机架做俯仰角度调整，俯仰轴框转轴与偏摆轴框连接，偏摆轴框相对俯仰轴框做偏摆调整，横向定位挡条贴紧在过渡框体的内侧面上，轴向定位挡条贴紧在第二定位框内侧面上，俯仰轴微驱动器的微驱动输出端通过俯仰连接块与俯仰轴框连接，偏摆轴微驱动器的微驱动输出端通过偏摆连接块与偏摆轴框连接。本发明用于惯性约束激光核聚变装置的光束引导系统或其他需要大口径光路调整系统中。

公开（公告）号：[CN103018879A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hrJfClSEWJQmr4kAd0KKkg&local=zh)

公开（公告）日：2013-04-03

申请号：CN201210554701.0

申请日：2012-12-19

申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130403;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130501;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 7/198;申请日:20121219;?

法律状态公告日：20150211;?

法律状态：授权;?

描述信息：授权;?

**174、一种面向回转运动的簧片式直线微驱动机构**

摘要：一种面向回转运动的簧片式直线微驱动机构，它涉及一种直线微驱动机构。本发明为了解决惯性约束激光核聚变装置光电控制系统中，电动反射镜模块和频率转换模块中晶体最佳匹配角不易调整的问题。步进电机与减速器连接，减速器上装有基座弯板，减速器与滚动丝杠连接，基座弯板上装有基座，基座上装有滚动导轨和轴承座，滑块装在滚动导轨上，滑块上装有螺母座板，滚动螺母装在螺母座板上，滚动丝杠穿过轴承座与滚动螺母螺纹连接，两个簧片前后水平并列设置，每个簧片均通过上夹板和下夹板夹持，簧片的左端通过簧片压板固定连接在连接块，簧片的右端通过簧片压板连接在螺母座板上，连接块与镜框连接。本发明用于驱动光学镜片的俯仰和偏摆等回转运动。

公开（公告）号：[CN103018880A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gE6%2FOf3ATTQGr4kAd0KKkg&local=zh)

公开（公告）日：2013-04-03

申请号：CN201210554702.5

申请日：2012-12-19

申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130403;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130501;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 7/198;申请日:20121219;?

法律状态公告日：20141217;?

法律状态：授权;?

描述信息：授权;?

**175、一种三点式高精度大口径电动反射镜架**

摘要：一种三点式高精度大口径电动反射镜架，它涉及一种电动反射镜架。本发明实现对大口径激光束的传输方向进行精确引导和控制，完成对惯性约束激光核聚变装置中激光光束的准直引导和光束近场调整的问题。本发明的镜架组件设置在机架组件的前端，且镜架组件与机架组件之间可转动连接，两个微驱动器组件由前至后依次穿设在镜架组件和机架组件上，驱动控制系统通过导线连接并控制两个微驱动器组件，镜架组件通过球形支撑挂于机架上，左侧的球形顶尖与平面支撑块接触、右侧的球形顶尖与V型支撑块接触。本发明适用于惯性约束激光核聚变设备中。

公开（公告）号：[CN103018896A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ihUpFULp7ojGr4kAd0KKkg&local=zh)

公开（公告）日：2013-04-03

申请号：CN201210554630.4

申请日：2012-12-19

申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130501;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02B 26/08;申请日:20121219;?

法律状态公告日：20130403;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150610;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G02B 26/08申请公布日:20130403;?

**176、一种面向回转运动的顶拉式直线微驱动机构**

摘要：一种面向回转运动的顶拉式直线微驱动机构, 它是惯性约束激光核聚变装置中光电控制系统使用的关键机构。本发明为了解决现有的惯性约束激光核聚变装置光电控制系统的频率转换过程中晶体最佳匹配角不易调整问题。本发明步进电机与轴承座连接，轴承座与固定框连接，丝杆通过联轴器与步进电机连接，第一滚动轴承的内圈由丝杆的轴肩定位、外圈由轴承座定位，第二滚动轴承的内圈由内挡圈定位、外圈由外挡圈定位，螺母与丝杆相连接，预紧弹簧设置在外挡圈与螺母之间，顶尖的球形端面与运动框相接触，支柱固定在运动框上，外弹簧固定在轴承座与支柱之间，多个盖板固定于轴承座上。本发明用于惯性约束激光核聚变装置中频率转换模块，实现晶体最佳匹配角调整。

公开（公告）号：[CN103021475A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2igqYE%2FFiClu2r4kAd0KKkg&local=zh)

公开（公告）日：2013-04-03

申请号：CN201210554629.1

申请日：2012-12-19

申请人：哈尔滨工业大学

法律状态：法律状态公告日：20130403;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130501;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/23;申请日:20121219;?

法律状态公告日：20150114;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):G21B 1/23;变更事项:发明人;变更前:梁迎春 卢礼华 张鹏 于福利;变更后:卢礼华 张鹏 于福利 梁迎春;?

法律状态公告日：20150204;?

法律状态：授权;?

描述信息：授权;?

**177、NUCLEAR FUSION REACTOR**

摘要：Nuclear fusion reactor, with a vessel (20) that has a fusion chamber (21) where fusion takes place, and a plurality of chambers (2, 4, 6) through which a fluid flows, which chambers are separated from one another by shielding walls (3, 5). The reactor also has a containment wall (10) surrounding the vessel (20), fluid-pumping equipment, equipment for treating the fluids circulating via the vessel (20), equipment for controlling the pressure in the fusion chamber (21), a dispenser that provides fuel to the inside of the fusion chamber (21), and a plurality of laser equipment (17) for impacting the fusion products within the fusion chamber. The nuclear reactor is used for fusion of deuterium-tritium, deuterium-deuterium, hydrogen-hydrogen, and for the total conversion of material to energy.

公开（公告）号：[WO2013098432A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU65Mk8jtu%2BX%2F%2FNkPtwy7rjn&local=zh)

公开（公告）日：2013-07-04

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申请日：2012-12-11

申请人：UNIV MADRID POLITECNICA

法律状态：法律状态公告日：20130821;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2013098432A1Corresponding Publication Number:;12863224Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20150121;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APP. NOT ENT. EUROP. PHASE描述信息：Docdb Publication Number:; WO 2013098432A1Corresponding Publication Number:;12863224Corresponding Authority:;EPCorresponding Kind:;A1

**178、Device for achieving nuclear fusion temperature and pressure of spherical pressure-resistant fusion reactor, has laser tubes whose high-energy laser beams are directed towards the center portion of the reactor**

摘要：Device for the achievement of fusion reactor temperatures and - pressures with a spherical pressure resistant reactor, in whose center a multiplicity of gas supply pipes (4) and laser pipes (9) with essentially even distribution are arranged. The gas supply pipes (4) means of a compression phase cascade (5) with a gas suitable for the nuclear fusion become fed with pressures of more than 2000 bar. Over the laser pipes (9) high-energy laser beams become on the center (3) of the reactor (1) arranged. Each compression phase cascade (5) consists of a majority of one behind the other switched pumps (6), which are subjected with the gas of the preceding compression phases, in such a manner that with each compression phase the pressure it is increased.

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公开（公告）日：2013-06-13

申请号：DE102012023728

申请日：2012-12-05

申请人：Röttger Jansen Herfeld

法律状态：法律状态公告日：20150701;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102012023728A1

**179、QUANTUM BEAM GENERATOR, QUANTUM BEAM GENERATION METHOD AND LASER NUCLEAR FUSION DEVICE**

摘要：PROBLEM TO BE SOLVED : To provide a quantum beam generator, a quantum beam generation method and a laser nuclear fusion device that are capable of automatically generating a quantum beam consecutively.SOLUTION : The quantum beam generator comprises : a target feed device 4a that feeds a target 2a to a chamber 3a; a target monitoring device 5a that monitors the target 2a present on an inner side of the chamber 3a; a laser light irradiation device 6a that irradiates the target 2a present on the inner side of the chamber 3a with laser light 8a; and a control device 7a. The target feed device 4a emits the target 2a at an emission timing to be controlled by the control device 7a in a preliminarily set emission direction 3d in the inner side of the chamber 3a, and the control device 7a calculates an irradiation point 4d of the laser light 8a, calculates an arrival timing of the target 2a to the irradiation point 4d and irradiates the laser light irradiation device 6a with the laser light on the basis of the irradiation point 4d and the arrival timing.COPYRIGHT : (C)2014, JPO&INPIT

公开（公告）号：[JP2014106093A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYGnicrN8fMsGGuxfaWZrjp&local=zh)

公开（公告）日：2014-06-09

申请号：JP2012258815

申请日：2012-11-27

申请人：HAMAMATSU PHOTONICS KK; GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES; TOYOTA MOTOR CORP; TOYOTA CENTRAL R D LABS INC

法律状态：法律状态公告日：20150714;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20150714法律状态公告日：20150915;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20150915法律状态公告日：20151006;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20150915法律状态公告日：20160510;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20160510法律状态公告日：20160622;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20160622法律状态公告日：20160830;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2014106093A 法律状态公告日：20160906;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20160906法律状态公告日：20160923;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2014106093A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20160916法律状态公告日：20160923;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2014106093A Corresponding Publication Number:;6010438Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150

**180、METHOD OF USING DEUTERIUM-CLUSTER FOILS FOR AN INTENSE PULSED NEUTRON SOURCE**

摘要：A method is provided for producing neutrons, comprising : providing a converter foil comprising deuterium clusters; focusing a laser on the foil with power and energy sufficient to cause deuteron ions to separate from the foil; and striking a surface of a target with the deuteron ions from the converter foil with energy sufficient to cause neutron production by a reaction selected from the group consisting of D-D fusion, D-T fusion, D-metal nuclear spallation, and p-metal. A further method is provided for assembling a plurality of target assemblies for a target injector to be used in the previously mentioned manner. A further method is provided for producing neutrons, comprising : splitting a laser beam into a first beam and a second beam; striking a first surface of a target with the first beam, and an opposite second surface of the target with the second beam with energy sufficient to cause neutron production.

公开（公告）号：[US20130064339A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rH2KhYuHjhda8O9V9sT8HBf&local=zh)

公开（公告）日：2013-03-14

申请号：US13672134

申请日：2012-11-08

申请人：NPL ASSOCIATES INC

法律状态：法律状态公告日：20121108;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;NPL ASSOCIATES, INC., ILLINOISFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MILEY, GEORGE H.;YANG, XIAOLING;REEL/FRAME:029265/0838Effective Date:;20121107法律状态公告日：20140729;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;MILEY, GEORGE H., ILLINOISFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:NPL ASSOCIATES, INC.;REEL/FRAME:033413/0554Effective Date:;20140708法律状态公告日：20140731;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MILEY, GEORGE H.;YANG, XIAOLING;SIGNING DATES FROM 20140708 TO 20140725;REEL/FRAME:033432/0009法律状态公告日：20140820;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;LENUCO, LLC, ILLINOISFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:NPL ASSOCIATES, INC.;REEL/FRAME:033571/0653Effective Date:;20140708法律状态公告日：20141024;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;MILEY, GEORGE H., ILLINOISFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:NPL ASSOCIATES, INC.;REEL/FRAME:034032/0084Effective Date:;20140708法律状态公告日：20160226;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;IHL HOLDINGS LIMITED, UNITED KINGDOMFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:LENUCO LLC;REEL/FRAME:037840/0089Effective Date:;20121222法律状态公告日：20160304;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;IHL HOLDINGS LIMITED, UNITED KINGDOMFree Text Description:;CORRECTIVE ASSIGNMENT TO CORRECT THE EXECUTION DATE PREVIOUSLY RECORDED AT REEL: 037840 FRAME: 0089. ASSIGNOR(S) HEREBY CONFIRMS THE ASSIGNMENT;ASSIGNOR:LENUCO LLC;REEL/FRAME:037996/0888Effective Date:;20151222法律状态公告日：20160321;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 8526560B2New Owner:;IHL HOLDINGS LIMITED, UNITED KINGDOMFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:LENUCO LLC;REEL/FRAME:038053/0384Effective Date:;20151222法律状态公告日：20170414;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 8526560B2法律状态公告日：20170420;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 8526560B2Fee Payment-year:;4法律状态公告日：20170420;?

状态效果：+;?

状态代码：SULP;?

法律状态：SURCHARGE FOR LATE PAYMENT描述信息：Docdb Publication Number:; US 8526560B2

**181、光纤制作方法及其光纤**

摘要：一种光纤制作方法, 系藉由晶纤外包覆有正、负内电极, 并通过雷射加热致使该晶纤表层软化而黏附於该耐热管内壁, 且控制雷射功率不致使该晶纤内层熔融而能维持固形核心层之态样, 藉此即能完成晶体光纤之制作, 并在该晶体光纤外二端镀上可与正、负内电极相互连接之正、负外电极, 以作为光电光纤而可用以导通电流讯号。

公开（公告）号：[TW201418807A](https://www.incopat.com/detail/init2?formerQuery=EIuEa2K8lNyheg3Ob2pD2mr4kAd0KKkg&local=zh)

公开（公告）日：2014-05-16

申请号：TW101140544

申请日：2012-11-01

申请人：国立中山大学; 国防部军备局中山科学研究院

**182、反射太赫兹谱技术检测偏滤器石墨瓦瞬态温度的装置**

摘要：本发明涉及核聚变与光学诊断领域，公开了一种反射太赫兹谱技术检测偏滤器石墨瓦瞬态温度的装置，太赫兹波发射装置透过窗口向石墨瓦垂直射入太赫兹波，激光测距模块测量探头到石墨瓦之间距离，同时探头测量并记录工作温度下由石墨瓦反射回的太赫兹时域波谱，并将其在有效频域内做傅里叶变换得到工作温度下频域谱；数据自动选取特征谱线，读取数据库中该探测距离时标定温度下该特征谱线位置，两者相比较得出频移量，与数据库的频移量-温度的函数关系相对照推断出瞬时温度，将结果输出并导入至计算机系统保存。本发明采用反射太赫兹时域谱技术，能够在线、同步并且无接触无损伤地检测磁约束聚变装置偏滤器石墨瓦的热冲击瞬时温度。

公开（公告）号：[CN103048061A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hQc3FURaZkymr4kAd0KKkg&local=zh)

公开（公告）日：2013-04-17

申请号：CN201210420320.3

申请日：2012-10-29

申请人：大连理工大学

法律状态：法律状态公告日：20130417;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130515;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G01K 11/00;申请日:20121029;?

法律状态公告日：20141217;?

法律状态：授权;?

描述信息：授权;?

**183、检测磁约束聚变装置偏滤器石墨瓦瞬时温度的装置**

摘要：本实用新型涉及核聚变与光学诊断领域，公开了一种检测磁约束聚变装置偏滤器石墨瓦瞬时温度的装置，具体包括：太赫兹波发射装置、太赫兹波探测装置、激光测距探头、太赫兹时域-频域转换模块、数据库模块、结果输出模块；所述激光测距探头与数据库模块数据连接；所述太赫兹波发射装置向偏滤器石墨瓦射入太赫兹波，偏滤器石墨瓦反射回的太赫兹波由太赫兹波探测装置接收，太赫兹波探测装置与太赫兹时域-频域转换模块、数据库模块、结果输出模块依次数据连接。本实用新型采用反射太赫兹时域谱技术，能够在线、同步并且无接触无损伤地检测磁约束聚变装置偏滤器石墨瓦的热冲击瞬时温度。?

公开（公告）号：[CN202869690U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtOROIGAmG3eYI4Gr4kAd0KKkg&local=zh)

公开（公告）日：2013-04-10

申请号：CN201220559115.0

申请日：2012-10-29

申请人：大连理工大学

法律状态：法律状态公告日：20130410;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20151223;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G01K 11/00;申请日:20121029;授权公告日:20130410;终止日期:20141029;?

**184、BUILT-UP WELDING DEVICE AND BUILT-UP WELDING METHOD OF NUCLEAR REACTOR IN-PILE STRUCTURE**

摘要：PROBLEM TO BE SOLVED : To provide a built-up welding device and a built-up welding method of a nuclear reactor in-pile structure, without causing a defect such as incomplete fusion, by optimizing weld penetration into the in-pile structure, without increasing heat gain.SOLUTION : The built-up welding device 8 comprises a welding head 9 installed in a tip part of the built-up welding device 8, a driving device for moving the welding head 9 along a welding object part 11, a nozzle 17 provided on the tip of the welding head 9 and injecting shield gas 15 into the welding object part 11, a welding wire supply part 7 for supplying a welding wire 14 to the welding object part 11, a condensing optical system 5 for irradiating the welding object part 11 with a laser beam 12 and a shield gas cover 18 installed in a tip part of the welding head 9 and holding the welding object part 11 in a gaseous phase, and the nozzle 17 is provided with gas flow separation layer forming means 17a and 17b formed with a separation layer of a gas flow.COPYRIGHT : (C)2014, JPO&INPIT

公开（公告）号：[JP2014087809A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYdfG9uAw8D4WGuxfaWZrjp&local=zh)

公开（公告）日：2014-05-15

申请号：JP2012237885

申请日：2012-10-29

申请人：TOSHIBA CORP

**185、LASER NUCLEAR FUSION APPARATUS AND NUCLEAR FUSION GENERATION METHOD**

摘要：PROBLEM TO BE SOLVED : To relatively easily control energy supplied to plasma in a center part of a target.SOLUTION : A laser nuclear fusion apparatus comprises : a target shell supply device 3 supplying a target shell Tg1 into a chamber 2; a target shell monitoring device 4 monitoring the posture and position of the target shell Tg1; a compression laser output device 5a and the like, irradiating the target shell Tg1 with a compression laser beam LS1; a heating laser output device 6 irradiating the target shell Tg1 with a heating laser beam LS3 following the compression laser beam LS1. The target shell Tg1 is formed in a hollow spherical shell shape, and is provided with a substantially spherical cavity Sp in the inside, and with at least one through hole H1 connecting the outside and the cavity Sp. An external surface Sf1 of the target shell Tg1 includes irradiation areas Ar1, Ar2 that are to be irradiated with the compression laser beam.COPYRIGHT : (C)2014, JPO&INPIT

公开（公告）号：[JP2014081274A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYbHiRJ%2Bg6eWmGuxfaWZrjp&local=zh)

公开（公告）日：2014-05-08

申请号：JP2012229145

申请日：2012-10-16

申请人：HAMAMATSU PHOTONICS KK; GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS INDUSTRIES; TOYOTA MOTOR CORP; TOYOTA CENTRAL R D LABS INC

法律状态：法律状态公告日：20150915;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2014081274A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20150915法律状态公告日：20150915;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 2014081274A Free Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20150915法律状态公告日：20151006;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014081274A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20150915法律状态公告日：20160720;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2014081274A 法律状态公告日：20160726;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2014081274A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20160726法律状态公告日：20160812;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2014081274A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20160805法律状态公告日：20160812;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2014081274A Corresponding Publication Number:;5986476Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150

**186、Laser nucle fusion**

摘要：PURPOSE : A laser nuclear fusion system protects the inside of a fusion reactor by using lead used for a capsule as a refrigerant.CONSTITUTION : A fuel capsule has a lens (2-1) and a funnel structure. The fuel capsule has a light condensing function. The funnel structure is manufactured by heavy metal. The heavy metal is gold or lead. The funnel structure is polished by rotating an auger structure on a grindstone.[Reference numerals] (2-1) Lens; (2-2) Fuel inlet; (2-3) Laser condensing funnel structure; (2-4) Ignition point; (2-5) Stiffener; (2-6) Funnel structures with high specific gravity such as lead or goldCOPYRIGHT KIPO 2013

公开（公告）号：[KR1020130092363A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczuQ08ywSyx3kX7UBnmuICed&local=zh)

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申请号：KR1020120112755

申请日：2012-10-11

申请人：PARK HYO SANG

法律状态：法律状态公告日：20130730;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20130092363A 法律状态公告日：20130730;?

状态代码：G15R;?

法律状态：REQUEST FOR EARLY OPENING描述信息：Docdb Publication Number:; KR 20130092363A 法律状态公告日：20140724;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 20130092363A 法律状态公告日：20141021;?

状态效果：-;?

状态代码：E601;?

法律状态：DECISION TO REFUSE APPLICATION描述信息：Docdb Publication Number:; KR 20130092363A

**187、METHOD OF SURGICAL TREATMENT OF DISSEMINATED DESTRUCTIVE PULMONARY TUBERCULOSIS**

摘要：FIELD : medicine.SUBSTANCE : invention relates to field of medicine, namely to thoracic surgery and can be used in carrying out lung resection caused by dissiminated tuberculosis, main forms of which are fibrous-cavernous tuberculosis and caseous pneumonia. Method consists in carrying out thoracotomy, isolation of lung from fusions and carrying out revision of lung parenchyma by isolation of lung tissue with main tuberculosis process and lung tissue with tuberculosis foci of dissemination, ablation of lung tissue with main tuberculosis process, performing hemostasis, drainage of pleural cavity and suturing thoracotomic wound. Puncture of parenchyma is performed in lung tissue with tuberculosis foci of dissemination. After that, light guide is introduced through it to supply irradiation directly into focus of tuberculosis changes. Impact with high-energy laser with irradiation wavelength 970 nm is performed with power of irradiation flow 10-15 W and temporary exposure 0.2-0.5 sec. Application of claimed invention makes it possible to perform destruction of tuberculosis foci in lung tissue with preservation of parenchyma which surrounds them, ensure smaller over-stretching of lung parenchyma in postoperative period and thus preserve vital capacity of lungs, to minimise risk of intra-operation complications, including damage to elements of lung root in the process of processing. Parameters of laser irradiation and exposure time ensure destruction of tuberculosis foci of lung tissue, which remain in parenchyma after cavern ablation.EFFECT : aseptic productive character of inflammation in the process of lung parenchyma reparation in post-operative period contributes to reduction of inflammatory changes in operated lung.1 ex

公开（公告）号：[RU2496430C1](https://www.incopat.com/detail/init2?formerQuery=F2Ou3Mpm5G3EMzH7YRgSN%2FR0OjOTHMZL&local=zh)

公开（公告）日：2013-10-27

申请号：RU2012142170

申请日：2012-10-04

申请人：Federal' noe gosudarstvennoe bjudzhetnoe uchrezhdenie "Tsentral' nyj nauchno issledovatel' skij institut tuberkuleza" Rossijskoj akademii meditsinskikh nauk

**188、红外非线性光学晶体材料碲钼酸锰及其生长方法与用途**

摘要：本发明提供一种新型红外非线性光学晶体材料碲钼酸锰及其生长方法与用途，其化学式为MnTeMoO6，粉末倍频效应为0.7×KTP，晶体红外波段透过范围为：2.5μm~5.3μm和5.5μm~6.5μm，晶体的熔点为735.6℃，空间群为P21212。该晶体材料采用顶部籽晶法生长，以TeO2和MoO3作为助溶剂，生长原料为摩尔比为1：2：2的MnTeMoO6粉体、TeO2和MoO3，或者摩尔比为1：3：3的MnO、TeO2和MoO3。该MnTeMoO6多晶粉体具有较大的倍频效应，不潮解，不溶于水，不溶于稀盐酸，物理化学性能稳定，可应用于医疗、核聚变、激光武器、光通讯、光存储等方面。

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申请人：中国地质大学(武汉)

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法律状态：授权;?

描述信息：授权;?

**189、Method and System to Remove Debris from a Fusion Reactor Chamber**

摘要：A method of removing a debris cloud from a fusion reactor includes injecting a fluid jet into the fusion reactor at a first velocity and thereafter, injecting a fusion target into the fusion reactor at a second velocity. The method also includes irradiating the fusion target with laser light and creating a fusion event. The method further includes forming a debris cloud in a vicinity of the fusion event and removing the debris cloud from the fusion reactor. The fluid jet applies a motive force to the debris cloud.

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申请人：Lawrence Livermore National Security LLC

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法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2013064340A1New Owner:;WISCONSIN ALUMNI RESEARCH FOUNDATION, WISCONSINFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:MOSES, GREGORY;REEL/FRAME:046983/0884Effective Date:;20120413

**190、MERGING UNIT EMULATOR FOR DETECTION IN SMART SUBSTATION**

摘要：A merging unit emulator for detection in a smart substation includes a main circuit board, a main circuit board interface plug, an interface driving chip, a central processing unit (CPU) module, a field programmable gate array (FPGA), a memory clock module and a fiber optical transceiver. The memory clock module includes a nonvolatile random access memory (NVRAM), a flash memory (FLASH) and a real time chip (RTC). The sampling values are calculated by the core module FPGA of the merging unit emulator based upon input signals. The merging unit has the features of stable operation, less power loss, precise time labeling and less time delay for a sampling value message.

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申请号：WOCN12080722

申请日：2012-08-29

申请人：CHINA ELECTRIC POWER RESEARCH INSTITUTE; INTEGRATED ELECTRONIC SYSTEMS LAB CO LTD; STATE GRID CORPORATION OF CHINA; YANG Wei; WANG Huapeng; WU Xiaobo

法律状态：法律状态公告日：20130424;?

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法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2013029543A1Corresponding Publication Number:;12827606Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20140228;?

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状态效果：-;?

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法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2013029543A1Corresponding Publication Number:;12827606Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20150318;?

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**191、REACTOR AND METHOD FOR CARRYING OUT A NUCLEAR FUSION REACTION**

摘要：The invention concerns a reactor (2) for implementing a nuclear fusion reaction, comprising : -a heat transfer liquid containing (4) first (10) and second (12) atomic elements in solution; - a bubble generator (6) capable of creating a bubble (14) in the heat transfer liquid, said bubble enclosing a gaseous medium (15) containing at least the first atomic element; - a laser source (8) designed to apply a femtosecond laser pulse (18) to the heat transfer liquid, directed at the bubble and having a duration of less than 100fs and an intensity greater than 1014 W.cm-2, to trigger a coulomb explosion in the gaseous medium, said explosion accelerating atomic nucleii of said first atomic elements to trigger a nuclear fusion reaction between atomic nucleii of the first and second atomic elements.

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申请日：2012-08-03

申请人：UNIV LYON 1 CLAUDE BERNARD; CENTRE NAT RECH SCIENT; ECOLE SUP CHIMIE PHYS ELECTRONIQ LYON CPE LYON; COMMISSARIAT ENERGIE ATOMIQUE; UNIV BORDEAUX 1

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状态效果：+;?

状态代码：PLFP;?

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状态代码：PLFP;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; FR 2994317A1Fee Payment-year:;7

**192、VIBRATION MEASURING SYSTEM OF NUCLEAR FUSION DEVICE USING LASER DOPPLER VIBROMETRY SYSTEM**

摘要：Disclosed is a vibration measurement system of a nuclear fusion device using a laser doppler vibrometry (LDV) system. The vibration measurement system of a nuclear fusion device using an LDV system is installed to be spaced from the nuclear fusion device and comprises a reflection object for guiding a laser so that the laser irradiated from the LDV system can reach a certain point of the nuclear fusion device. The vibration of the nuclear fusion device can be measured in the long distance by using the vibration measurement system of the nuclear fusion device using the LDV system, thereby securing safety in the vibration measurement process of the nuclear fusion device, accurately measuring only vibration information of the nuclear fusion device itself by separating the vibration information of a route for moving the laser of the LDV system and collecting accurate information on the status of the operation of the nuclear fusion device.COPYRIGHT KIPO 2014

公开（公告）号：[KR1020140007144A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczul6%2FSr25mqyVmeokfyvWfq&local=zh)

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申请人：KOREA BASIC SCIENCE INSTITUTE

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法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 101389428B1法律状态公告日：20130723;?

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法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 101389428B1法律状态公告日：20140122;?

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状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 101389428B1法律状态公告日：20140421;?

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法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 101389428B1法律状态公告日：20170327;?

状态代码：FPAY;?

法律状态：ANNUAL FEE PAYMENT描述信息：Docdb Publication Number:; KR 101389428B1Payment Date:;20170327Fee Payment-year:;4

**193、CONTINUOUS FUSION DUE TO ENERGY CONCENTRATION THROUGH FOCUSING OF CONVERGING FUEL PARTICLE BEAMS**

摘要：A thermonuclear reaction system for generating a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The particle beam emitters are supported spatially around oriented toward a common focal region of the reaction chamber. The particle beam emitters accelerate energized particles of at least one thermonuclear fuel type, such as hydrogen or deuterium, into the reaction chamber as a plurality of particle beams converging at the common focal region. When the high-energy particle beams converge at the common focal region, the resulting plasma bail is sufficiently dense and hot that a thermonuclear fusion reaction is instigated and thereafter sustained by the energy release accompanying the fusion reactions. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction

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申请人：ZHENG XIAN JUN

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状态代码：EEER;?

法律状态：EXAMINATION REQUEST描述信息：Docdb Publication Number:; CA 2832753A1Effective Date:;20180222

**194、通过聚焦会聚的燃料粒子束使能量集中而产生的持续性聚变**

摘要：一种用于引发热核聚变反应的热核反应系统，其包括反应室和多个粒子束发射器。该粒子束发射器空间上围绕反应室的共聚焦区域而支承并朝该共聚焦区域取向。该粒子束发射器使至少一种热核燃料类型例如氢或氘的赋能粒子加速进入反应室作为会聚于共聚焦区域的多束粒子束。当高能粒子束会聚于共聚焦区域时，得到的等离子体球足够密实且足够热，从而引发热核聚变反应，然后通过伴随聚变反应的能量释放使其持续进行。任选地，激光束或其他能量输入设备还可围绕并朝向共聚焦区域取向以使高能激光束指向等离子体球，从而协助引发聚变反应。

公开（公告）号：[CN103608868A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jrO8sZwot7Q2r4kAd0KKkg&local=zh)

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申请人：曾宪俊

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描述信息：公开;?

法律状态公告日：20140326;?

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法律状态公告日：20170606;?

法律状态：授权;?

描述信息：授权;?

**195、CONTINUOUS FUSION DUE TO ENERGY CONCENTRATION THROUGH FOCUSING OF CONVERGING FUEL PARTICLE BEAMS**

摘要：A thermonuclear reaction system for generating a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The particle beam emitters are supported spatially around oriented toward a common focal region of the reaction chamber. The particle beam emitters accelerate energized particles of at least one thermonuclear fuel type, such as hydrogen or deuterium, into the reaction chamber as a plurality of particle beams converging at the common focal region. When the high-energy particle beams converge at the common focal region, the resulting plasma bail is sufficiently dense and hot that a thermonuclear fusion reaction is instigated and thereafter sustained by the energy release accompanying the fusion reactions. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction

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申请号：WOCA12050392

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申请人：ZHENG Xian Jun

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状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012167387A1Corresponding Publication Number:;2832753Corresponding Authority:;CA法律状态公告日：20131210;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012167387A1Designated State Authority:;DE法律状态公告日：20140507;?

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**196、大功率连续辐射伽马激光器**

摘要：一种大功率连续辐射伽马激光器，属物理仪器、能源、军工领域。其特征是，在自由电子激光器中，在与电子束相反的方向上，对着电子束输入高功率普通激光，入射电子束的速度和入射的激光的波长要满足(1)-(2)式；对于大功率伽马激光器，入射电子的数密度ρe满足ρe≥ρe0，ρe0满足(6)式；电子束通过的管道是圆筒形的，不仅仅分布有周期排列的扭摆磁铁，而且与电源正极相连。这种激光器能够更容易地实现可控核聚变，解决能源问题；在科研、工业和兵器领域有重要的不可代替的作用。

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申请人：陈世浩

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描述信息：公开;?

法律状态公告日：20150422;?

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法律状态：授权;?

描述信息：授权;?

**197、大功率连续辐射伽马激光器**

摘要：一种大功率连续辐射伽马激光器属物理仪器、能源、军工领域。其特征是，这种伽马激光器由低温等离子体部分，伽马射线发生器(加速器)，冷却系统和伽马射线屏蔽罩构成。其中低温等离子体由电离的原子核与电子组成，辐照等离子体的伽马射线来自于电子与质子对撞的加速器。伽马光子的能量大于或等于将低温等离子体中的原子核从基态激发到激发态所需要的能量。在低温等离子体周围有冷却液体或气体流动。它的伽马射线屏蔽罩由厚10cm以上的铅制作。这种激光器对于科研、工业及兵器都有不可代替的重要作用。利用它能够更容易地实现可控核聚变。

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申请人：陈世浩

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法律状态公告日：20150415;?

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法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):H01S 4/00申请公布日:20131030;?

**198、ENERGY PRODUCTION BY NUCLEAR FUSION REACTIONS ANEUTRONIQUES INITIEES BY LASERS**

摘要：The invention relates to the production of energy with laser beams, involving : a) exciting a fuel target (4) into a plasma state using a first set of laser beams (1); b) bombarding the fuel target in the plasma state with particles generated using a second set of laser beams (2), the fuel and the particles being chosen so that the interaction between the fuel target in the plasma state and the particles produce non-thermal equilibrium aneutronic nuclear reactions; and c) recovering energy from the ions generated by the aneutronic nuclear reactions.

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申请人：ECOLE POLYTECH

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状态代码：PLFP;?

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状态代码：PLFP;?

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状态代码：PLFP;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; FR 2988897A1Fee Payment-year:;7

**199、METHOD OF LASER WELDING A NUCLEAR FUEL ROD**

摘要：A method of welding a fuel rod includes the following steps. An end plug and a cladding tube of the fuel rod are brought together to abut each other, and welded by applying a laser beam directed to a welding zone to melt material of the end plug and the cladding tube. The welding is sensed by sensing radiation within a first wavelength range, which includes the wavelength of the laser beam coming from reflections from the welding zone, sensing radiation within a second wavelength range different from the first wavelength range, which includes infrared radiation from melted material, and sensing radiation within a third wavelength range different from the first and second wavelength ranges, which includes radiation from plasma. The welding and melting of material is monitored by monitoring the sensed radiations.

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申请号：KR1020137028329

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申请人：WESTINGHOUSE ELECTRIC SWEDEN

**200、METHOD OF LASER WELDING A NUCLEAR FUEL ROD**

摘要：A method of welding a fuel rod (1) comprises the following steps. An end plug (3) and a cladding tube (2) of the fuel rod are brought together to abut each other, and welded by applying a laser beam directed to a welding zone (36) to melt material of the end plug and the cladding tube. The welding is sensed by sensing radiation within a first wavelength range, which includes the wavelength of the laser beam coming from reflections from the welding zone, sensing radiation within a second wavelength range different from the first wavelength range, which includes infrared radiation from melted material, and sensing radiation within a third wavelength range different from the first and second wavelength ranges, which includes radiation from plasma. The welding and melting of material is monitored by monitoring the sensed radiations.

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申请人：WESTINGHOUSE ELECTRIC SWEDEN AB; BORELL Sten; ROSTVALL Tomas

法律状态：法律状态公告日：20121226;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2012146444A1Corresponding Publication Number:;12709652Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20130925;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2012146444A1Corresponding Publication Number:;2012709652Corresponding Authority:;EP法律状态公告日：20131007;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012146444A1Corresponding Publication Number:;2014506807Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20131025;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012146444A1Corresponding Publication Number:;20137028329Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20131028;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012146444A1Designated State Authority:;DE法律状态公告日：20140402;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2012146444A1Corresponding Publication Number:;14110941Corresponding Authority:;US

**201、THERMONUCLEAR REACTOR WITH LASER ACCELERATORS**

摘要：A -thermonuclear reactor with laser accelerators consists of deuterium and tritium accelerators, a zone of reaction, a heat carrier – charge granules LiAlO2, leakage channel of charge hot granules LiAlO, a working zone of reaction chamber covered with light lithium isotope layer, a target input device, a rotating upper part of the camera, a liquid lithium input device, a thin protective lithium layer, beam waveguide with windows for entering laser beams into the camera, fusion microexplosions, a blanket made of uranium mixture, biological protection. The laser accelerators are used to accelerate deuterium and tritium to 3, 2 MeV, external magnets consisting a heat carrier LiAlOon the inner side of the reactor camera, laser accelerator based-focusing device for compression and direction of deuteron and triton flight to the zone of reaction as well as batch routing control system to a thermonuclear reactor.

公开（公告）号：[UA72759U](https://www.incopat.com/detail/init2?formerQuery=6iWYxXjEWiaU8nW8PA1IvA%3D%3D&local=zh)

公开（公告）日：2012-08-27

申请号：UA201202279

申请日：2012-02-27

申请人：MATNIAK SERHII VASYLIOVYCH

**202、CONTINUOUS FUSION DUE TO ENERGY CONCENTRATION THROUGH FOCUSING OF CONVERGING FUEL PARTICLE BEAMS**

摘要：A thermonuclear reaction system for generating a thermonuclear fusion reaction includes a reaction chamber and a number of particle beam emitters. The particle beam emitters are supported spatially around oriented toward a common focal region of the reaction chamber. The particle beam emitters accelerate energized particles of at least one thermonuclear fuel type, such as hydrogen or deuterium, into the reaction chamber as a plurality of particle beams converging at the common focal region. When the high-energy particle beams converge at the common focal region, the resulting plasma ball is sufficiently dense and hot that a thermonuclear fusion reaction is instigated and thereafter sustained by the energy release accompanying the fusion reactions. Optionally, laser beams or other input energy devices may also be oriented around and toward the common focal region to direct high-energy laser beams at the plasma ball to assist with instigation of the fusion reaction.

公开（公告）号：[US20130058446A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGWDkXTa3FWRzkJJEbMdX8W&local=zh)

公开（公告）日：2013-03-07

申请号：US13402111

申请日：2012-02-22

申请人：Xian Jun Zheng

**203、一种用于超导线圈盒的窄间隙激光填丝焊接方法**

摘要：本发明公开了一种用于超导线圈盒的窄间隙激光填丝焊接方法，该方法针对核聚变反应堆超导线圈盒，利用激光对大型超导线圈壳体进行窄间隙激光填丝焊接，将整个线圈盒密封。本发明方法首先将被焊件开窄间隙V型坡口，采用丙酮对焊缝及表面进行清洗，然后将其放于承重夹具及仿形夹具上固定，利用由机器人带动的激光加工头，采用先点固，再用激光连续焊接钝边，然后对坡口焊缝实施多层填热丝的激光焊接，且每层均采用对称交替的焊接顺序，最终实现线圈盒的整体封焊。本发明解决了我国首个国际热核聚变实验堆计划中超导线圈密封问题，并且为超大型结构体的焊接提供了一种有效的方法。

公开（公告）号：[CN103252578A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iotyRNdxqORGr4kAd0KKkg&local=zh)

公开（公告）日：2013-08-21

申请号：CN201210037688.1

申请日：2012-02-17

申请人：沈阳新松机器人自动化股份有限公司

法律状态：法律状态公告日：20130821;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130918;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23K 26/20;申请日:20120217;?

法律状态公告日：20150909;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):B23K 26/20申请公布日:20130821;?

**204、Nuclear fusion reactor irradiates laser pulses on one or both sides of cylinder having solid or compressed fusion fuel**

摘要：For the Fusion reactor with negligible radioactivity laser-drivenplasma block ignitionsolid body-close or moderately compressed Combustible according to patent application of by DE10209037640the lateral delimitation is accomplished the reaction with magnetic fields and/or a sheath with a high atomic weight.

公开（公告）号：[DE102012001634A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4926DwRMSvIYwLzs13M5dXLHE&local=zh)

公开（公告）日：2013-08-01

申请号：DE102012001634

申请日：2012-01-30

申请人：Heinrich Hora

法律状态：法律状态公告日：20120130;?

状态代码：R086;?

法律状态：NON-BINDING DECLARATION OF LICENSING INTEREST描述信息：Docdb Publication Number:; DE102012001634A1法律状态公告日：20150801;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102012001634A1

**205、SINTERING AND LASER FUSION DEVICE, COMPRISING A MEANS FOR HEATING POWDER BY INDUCTION**

摘要：A device for producing or building up a metal part by sintering and laser fusion, the device including a laser beam generator, a mechanism for deflecting the beam to scan a surface of the part to be produced, a sintering pan including a metal powder used to cover the surface of the part and to be melted by the laser beam to thicken the part, and at least one mechanism for heating powder contained in an area of the sintering pan by induction.

公开（公告）号：[EP2670547B2](https://www.incopat.com/detail/init2?formerQuery=KOf6Z1wANyxNyLQche3a1PR0OjOTHMZL&local=zh)

公开（公告）日：2018-08-08

申请号：EP12706654

申请日：2012-01-30

申请人：Safran Aircraft Engines

法律状态：法律状态公告日：20131211;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2670547A2Effective Date:;20130827法律状态公告日：20131211;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2670547A2Corresponding Authority:;EPCorresponding Kind:;A2Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20140507;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2670547A2法律状态公告日：20140806;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2670547A2Effective Date:;20140710法律状态公告日：20141203;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2670547A2Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20141203;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTEDFree Text Description:;NOT ENGLISH法律状态公告日：20141215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;699062Corresponding Authority:;ATEffective Date:;20141215法律状态公告日：20141215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20141231;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELANDFree Text Description:;LANGUAGE OF EP DOCUMENT: FRENCH法律状态公告日：20150115;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602012004126Corresponding Authority:;DEEffective Date:;20150115法律状态公告日：20150116;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;4法律状态公告日：20150317;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;SEDesignated State Event Code:;TRGRDesignated State Description:;TRANSLATION OF GRANTED EP PATENT法律状态公告日：20150408;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;NLDesignated State Event Code:;VDEPDesignated State Description:;INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILEDEffective Date:;20141203法律状态公告日：20150415;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;699062Corresponding Authority:;ATEffective Date:;20141203法律状态公告日：20150430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150430;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20150303法律状态公告日：20150525;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT法律状态公告日：20150529;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150529;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150529;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150529;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;CYFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150529;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20150304法律状态公告日：20150529;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;RSFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;EEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;CZFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20150403法律状态公告日：20150731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;SKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ROFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150810;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;DEDesignated State Event Code:;R026Designated State Description:;OPPOSITION FILED AGAINST PATENTCorresponding Publication Number:;602012004126Corresponding Authority:;DE法律状态公告日：20150828;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;CHDesignated State Event Code:;PLDesignated State Description:;PATENT CEASED法律状态公告日：20150831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ISFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20150403法律状态公告日：20150831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20150831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;LUFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20150130法律状态公告日：20150916;?

状态效果：-;?

状态代码：26;?

法律状态：OPPOSITION FILED描述信息：Docdb Publication Number:; EP 2670547A2Opponent Name:;SIEMENS AKTIENGESELLSCHAFTEffective Date:;20150810法律状态公告日：20150930;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;MCFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20151030;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;LIFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20150131法律状态公告日：20151030;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20151030;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;CHFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20150131法律状态公告日：20151104;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;IEDesignated State Event Code:;MM4ADesignated State Description:;PATENT LAPSED法律状态公告日：20160112;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;5法律状态公告日：20160113;?

状态代码：RAP2;?

法律状态：TRANSFER OF RIGHTS OF AN EP GRANTED PATENT描述信息：Docdb Publication Number:; EP 2670547A2New Owner:;SNECMA法律状态公告日：20160129;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;IEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20150130法律状态公告日：20160229;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;SIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20160921;?

状态代码：RAP2;?

法律状态：TRANSFER OF RIGHTS OF AN EP GRANTED PATENT描述信息：Docdb Publication Number:; EP 2670547A2New Owner:;SAFRAN AIRCRAFT ENGINES法律状态公告日：20161230;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;MTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20170113;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;6法律状态公告日：20170531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;HUFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT; INVALID AB INITIOEffective Date:;20120130法律状态公告日：20170531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;SMFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20170531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;BEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20150131法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;TRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20171213;?

状态效果：-;?

状态代码：R26;?

法律状态：OPPOSITION FILED (CORRECTION)描述信息：Docdb Publication Number:; EP 2670547A2Opponent Name:;SIEMENS AKTIENGESELLSCHAFTEffective Date:;20150810法律状态公告日：20171221;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;7法律状态公告日：20180131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;FRPayment Date:;20171221Fee Payment-year:;7法律状态公告日：20180228;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;GBPayment Date:;20171222Fee Payment-year:;7法律状态公告日：20180430;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;DEPayment Date:;20171218Fee Payment-year:;7法律状态公告日：20180531;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ITPayment Date:;20180102Fee Payment-year:;7法律状态公告日：20180629;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;MKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20180808;?

状态代码：27A;?

法律状态：MAINTAINED AS AMENDED描述信息：Docdb Publication Number:; EP 2670547A2Effective Date:;20180808法律状态公告日：20180808;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2670547A2Corresponding Authority:;EPCorresponding Kind:;B2Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180808;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;DEDesignated State Event Code:;R102Designated State Description:;EPO DECISION MAINTAINING PATENT IN AMENDED FORM NOW FINALCorresponding Publication Number:;602012004126Corresponding Authority:;DE法律状态公告日：20181023;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;SEDesignated State Event Code:;RPEODesignated State Description:;EP PATENT HAS BEEN REPUBLISHED IN MODIFIED FORM AFTER OPPOSITION AT EPO法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;ALFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20141203法律状态公告日：20190131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2670547A2Designated State Authority:;SEPayment Date:;20181221Fee Payment-year:;8

**206、The final beam transport system**

摘要：A system includes a laser system operable to provide a laser beam along an optical path and a fusion chamber coupled to the optical path. The system also includes a neutron pinhole disposed along the optical path between the laser system and the fusion chamber and a neutron attenuation region disposed along the optical path between the laser system and the fusion chamber.

公开（公告）号：[JP2014511475A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYIjHCu5PcyV2GuxfaWZrjp&local=zh)

公开（公告）日：2014-05-15

申请号：JP2013551297

申请日：2012-01-24

申请人：Lawrence Livermore National Security LLC510218043

**207、基于Android操作系统的智能激光投影机**

摘要：本发明公开了一种基于Android操作系统的智能投影机，其特征在于：采用嵌入式的中央处理单元、与中央处理单元连接的存储器、显示单元、液晶触摸接收单元，声音处理单元，和投影机模块扩展板相链接，在此平台上查看并修改Android的源代码，编译LINUX的内核，移植主流的Android操作系统。不仅使投影机能够自动播放U盘中高清影像、演示PPT文档，还可根据用户需求个性化的安装第三方软件功能，具备上网，浏览网页，通过虚拟化方式共享资源，完美融合云计算，轻松实现资源的获取和分享。

公开（公告）号：[CN103957368A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ijLon0Vjgj%2BWr4kAd0KKkg&local=zh)

公开（公告）日：2014-07-30

申请号：CN201110461834.9

申请日：2011-12-30

申请人：南阳首控光电有限公司

法律状态：法律状态公告日：20140730;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150819;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):H04N 5/74申请公布日:20140730;?

**208、NUCLEAR REACTOR OF FUSION.**

摘要：Nuclear fusion reactor, with a vessel (20) that has a fusion chamber (21) where fusion takes place, and a plurality of chambers (2, 4, 6) through which a fluid flows, which chambers are separated from one another by shielding walls (3, 5). The reactor also has a containment wall (10) surrounding the vessel (20), fluid-pumping equipment, equipment for treating the fluids circulating via the vessel (20), equipment for controlling the pressure in the fusion chamber (21), a dispenser that provides fuel to the inside of the fusion chamber (21), and a plurality of laser equipment (17) for impacting the fusion products within the fusion chamber. The nuclear reactor is used for fusion of deuterium-tritium, deuterium-deuterium, hydrogen-hydrogen, and for the total conversion of material to energy.

公开（公告）号：[ES2377370A1](https://www.incopat.com/detail/init2?formerQuery=vsmtQvVAeXs%2BB6%2F3CX783PR0OjOTHMZL&local=zh)

公开（公告）日：2012-03-27

申请号：ES201132106

申请日：2011-12-26

申请人：UNIV MADRID POLITECNICA

法律状态：法律状态公告日：20121127;?

状态效果：+;?

状态代码：FG2A;?

法律状态：DEFINITIVE PROTECTION描述信息：Docdb Publication Number:; ES 2377370A1Corresponding Publication Number:;2377370Corresponding Authority:;ESCorresponding Kind:;B2Effective Date:;20121127

**209、INERTIAL CONFINEMENT FUSION POWER PLANT WHICH DECOUPLES LIFE-LIMITED COMPONENTS FROM PLANT AVAILABILITY**

摘要：An architecture for a fusion power plant is disclosed. The plant includes a fusion chamber for producing neutrons from a fusion reaction, and a laser system in which lasers are arranged about a vacuum chamber to provide energy to the fusion chamber to initiate the fusion reaction. The beam paths between the lasers and the fusion chamber are configured to prevent neutrons from the fusion chamber from reaching the laser system at a level that would preclude human access to the laser system.

公开（公告）号：[CA2813965A1](https://www.incopat.com/detail/init2?formerQuery=zZ400cM2Y6Hd%2Bisz3EbGQPR0OjOTHMZL&local=zh)

公开（公告）日：2012-05-18

申请号：CA2813965

申请日：2011-11-08

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC

**210、FUSION TARGET INJECTION AND TRACKING**

摘要：A system and method for injecting a fusion target into a fusion chamber for the purpose of initiating a fusion reaction includes injecting the target into a barrel and accelerating it to a predetermined flight velocity. A system for tracking a fusion target includes one or more laser beams traversing horizontally across a fusion chamber. As the fusion target travels in a direction orthogonal to the laser beams, the tracking system determines the velocity and tilt associated with the target. The engagement system includes one or more light sources that illuminate the target and one or more sensors that capture the scattered light. The engagement system determines one or more locations on the fusion target and provides the coordinates for those locations to laser control system and a time for fire the laser beams based on the expected target position near the center of the fusion chamber.

公开（公告）号：[CA2815828A1](https://www.incopat.com/detail/init2?formerQuery=zZ400cM2Y6F1FY5q1CiHw%2FR0OjOTHMZL&local=zh)

公开（公告）日：2012-05-18

申请号：CA2815828

申请日：2011-11-08

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC

法律状态：法律状态公告日：20151222;?

状态效果：-;?

状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2815828A1Effective Date:;20151110

**211、Nuclear fusion and tracking of the target injection**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

公开（公告）号：[JP2014500488A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaVzObEuUTSN2GuxfaWZrjp&local=zh)

公开（公告）日：2014-01-09

申请号：JP2013537930

申请日：2011-11-08

申请人：Lawrence Livermore National Security LLC510218043

**212、Inertial confinement nuclear fusion chamber**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

公开（公告）号：[JP2014500489A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZfmzg%2Fg7KIb2GuxfaWZrjp&local=zh)

公开（公告）日：2014-01-09

申请号：JP2013537933

申请日：2011-11-08

申请人：Lawrence Livermore National Security LLC510218043

法律状态：法律状态公告日：20141030;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20141029法律状态公告日：20150805;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20150804法律状态公告日：20151104;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20151104法律状态公告日：20151204;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20151204法律状态公告日：20160122;?

状态代码：RD02;?

法律状态：NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7422Effective Date:;20160122法律状态公告日：20160122;?

状态代码：RD03;?

法律状态：NOTIFICATION OF APPOINTMENT OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7423Effective Date:;20160122法律状态公告日：20160210;?

状态代码：RD04;?

法律状态：NOTIFICATION OF RESIGNATION OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7424Effective Date:;20160210法律状态公告日：20160229;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20160210法律状态公告日：20160404;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20160404法律状态公告日：20160630;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20160630法律状态公告日：20161003;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2014500489A 法律状态公告日：20161005;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20161005法律状态公告日：20161020;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2014500489A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20161017法律状态公告日：20161021;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2014500489A Corresponding Publication Number:;6027974Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150

**213、From the plant operation rate, separating the component life is limited inertial confinement nuclear fusion power plant**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

公开（公告）号：[JP2014500490A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaNyQAfv0KZVGGuxfaWZrjp&local=zh)

公开（公告）日：2014-01-09

申请号：JP2013537937

申请日：2011-11-08

申请人：Lawrence Livermore National Security LLC510218043

法律状态：法律状态公告日：20141030;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2014500490AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20141029法律状态公告日：20150811;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2014500490AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20150811法律状态公告日：20160223;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2014500490AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20160223

**214、FUSION TARGET INJECTION AND TRACKING**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

公开（公告）号：[KR1020130137183A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczuiA6ktRp0OvhBBk%2BKrtApA&local=zh)

公开（公告）日：2013-12-16

申请号：KR1020137013022

申请日：2011-11-08

申请人：L LIVERMORE NAT SECURITY LLC

法律状态：法律状态公告日：20170110;?

状态效果：-;?

状态代码：WITN;?

法律状态：WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20130137183A

**215、INERTIAL CONFINEMENT FUSION POWER PLANT WHICH DECOUPLES LIFE-LIMITED COMPONENTS FROM PLANT AVAILABILITY**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

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申请号：KR1020137011307

申请日：2011-11-08

申请人：L LIVERMORE NAT SECURITY LLC

法律状态：法律状态公告日：20161209;?

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状态代码：WITN;?

法律状态：WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20130137641A

**216、CHAMBER INERTIAL THERMONUCLEAR FUSION DEVICE**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

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申请日：2011-11-08

申请人：ЛОРЕНС ЛИВЕРМОР НЭШНЛ СЕКЬЮРИТИ, ЭлЭлСи

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状态代码：FA93;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2013118578A Effective Date:;20141110

**217、SIMILARLY AND TRACKING OF A THERMONUCLEAR TARGET**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

公开（公告）号：[RU2013118579A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4JDfHWrxhx1EWGuxfaWZrjp&local=zh)

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申请人：ЛОРЕНС ЛИВЕРМОР НЭШНЛ СЕКЬЮРИТИ, ЭлЭлСи

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法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2013118579A Effective Date:;20141110

**218、POWER PLANT BASED ON THERMONUCLEAR SYNTHESIS WITH INERTIAL CONFINEMENT OF PLASMA, ELIMINATING THE CONNECTION OF COMPONENTS, WITH LIMITED SERVICE LIFE, WITH WILLINGLY INSTALLATION**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

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申请人：ЛОРЕНС ЛИВЕРМОР НЭШНЛ СЕКЬЮРИТИ, ЭлЭлСи

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法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2013125571A Effective Date:;20141110

**219、INTERTIAL CONFINEMENT FUSION POWER PLANT WHICH DECOUPLES LIFE-LIMITED COMPONENT FROM PLANT AVAILABILITY**

摘要：An architecture for a fusion power plant is disclosed. The plant includes a fusion chamber for producing neutrons from a fusion reaction, and a laser system in which lasers are arranged about a vacuum chamber to provide energy to the fusion chamber to initiate the fusion reaction. The beam paths between the lasers and the fusion chamber are configured to prevent neutrons from the fusion chamber from reaching the laser system at a level that would preclude human access to the laser system.

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公开（公告）日：2014-09-25

申请号：US13883982

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申请人：Edward I Moses; Jeffery F Latkowski; Thomas M Anklam; Mary L Spaeth; Anthony Michael Dunne; Richard H Sawicki; Robert J Deri; Robin R Miles; Andrew J Bayramian; Kenneth R Manes; Peter A Amendt; Alvin C Erlandson

法律状态：法律状态公告日：20141017;?

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法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2014286471A1New Owner:;LAWRENCE LIVERMORE NATIONAL SECURITY, LLC, CALIFORFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MOSES, EDWARD I.;ANKLAM, THOMAS M.;LATKOWSKI, JEFFREY F.;AND OTHERS;SIGNING DATES FROM 20131111 TO 20140422;REEL/FRAME:033975/0466

**220、FUSION TARGET INJECTION AND TRACKING**

摘要：A system and method for injecting a fusion target into a fusion chamber for the purpose of initiating a fusion reaction includes injecting the target into a barrel and accelerating it to a predetermined flight velocity. A system for tracking a fusion target includes one or more laser beams traversing horizontally across a fusion chamber. As the fusion target travels in a direction orthogonal to the laser beams, the tracking system determines the velocity and tilt associated with the target. The engagement system includes one or more light sources that illuminate the target and one or more sensors that capture the scattered light. The engagement system determines one or more locations on the fusion target and provides the coordinates for those locations to laser control system and a time for fire the laser beams based on the expected target position near the center of the fusion chamber.

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申请号：WOUS11059791

申请日：2011-11-08

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC; MILES Robin; ROSSO Paul; PETZOLDT Ronald W; ALEXANDER Neil B; BLISS Erlan S; BAKER Kevin

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状态代码：121;?

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状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2012064746A1Corresponding Publication Number:;2011840221Corresponding Authority:;EP法律状态公告日：20130422;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064746A1Corresponding Publication Number:;2013537930Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20130424;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064746A1Corresponding Publication Number:;2815828Corresponding Authority:;CA法律状态公告日：20130508;?

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法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064746A1Designated State Authority:;DE法律状态公告日：20130521;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064746A1Corresponding Publication Number:;20137013022Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20130610;?

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法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064746A1Corresponding Publication Number:;2013118579Corresponding Authority:;RUCorresponding Kind:;A

**221、INERTIAL CONFINEMENT FUSION POWER PLANT WHICH DECOUPLES LIFE-LIMITED COMPONENT FROM PLANT AVAILABILITY**

摘要：An architecture for a fusion power plant is disclosed. The plant includes a fusion chamber for producing neutrons from a fusion reaction, and a laser system in which lasers are arranged about a vacuum chamber to provide energy to the fusion chamber to initiate the fusion reaction. The beam paths between the lasers and the fusion chamber are configured to prevent neutrons from the fusion chamber from reaching the laser system at a level that would preclude human access to the laser system.

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公开（公告）日：2012-05-18

申请号：WOUS11059820

申请日：2011-11-08

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC; MOSES Edward I; DUNNE Anthony Michael; LATKOWSKI Jeffery F; ANKLAM Thomas M; SPAETH Mary L; SAWICKI Richard H; DERI Robert J; MILES Robin R; BAYRAMIAN Andrew J; ERLANDSON Alvin C; MANES Kenneth R; AMENDT A Peter

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状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;2813965Corresponding Authority:;CA法律状态公告日：20130409;?

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状态代码：REEP;?

法律状态：REQUEST FOR ENTRY INTO THE EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;2011839360Corresponding Authority:;EP法律状态公告日：20130409;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;2011839360Corresponding Authority:;EP法律状态公告日：20130412;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;2013537937Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20130430;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;20137011307Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20130508;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064773A1Designated State Authority:;DE法律状态公告日：20130610;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;2013125571Corresponding Authority:;RUCorresponding Kind:;A法律状态公告日：20140501;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2012064773A1Corresponding Publication Number:;13883982Corresponding Authority:;US

**222、The indirect drive type power for nuclear fusion type target**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

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申请号：JP2013537917

申请日：2011-11-07

申请人：Lawrence Livermore National Security LLC510218043

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状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20141028法律状态公告日：20150805;?

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状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20150804法律状态公告日：20151104;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20151104法律状态公告日：20151117;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20151117法律状态公告日：20160122;?

状态代码：RD02;?

法律状态：NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A7422Effective Date:;20160122法律状态公告日：20160122;?

状态代码：RD03;?

法律状态：NOTIFICATION OF APPOINTMENT OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A7423Effective Date:;20160122法律状态公告日：20160210;?

状态代码：RD04;?

法律状态：NOTIFICATION OF RESIGNATION OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A7424Effective Date:;20160210法律状态公告日：20160212;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20160210法律状态公告日：20160229;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20160210法律状态公告日：20160303;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2014500487AFree Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20160229

**223、TARGET INDIRECT OF EXCITATION FOR THERMONUCLEAR POWER ENGINEERING**

摘要：A hohlraum for an inertial confinement fusion power plant is disclosed. The hohlraum includes a generally cylindrical exterior surface, and an interior rugby ball-shaped surface. Windows over laser entrance holes at each end of the hohlraum enclose inert gas. Infrared reflectors on opposite sides of the central point reflect fusion chamber heat away from the capsule. P2 shields disposed on the infrared reflectors help assure an enhanced and more uniform x-ray bath for the fusion fuel capsule.

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申请号：RU2013125570

申请日：2011-11-07

申请人：ЛОРЕНС ЛИВЕРМОР НЭШНЛ СЕКЬЮРИТИ, ЭлЭлСи

法律状态：法律状态公告日：20170710;?

状态效果：-;?

状态代码：FA93;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2013125570A Effective Date:;20141110

**224、一种触发氘钯气固系统发热的设备**

摘要：本实用新型的目的是为了克服现有的通过核聚变方法获取能量的方法存在的上述缺点，提供一种触发氘钯气固系统发热的设备。本实用新型提供一种触发氘钯气固系统发热的设备，其中，该设备包括反应室、氘气供给装置、抽真空装置、激光器和半反射镜，所述反应室内设置有陶瓷管以及缠绕在该陶瓷管上的钯丝，所述半反射镜用于将所述激光器发射的激光透射到所述钯丝上，所述氘气供给装置与所述反应室连通，用于对反应室提供氘气，所述抽真空装置与所述反应室连通，用于对反应室抽真空。

公开（公告）号：[CN202159495U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORNywd5QF5p0B2r4kAd0KKkg&local=zh)

公开（公告）日：2012-03-07

申请号：CN201120304711.X

申请日：2011-08-19

申请人：神华集团有限责任公司; 神华科技发展有限责任公司

法律状态：法律状态公告日：20120307;?

法律状态：授权;?

描述信息：授权;?

**225、METHOD FOR OPTIMALLY DETERMINING THE CHARACTERISTICS AND ARRANGEMENT OF A SET OF SENSORS FOR MONITORING AN AREA**

摘要：IN THE MATTER OF a Singapore Application corresponding toPCT Application PCT/EP2011/062119RWS Group Ltd, of Europa House, Chiltern Park, Chiltern Hill, Chalfont St Peter, Buckinghamshire, United Kingdom, hereby solemnly and sincerely declares that, to the best of its knowledge and belief, the following document, prepared by one of its translators competent in the art and conversant with the English and French languages, is a true and correct translation of the PCT Application filed under No. PCT/EP2011/062119.Date : 6 February 2013 N. T. SIMPK1N Deputy Managing Director — UK Translation DivisionFor and on behalf of RWS Group Ltd 1METHOD FOR OPTIMALLY DETERMINING THE CHARACTERISTICS AND ARRANGEMENT OF A SET OF SENSORS FOR MONITORING AN AREA5 The subject of the present invention is a method for determining thecharacteristics and arrangement of a set of devices or sensors for monitoring a zone of interest.It applies notably in aiding the design of a system for monitoring azone of interest through a network of fixed sensors and in determining the 10 optimum position and optimum adjustment of these sensors in the zoneunder a set of given constraints.The invention applies to any type of device or sensor in particular a camera, a radar, a seismic or acoustic sensor or else a motion detection device.15The technical problem at which the present invention is aimed relates to the automatic allocation of a set of sensors, operating in a network, in a manner adapted to the monitoring of a predefined zone of interest. This problem is notably encountered by a monitoring system20 designer or a user of such a system. It consists, on the basis of a set of sensors each having specific characteristics according to particular technologies, of a set of absolute constraints to be complied with and of a set of properties that it is desired to optimize, in determining the combination, in terms of number and type from among those available, of25 sensors making it possible to satisfy these absolute constraints and to optimize these properties. A second problem is also aimed at determining the optimum position and optimum adjustment of the sensors determined previously within the monitoring zone so as to optimize performance for constrained resources.30 The network of sensors chosen must comply with one or moreabsolute constraints, for example, a maximum budget, maximum energy reserve, maximum carriage or minimum detection performance. 2The properties to be optimized are, for example, the total price of the system, a probability of target detection, an accuracy of location in two or three dimensions. The properties are classed empirically by relative significance.5 The technical problem at which the present invention is aimed is aproblem of constrained multicriterion optimization of a set of heterogeneous cost functions of arbitrary complexity. These functions being able to be of diverse nature, analytical or non-analytical, continuous or non-continuous, differentiable or non-differentiable. Some constraints may be expressed by 10 simple functions. For example, the total price of the system corresponds to a simple sum of the prices of its constituents. Likewise the total weight of the system is also obtained by the sum of the weights of each sensor. On the other hand, other constraints are modeled by more complex functions. Thus the probability of detecting a target can depend on an a priori 15 probability density of presence of the target, the target-sensor distance or indeed the intervisibility. Accuracy of location based on fusion between sensors can involve the probabilities of detection, the accuracies of elementary measurements and the mutual relative positions of the sensors. 20 The solutions of the prior art which address the problem of theoptimization of sensor networks relate essentially to the deployment of networks of wireless devices and are aimed at optimizing the means of communication. The problem area thus tackled relates in particular to the maintaining of the service and the autonomy of the antennas and not the 25 optimization of the coverage of a monitoring zone as a function of diverse constraints on the sensors.Concerning the problem area of the optimal positioning of monitoring sensors, patent application US 7395195 proposes a device allowing the representation of a network of devices, the allocation of calculation 30 resources and the positioning of said sensors. Patent application US 7693049 implements a stochastic optimization technique essentially focused on the conservation of energy resources. 3In addition to the fact that the two aforementioned patent applications are aimed at only part of the wider problem that the present invention proposes to solve, they also exhibit limitations in relation to the optimization constraints that they can take into account. Generally, the5 known schemes implement conventional optimization schemes such as the gradient scheme. Such schemes exhibit the following drawbacks. They afford a solution to the global optimization problem only if the optimization constraints are modeled by differentiable functions, this representing a significant limitation that the present invention is aimed at removing.10 Moreover these schemes do not make it possible to avoid the phenomena of local minima or maxima which represent unsatisfactory solutions. It is also possible to use schemes based on a genetic algorithm, but these are not applicable to all cost functionals and do not guarantee convergence to a valid solution in all cases.15The present invention makes it possible to remove the limitations of the prior art by proposing a completely automated solution for determining the sensors in terms of number, type and position.For this purpose, the subject of the invention is an iterative method, 20 implemented by computer, of optimized design of a system for monitoring a geographical zone comprising a plurality of sensors of different types and characteristics represented by a vector S each component of which indicates the type and the characteristics of a sensor and its position in said zone, said system exhibiting a plurality of absolute technical constraints, 25 said method being characterized in that it comprises at least the following steps : o a step of initializing the vector S to a solution So, o a step of perturbing the sensors making up the solution So at the iteration of index n, to obtain a new candidate solution 5, 1 at the30 iteration of index n+1, said perturbation entailing changing the type or a characteristic of at least one of said sensors, the possible sensor types also including a dummy type whose 4characteristics have no impact on the global cost of the solution S, o a step of evaluating the cost of said solution srkm on the basis of a global cost function C(S) determined as a combination of a5 plurality of sub-criteria Ck(S) for optimizing at least one characteristic of said sensors of which the solution S is composed, o a step of selecting the new current solution Sn+1 at the iteration n+1 on the basis of a probability of transition 10 P transition = 77 (C (S n), C (S n\_ Ei )) which decreases as a functionof (C (s?, ) — C (Sr )) culminating in the selection of the newcandidate solution 5b4-1= 5e+1 or in the retaining of the previous solution S+1 =S, a step of storing, at each iteration, the best solution Sbest 15 obtained which satisfies the relation : if C(s1) < C(Sb?, ), Sbes, =a test step for stopping or continuing the iterations of said method, when the stopping test is positive, a final step of producing the 20 optimal solution Sbest containing the number, the type, the characteristics and the position of the sensors suitable for monitoring said geographical zone.In a variant embodiment of the invention, the method furthermore 25 comprises a step of displaying the positions of said sensors making up the optimal solution Sbest in the geographical zone on a user interface.In another variant embodiment of the invention, the initialization step comprises at least the following sub-steps : o random selection of the type of each of said sensors from among 30 the available types, including the dummy type, o random selection of the position of each of said sensors, 5o verification of compliance, by the solution So, with all the absolute constraints.In another variant embodiment of the invention, said sensors are of passive type and are at least taken from the following set : a camera, a5 radar, a seismic sensor, an acoustic sensor, a motion detection device, a detection device based on electrical contact, a device for detecting radioelectric sources, a device for detecting nuclear sources, a magnetic, capacitive, inductive, chemical or bacteriological detection device.In another variant embodiment of the invention, said sensors are of 10 active type and are at least taken from the following set : a radar, an active acoustic detector, a LIDAR detector, a detector based on neutron activation, an active-barrier-based detector.In another variant embodiment of the invention, an absolute technicalconstraint is a constraint of maximum weight or maximum price or of 15 minimum accuracy of location over a given geographical zone.In another variant embodiment of the invention, a characteristic of asensor comprises its weight, its price, its probability of detecting a target, itsdetection radius.In another variant embodiment of the invention, an optimization sub 20 criterion is the global weight of the set of said sensors or the global price of the set of said sensors or the degree of coverage of the monitored zone or the accuracy of location of a target in the monitored zone, said sub-criterion being able to be computed numerically for the set of sensors making up the solution S. 25 In another variant embodiment of the invention, at least one of the sub criteria depends on a significance map which allocates for each mesh cell, with coordinates i, j, of the geographical zone to be mo

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申请人：THALES SA

**226、谷氨酰胺转运蛋白2-加强型绿色荧光蛋白融合蛋白表达载体及其构建方法和应用**

摘要：本发明涉及生物工程领域，公开了一种融合蛋白表达载体。将谷氨酰胺转运蛋白2(SNAT2)C端与加强型绿色荧光蛋白(EGFP)的N端相连，构建在真核生物表达载体pBK-CMV(Δ[1098-1300])上，得到谷氨酰胺转运蛋白2-加强型绿色荧光蛋白融合蛋白表达载体。通过这种载体，可用激光共聚焦电子显微镜和利用GFP抗体通过蛋白免疫印记技术(Western?blot)检测SNAT2在哺乳动物细胞(如HEK293T细胞)膜上的表达、定位及定量的方法。

公开（公告）号：[CN102321656A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2hOlFJCAqdf8Wr4kAd0KKkg&local=zh)

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描述信息：发明专利申请公布后的驳回IPC(主分类):C12N 15/66申请公布日:20120118;?

**227、Producing a component by a layered structure using selective laser melting, comprises for each layer fusing a powdery component material corresponding to a desired geometry of the component, using a laser beam and solidifying by cooling**

摘要：The present invention relates to a method for producing a component by means of selective laser sintering by laminar structure, in which for each layer a powdered construction unit material corresponding to a desired geometry of the component with at least one laser beam is melted and then solidified by cooling. In the method the is sucked. Sheath-core-principle used, wherein the webs, on which the laser beam is guided in the core region, so be selected that it always at least approximately perpendicular to the shell region upon contact with the sheath portion meet. In this way a smaller layer thickness relationshipfusionmetallurgically connection between between covering part and covering part and can be achieved with good core region core area. The method thus makes possible a faster generative production at high production quality.

公开（公告）号：[DE102011105045B3](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4926exjBkljMW9%2F72jNNt%2FCI4&local=zh)

公开（公告）日：2012-06-21

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申请日：2011-06-20

申请人：Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e V

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状态代码：R012;?

法律状态：REQUEST FOR EXAMINATION VALIDLY FILED描述信息：Docdb Publication Number:; DE102011105045B3法律状态公告日：20120204;?

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状态代码：R020;?

法律状态：PATENT GRANT NOW FINAL描述信息：Docdb Publication Number:; DE102011105045B3Effective Date:;20120922

**228、FUEL PELLETS FOR LASER FUSION**

摘要：Fuel pellets for use as targets in thermonuclear fusion by inertial confinement are manufactured from a solid palladium core that contains deuterium tritium gases. The palladium core is covered with a tamper-ablator shell of heavy metal selected from the group including gold, platinum, and tungsten.

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申请号：US13156544

申请日：2011-06-09

申请人：STAUFFER JOHN E

**229、Target**

摘要：PROBLEM TO BE SOLVED : To provide a target used for a new laser nuclear fusion that is proposed to enable efficient energy generation.SOLUTION : A target 2 used for laser nuclear fusion is formed in a long shape having a circular or isotropic polygonal cross-section, and has a plurality of planar reaction parts 21 made of a reaction material for nuclear fusion. The plurality of the reaction parts 21 have flat surfaces perpendicular to the longitudinal direction and disposed at an interval from each other in the longitudinal direction. The target 2 is configured so that a nuclear fusion reaction is induced by injecting ions of nuclear fusion fuel from one end 2a of the target 2 in the longitudinal direction, sending the ions to respective reaction parts 21 so that the ions move from the one end 2a toward the other end 2b opposite to the one end 2a, and irradiating the reaction parts 21 with laser beams P2, P3 from the outer periphery of the target 2.COPYRIGHT : (C)2013, JPO&INPIT

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申请人：SUZUKI MOTOR CORP

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状态代码：A621;?

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状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2012242319AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20150206

**230、METHOD FOR MANUFACTURING TARGET**

摘要：PROBLEM TO BE SOLVED : To provide a method for manufacturing a target in which a target used for new laser nuclear fusion proposed in order to efficiently enable energy generation can be manufactured with high accuracy and ease.SOLUTION : In a method for manufacturing a long-shaped target used for laser nuclear fusion, ions of nuclear fusion fuel are injected from one end side of a target in the longitudinal direction and sent to a reaction material inside the target so as to go from the one end side of the target toward the other end side opposite to the one end side, and the reaction material inside the target is irradiated with laser beams from the side surface of the target to induce a nuclear fusion reaction.COPYRIGHT : (C)2013, JPO&INPIT

公开（公告）号：[JP2012242320A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZ5nwH9OPgMm2GuxfaWZrjp&local=zh)

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申请人：SUZUKI MOTOR CORP

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状态代码：A621;?

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状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2012242320AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20150210

**231、实现轻核聚合的方法**

摘要：本发明属于核能技术领域，具体涉及一种实现轻核聚合的方法。首先，制作直径在纳米量级的金属钯微球，并将其置于D气中，因为金属钯具有极强的吸附D的能力，因此D进入金属钯的晶格内紧密排列，原子核间距远低于正常状态。然后，将饱和吸附D的金属钯微球投入反应堆容器中，以若干束强脉冲激光成对称进行打靶，靶球内的D在高能量激光的作用下克服核力作用，聚合为更高原子序数的原子，并释放出大量的能量。本发明提供的技术方案由于采取金属钯吸附D气，使D原子之间的距离远小于常态，因此可以有效地降低激光打靶所需要的能量，促进轻核聚变的实现。

公开（公告）号：[CN102789819A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gCvb%2Fx6bJ902r4kAd0KKkg&local=zh)

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申请人：曲舒心

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描述信息：文件的公告送达收件人:曲舒心文件名称:发明专利申请初步审查合格通知书;?

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法律状态：文件的公告送达;?

描述信息：文件的公告送达IPC(主分类):G21B 3/00收件人:曲舒心文件名称:发明专利申请公布通知书;?

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法律状态：文件的公告送达;?

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法律状态：文件的公告送达;?

描述信息：文件的公告送达IPC(主分类):G21B 3/00收件人:曲舒心文件名称:视为撤回通知书;?

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法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G21B 3/00申请公布日:20121121;?

**232、一种可控核聚变装置**

摘要：一种可控核聚变装置，如图所示：若干部激光聚焦点火器1同时照射核反应腔3的球心，使球心的温度上升到核聚变反应所需要的几亿度的高温。核燃料在球心处发生聚变反应，核聚变反应发出强烈的光芒。球面聚焦反射镜2再把核聚变发出的光反射回球心，使球心的温度保持在几亿度到几千亿度之间，使球心具备持续的核聚变反应条件。这时，只要调节反射镜的反射面积的大小或者是调节核燃料的浓度，就可以达到调节核聚变激烈程度的目的。

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申请人：袁美照

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描述信息：发明专利申请公布后的视为撤回IPC(主分类):G21B 1/00申请公布日:20111005;?

**233、一种测量托卡马克第一壁表面氘或氚滞留空间分布方法**

摘要：本发明公开了一种测量托卡马克第一壁材料表面氘或氚滞留二维分布方法，用于磁约束聚变装置的第一壁材料表面的氘(氚)元素滞留特性的研究，得到壁材料表面微小区域的氘(氚)元素的二维分布。其特征在于用两束高功率可调谐脉冲激光分别共振解离C-H、C-D化学键(解吸附)和共振电离H、D原子，高效率的产生H+、D+离子，用飞行时间质谱对氘(氚)离子进行检测。用显微镜/摄像机系统观察被测样品区域，用精密二维电动平台实现样品二维分析，本发明可高灵敏，高分辨、快速高效的测量氘(氢、氚)元素在第一壁材料表面的分布情况，为细致研究氘(氚)表面滞留特性提供依据。

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申请人：大连理工大学

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描述信息：实质审查的生效IPC(主分类):G01T 1/29;申请日:20110120;?

**234、基于光栅调制相位比较等离子体磁场测量方法与装置**

摘要：本发明属于核聚变等离子体诊断，具体涉及一种基于光栅调制相位比较等离子体磁场测量方法和装置。目的是针对极向磁场测量受到的限制，提供一种步骤简单、成本低的等离子体磁场测量方法与装置。具体分为：一、利用激光发射器得到一束光束；二、将光束分为三组干涉光路，同时得到不经过等离子体的参考路差拍信号、等离子体密度差拍信号和等离子体极向场差拍信号；三、利用密度差拍信号与参考路的差拍信号的相位之差得到等离子体的电子密度；四、利用极向场差拍信号与参考路的差拍信号的相位之差得到极向磁场的值。本发明避免了过去振幅信号测量带来的激光功率扰动及环境影响的危害，使测量更加可靠，并能够提高测量精度。

公开（公告）号：[CN102129050A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2j7%2FJTMDjA%2BrGr4kAd0KKkg&local=zh)

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申请人：核工业西南物理研究院

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描述信息：公开;?

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法律状态：授权;?

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**235、钨合金与钽合金的低温扩散焊接方法**

摘要：本发明涉及一种钨合金与钽合金的低温扩散焊接方法，该方法步骤包括：(1)工件表面清理步骤：将钨合金、钽合金加工到规定尺寸，除去它们和中间层-镍箔待焊面的氧化层；(2)工件组装步骤：将中间层-镍箔置于钨合金与钽合金之间，构造被焊接工件；(3)真空扩散焊接步骤：将被焊接工件放入真空扩散焊接炉内，加热、保温，当保温开始时对被焊接工件施加轴向压力，保温结束后卸除压力并随炉冷却。本发明能够克服现有焊接技术无法在低温下实现钨合金与钽合金的高质量扩散焊接的问题，特别适合钨合金和钽合金之间在低温下可靠且精密的扩散焊接，所制备的钨钽焊接体可以用于动高压物理和核聚变等研究领域。

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申请人：武汉理工大学

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描述信息：公开;?

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描述信息：授权;?

**236、A prompt gamma-ray detection apparatus for analyzing chemical materials by using femto second pulse laser induced neutrons**

摘要：PURPOSE : A prompt gamma measure system for analyzing a chemical sample using femto second pulse laser induced neutrons is provided to non-destructively analyze constituents inside a sample by measuring prompt gamma rays caused by a nuclear reaction of a nucleus of a chemical substance and thermal neutron.CONSTITUTION : A prompt gamma measure system(10) for analyzing a chemical sample using femto second pulse laser induced neutrons comprises an ultra high frequency laser unit, a vacuum chamber(12), a target mount, a rotator(14), an outer cover, a sample mounting part(16), a lithium polyethylene port(17), a gamma ray measurement part, and an extension port(21). The ultrahigh frequency laser unit has properties of beam energy generating a D-D fusion reaction. The vacuum chamber creates neutrons by the ultrahigh purse laser frequency inducement D-D fusion reaction in the ultrahigh frequency laser unit. The target mount can mount a plastic target having heavy hydrogen as a cylinder form. The rotator rotates the plastic target so that a continuous oscillation of the femto second pulse laser induced neutrons is possible. The outer cover minimizes the emission of the neutrons from a whole outside part of the target mount except for a laser penetration part. A sample which is a measuring object is mounted on the sample mounting part.COPYRIGHT KIPO 2012

公开（公告）号：[KR1020120069228A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczvrj13aW1%2FYijjdc40lhC%2Bm&local=zh)

公开（公告）日：2012-06-28

申请号：KR1020100130687

申请日：2010-12-20

申请人：KOREA ATOMIC ENERGY RESEARCH INSTITUTE

法律状态：法律状态公告日：20101220;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20120069228A 法律状态公告日：20121220;?

状态效果：+;?

状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 20120069228A 法律状态公告日：20121224;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 20120069228A 法律状态公告日：20160928;?

状态代码：FPAY;?

法律状态：ANNUAL FEE PAYMENT描述信息：Docdb Publication Number:; KR 20120069228A Payment Date:;20160928Fee Payment-year:;5

**237、核聚变靶材、核聚变装置以及核聚变方法**

摘要：本发明的目的在于，能够以比较高的效率引发核聚变反应并且能够使装置小型化。本发明的核聚变装置(1)具备：包含含有氘或者氚的靶基板(7a)及层叠于靶基板(7a)上且含有氘或者氚的薄膜层(7b)的核聚变靶材(7)、容纳核聚变靶材(7)的真空容器(5)、朝着核聚变靶材(7)的薄膜层(7b)照射连续的2个第1及第2脉冲激光(P1, P2)的激光装置(3)，第1脉冲激光(P1)的强度小于第2脉冲激光(P2)的强度，并且，被设定为能够从靶基板(7a)剥离薄膜层(7b)的值。

公开（公告）号：[CN102714062A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jmTUdpPIhM2Wr4kAd0KKkg&local=zh)

公开（公告）日：2012-10-03

申请号：CN201080057004.3

申请日：2010-12-15

申请人：浜松光子学株式会社; 丰田自动车株式会社

法律状态：法律状态公告日：20121003;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20121128;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/15;申请日:20101215;?

法律状态公告日：20150401;?

法律状态：授权;?

描述信息：授权;?

**238、NUCLEAR FUSION TARGET, NUCLEAR FUSION DEVICE, AND NUCLEAR FUSION METHOD**

摘要：An object is to be capable of inducing a nuclear fusion reaction at a relatively high efficiency and downsize a device. A nuclear fusion device 1 of the present invention includes a nuclear fusion target 7 including a target substrate 7a containing deuterium or tritium and a thin-film layer 7b containing deuterium or tritium stacked on the target substrate 7a, a vacuum container 5 for storing the nuclear fusion target 7, and a laser unit 3 for irradiating two successive first and second pulsed laser lights P1, P2 toward the thin-film layer 7b of the nuclear fusion target 7, and the intensity of the first pulsed laser light P1 is set to a value that is smaller than that of the second pulsed laser light P2 and allows peeling of the thin-film layer 7b from the target substrate 7a.

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公开（公告）日：2012-10-24

申请号：EP10837638

申请日：2010-12-15

申请人：Hamamatsu Photonics K K; Toyota Jidosha Kabushiki Kaisha

法律状态：法律状态公告日：20121024;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2515308A1Effective Date:;20120702法律状态公告日：20121024;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2515308A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20130227;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN APPLICATION描述信息：Docdb Publication Number:; EP 2515308A1New Owner:;HAMAMATSU PHOTONICS K.K.法律状态公告日：20130227;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN APPLICATION描述信息：Docdb Publication Number:; EP 2515308A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA法律状态公告日：20130327;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2515308A1法律状态公告日：20151222;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;DEDesignated State Event Code:;R079Designated State Description:;AMENDMENT OF IPC MAIN CLASSCorresponding Publication Number:;602010048433Corresponding Authority:;DEFree Text Description:;PREVIOUS MAIN CLASS: G21B0001150000Ipc:;G21B0003000000法律状态公告日：20160127;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2515308A1Ipc:;H05H 6/00 20060101ALI20151222BHEP法律状态公告日：20160127;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2515308A1Ipc:;G21B 3/00 20060101AFI20151222BHEP法律状态公告日：20160210;?

状态效果：+;?

状态代码：RA4;?

法律状态：DESPATCH OF SUPPLEMENTARY SEARCH REPORT描述信息：Docdb Publication Number:; EP 2515308A1Effective Date:;20160113法律状态公告日：20170830;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2515308A1Effective Date:;20170803法律状态公告日：20180207;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2515308A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AL;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MK;MT;NL;NO;PL;PT;RO;RS;SE;SI;SK;SM;TR;法律状态公告日：20180207;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20180215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20180215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;969084Corresponding Authority:;ATEffective Date:;20180215法律状态公告日：20180307;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20180315;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602010048433Corresponding Authority:;DE法律状态公告日：20180613;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20180207法律状态公告日：20180715;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;969084Corresponding Authority:;ATEffective Date:;20180207法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180507法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;CYFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180508法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180507法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;RSFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ISFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180607法律状态公告日：20180911;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;DEDesignated State Event Code:;R084Designated State Description:;DECLARATION OF WILLINGNESS TO LICENCECorresponding Publication Number:;602010048433Corresponding Authority:;DE法律状态公告日：20181003;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;GBDesignated State Event Code:;746Designated State Description:;REGISTER NOTED 'LICENCES OF RIGHT' (SECT. 46/1977)Effective Date:;20180912法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ALFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ITFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;EEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;ROFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181108;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;DEDesignated State Event Code:;R097Designated State Description:;NO OPPOSITION FILED AGAINST GRANTED PATENT, OR EPO OPPOSITION PROCEEDINGS CONCLUDED WITHOUT DECISIONCorresponding Publication Number:;602010048433Corresponding Authority:;DE法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;SKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;CZFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;SMFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180207法律状态公告日：20190116;?

状态效果：+;?

状态代码：26N;?

法律状态：NO OPPOSITION FILED描述信息：Docdb Publication Number:; EP 2515308A1Effective Date:;20181108法律状态公告日：20190131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2515308A1Designated State Authority:;DEPayment Date:;20181204Fee Payment-year:;9

**239、NUCLEAR FUSION TARGET, NUCLEAR FUSION DEVICE, AND NUCLEAR FUSION METHOD**

摘要：An object is to be capable of inducing a nuclear fusion reaction at a relatively high efficiency and downsize a device. A nuclear fusion device 1 of the present invention includes a nuclear fusion target 7 including a target substrate 7a containing deuterium or tritium and a thin-film layer 7b containing deuterium or tritium stacked on the target substrate 7a, a vacuum container 5 for storing the nuclear fusion target 7, and a laser unit 3 for irradiating two successive first and second pulsed laser lights P 1 , P 2 toward the thin-film layer 7b of the nuclear fusion target 7, and the intensity of the first pulsed laser light P 1 is set to a value that is smaller than that of the second pulsed laser light P 2 and allows peeling of the thin-film layer 7b from the target substrate 7a.

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公开（公告）日：2012-10-02

申请号：KR1020127014510

申请日：2010-12-15

申请人：TOYOTA MOTOR CO LTD; HAMAMATSU PHOTONICS KK

法律状态：法律状态公告日：20151111;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 20120107471A 法律状态公告日：20160525;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 20120107471A 法律状态公告日：20161104;?

状态效果：+;?

状态代码：E701;?

法律状态：DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT描述信息：Docdb Publication Number:; KR 20120107471A 法律状态公告日：20170203;?

状态效果：+;?

状态代码：GRNT;?

法律状态：WRITTEN DECISION TO GRANT描述信息：Docdb Publication Number:; KR 20120107471A

**240、NUCLEAR FUSION TARGET, NUCLEAR FUSION DEVICE, AND NUCLEAR FUSION METHOD**

摘要：An object is to be capable of inducing a nuclear fusion reaction at a relatively high efficiency and downsize a device. A nuclear fusion device 1 of the present invention includes a nuclear fusion target 7 including a target substrate 7a containing deuterium or tritium and a thin-film layer 7b containing deuterium or tritium stacked on the target substrate 7a, a vacuum container 5 for storing the nuclear fusion target 7, and a laser unit 3 for irradiating two successive first and second pulsed laser lights P1, P2 toward the thin-film layer 7b of the nuclear fusion target 7, and the intensity of the first pulsed laser light P1 is set to a value that is smaller than that of the second pulsed laser light P2 and allows peeling of the thin-film layer 7b from the target substrate 7a.

公开（公告）号：[US20120307950A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rE7hvZymWC%2BccPRaceoSxX2&local=zh)

公开（公告）日：2012-12-06

申请号：US13516112

申请日：2010-12-15

申请人：Toyota Jidosha Kabushiki Kaisha; Hamamatsu Photonics K K

法律状态：法律状态公告日：20120718;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2012307950A1New Owner:;HAMAMATSU PHOTONICS K.K., JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SEKINE, TAKASHI;KAWASHIMA, TOSHIYUKI;KAN, HIROFUMI;AND OTHERS;SIGNING DATES FROM 20120528 TO 20120614;REEL/FRAME:028577/0313法律状态公告日：20120718;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2012307950A1New Owner:;TOYOTA JIDOSHA KABUSHIKI KAISHA, JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SEKINE, TAKASHI;KAWASHIMA, TOSHIYUKI;KAN, HIROFUMI;AND OTHERS;SIGNING DATES FROM 20120528 TO 20120614;REEL/FRAME:028577/0313

**241、NUCLEAR FUSION TARGET, NUCLEAR FUSION DEVICE, AND NUCLEAR FUSION METHOD**

摘要：Disclosed is a device which is capable of inducing a nuclear fusion reaction with relatively high efficiency, while being reduced in size. Specifically disclosed is a nuclear fusion device (1) which comprises : a nuclear fusion target material (7) that comprises a target substrate (7a) containing deuterium or tritium, and a thin film layer (7b) arranged on the target substrate (7a) and containing deuterium or tritium; a vacuum container (5) that houses the nuclear fusion target material (7); and a laser device (3) that emits two successive first and second pulse laser beams (P1, P2) toward the thin film layer (7b) of the nuclear fusion target material (7). The intensity of the first pulse laser beam (P1) is set at a value that is lower than the intensity of the second pulse laser beam (P2) but capable of separating the thin film layer (7b) from the target substrate (7a).

公开（公告）号：[WO2011074612A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU7L5OVkxvIYtPNkPtwy7rjn&local=zh)

公开（公告）日：2011-06-23

申请号：WOJP10072573

申请日：2010-12-15

申请人：HAMAMATSU PHOTONICS K K; TOYOTA JIDOSHA KABUSHIKI KAISHA; SEKINE Takashi; KAWASHIMA Toshiyuki; KAN Hirofumi; KITAGAWA Yoneyoshi; MORI Yoshitaka; AZUMA Hirozumi; HIOKI Tatsumi; MOTOHIRO Tomoyoshi; MIYAMOTO Yasushi; NAKAMURA Naoki

法律状态：法律状态公告日：20101215;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2011074612A1Corresponding Publication Number:;201080057004.3Corresponding Authority:;CN法律状态公告日：20110907;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2011074612A1Corresponding Publication Number:;10837638Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20111215;?

状态代码：DPE1;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED AFTER EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED FROM 20040101)描述信息：Docdb Publication Number:; WO 2011074612A1法律状态公告日：20120604;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2011074612A1Corresponding Publication Number:;20127014510Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20120618;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2011074612A1Designated State Authority:;DE法律状态公告日：20120702;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2011074612A1Corresponding Publication Number:;2010837638Corresponding Authority:;EP法律状态公告日：20120718;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2011074612A1Corresponding Publication Number:;13516112Corresponding Authority:;US

**242、闪烁分层摄影仪**

摘要：本发明提供一种闪烁分层摄影仪，涉及一种医用核素设备，该闪烁分层摄影仪包括：一探测定位系统，用于利用环状像素阵列探测器，获取任意投影角度的生物体体内核素的投影透视的图像信息；一激光定位系统，用于获取生物体的外部轮廓线的图像信息；以及一主控系统，用于将所述生物体体内核素的投影透视的图像信息和所述外部轮廓线的图像信息进行双模态信息融合处理。可实现生物体正电子投影透视的图像信息与激光外部轮廓线的图像信息的双模态信息融合，能够获得生物体的内部结构和外部结构相结合的定位信息。

公开（公告）号：[CN102525521A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ieP3jFqqdMRGr4kAd0KKkg&local=zh)

公开（公告）日：2012-07-04

申请号：CN201010600965.6

申请日：2010-12-13

申请人：北京大基康明医疗设备有限公司

法律状态：法律状态公告日：20120905;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):A61B 6/02;申请日:20101213;?

法律状态公告日：20120704;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20150513;?

法律状态：发明专利申请公布后的驳回;?

描述信息：发明专利申请公布后的驳回IPC(主分类):A61B 6/02申请公布日:20120704;?

**243、闪烁分层摄影仪**

摘要：本实用新型提供一种闪烁分层摄影仪，涉及一种医用核素设备，该闪烁分层摄影仪包括：一探测定位系统，用于利用环状像素阵列探测器，获取任意投影角度的生物体体内核素的投影透视的图像信息；一激光定位系统，用于获取生物体的外部轮廓线的图像信息；以及一主控系统，用于将所述生物体体内核素的投影透视的图像信息和所述外部轮廓线的图像信息进行双模态信息融合处理。可实现生物体正电子投影透视的图像信息与激光外部轮廓线的图像信息的双模态信息融合，能够获得生物体的内部结构和外部结构相结合的定位信息。

公开（公告）号：[CN201879710U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORMkb1Lxr%2Fb5%2Bmr4kAd0KKkg&local=zh)

公开（公告）日：2011-06-29

申请号：CN201020673494.7

申请日：2010-12-13

申请人：北京大基康明医疗设备有限公司

法律状态：法律状态公告日：20110629;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20121010;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利权的转移IPC(主分类):A61B 6/00;变更事项:专利权人;变更前权利人:北京大基康明医疗设备有限公司;变更后权利人:哈尔滨亿仁赛博医疗设备有限公司;变更事项:地址;变更前权利人:100176 北京市经济技术开发区永昌北路11号;变更后权利人:黑龙江省哈尔滨双城市工农街;登记生效日:20120905;?

**244、模拟靶定位装置**

摘要：本发明涉及一种用于激光核聚变靶室诊断设备的模拟靶定位装置，该模拟靶定位装置包括模拟靶、送靶杆、第一直线定位轴承以及直线电机；第一直线定位轴承套接于送靶杆上；直线电机驱动送靶杆并沿直线电机的轴向在第一直线定位轴承内做伸缩运动；送靶杆和模拟靶活动连接。本发明提供了一种能够沿轴向稳定流畅伸缩、对诊断设备的理论目标位置进行高精度位置指示的模拟靶定位装置。

公开（公告）号：[CN102486941A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ibXcWOS9RaNWr4kAd0KKkg&local=zh)

公开（公告）日：2012-06-06

申请号：CN201010574557.8

申请日：2010-12-06

申请人：中国科学院西安光学精密机械研究所

法律状态：法律状态公告日：20120606;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20120725;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21B 1/11;申请日:20101206;?

法律状态公告日：20140326;?

法律状态：授权;?

描述信息：授权;?

**245、模拟靶定位装置**

摘要：本实用新型涉及一种用于激光核聚变靶室诊断设备的模拟靶定位装置，该模拟靶定位装置包括模拟靶、送靶杆、第一直线定位轴承以及直线电机；第一直线定位轴承套接于送靶杆上；直线电机驱动送靶杆并沿直线电机的轴向在第一直线定位轴承内做伸缩运动；送靶杆和模拟靶活动连接。本实用新型提供了一种能够沿轴向稳定流畅伸缩、对诊断设备的理论目标位置进行高精度位置指示的模拟靶定位装置。

公开（公告）号：[CN201904093U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtOROYdWsf613%2Brmr4kAd0KKkg&local=zh)

公开（公告）日：2011-07-20

申请号：CN201020644129.3

申请日：2010-12-06

申请人：中国科学院西安光学精密机械研究所

法律状态：法律状态公告日：20110720;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20160120;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G21B 1/11;申请日:20101206;授权公告日:20110720;终止日期:20141206;?

**246、FRONTAL COLLISION TYPE NUCLEAR FUSION REACTOR**

摘要：PROBLEM TO BE SOLVED : To solve the problems that there are : a tokamak system for shutting in plasma by magnetic force; and an inertia (implosion) system for irradiating a fuel pellet with a laser, etc. in a conventional nuclear fusion reactor, however, the systems are still at a stage of an experimental reactor, and it is far from a practical use level, a frontal collision type nuclear fusion reactor of an ion beam using a linear accelerator is suggested before, however, an examinations on pulse operation, Coulomb repulsion are insufficient.SOLUTION : A system for making pulse electric field type accelerators face each other on one center line to cause frontal collision of neutral particle group beams is used. The beams are made to intersect at a center point of a spherical pressure container for the required number, several thousands of accelerators. Nuclear fusion reaction (artificial sun of 1 cm) is generated by the frontal collision of the pulse-driven and synchronized neutral particle groups.COPYRIGHT : (C)2012, JPO&INPIT

公开（公告）号：[JP2012122980A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYMUf2yLT8BjGGuxfaWZrjp&local=zh)

公开（公告）日：2012-06-28

申请号：JP2010285103

申请日：2010-12-06

申请人：FUJIWARA MINORU

法律状态：法律状态公告日：20121211;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2012122980A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20121211法律状态公告日：20130709;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2012122980A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20130709

**247、纳飞秒双激光复合加工系统**

摘要：本发明涉及一种纳飞秒双激光复合加工系统。包括飞秒激光器、纳秒激光器、同步控制电路、照明光源、半透半反镜、第一二向色镜、第二二向色镜、聚焦透镜和CCD图像探测器。同步控制电路控制飞秒激光器和纳秒激光器的激光脉冲输出，在时间上精确调节纳秒与飞秒脉冲的相对时间使二者脉冲的前沿同步；照明光源位于半透半反镜的一侧，另一侧为第二二向色镜、第一二向色镜和聚焦透镜依次同轴放置，并与照明光源位于一条直线上；CCD图像探测器位于半透半反镜的反射光路末端。本发明同时集合了飞秒激光加工精度高和纳秒激光加工效率高的优点，实现了高精度、高效率可兼顾的微纳加工；可广泛应用于航空、航天关键零件的高精度加工、激光核聚变点火靶的微结构加工、微型传感器微结构加工等领域。

公开（公告）号：[CN102059451A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jX2J9mLGEU5mr4kAd0KKkg&local=zh)

公开（公告）日：2011-05-18

申请号：CN201010535443.2

申请日：2010-11-08

申请人：北京理工大学

法律状态：法律状态公告日：20110720;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23K 26/00;申请日:20101108;?

法律状态公告日：20110518;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20140312;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):B23K 26/00申请公布日:20110518;?

**248、一种钨/低活化钢的真空电子束钎焊连接方法**

摘要：本发明提供了一种钨/低活化钢的真空电子束钎焊连接方法，属于金属材料领域。具体是以成分为Ti：30-50％，Zr：30-50％，Cu：10-15％，Ni：5-10％(wt％)的非晶态Ti基箔带为钎料，采用真空电子束钎焊技术进行钨与低活化钢的钎焊连接。施焊时从钨的表面进行电子束面扫描加热，温度控制在800-1200℃，腔室内工作真空度1.0-5.0×10-3Pa，加速电压100-150KV，聚焦电流100-600mA，电子束流1-10mA，扫描频率为0.1-1KHz，采用计算机控制高频扫描线圈，加热时间为1-5分钟。本发明方法可以使钨与低活化钢在短时间内实现连接，效率高，焊缝界面结合完好，没有孔隙、夹杂、裂纹等缺陷。可广泛应用于磁约束核聚变实验装置中氦冷偏滤器部件的连接。

公开（公告）号：[CN102000895A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2j2%2F0F0JnLBl2r4kAd0KKkg&local=zh)

公开（公告）日：2011-04-06

申请号：CN201010298801.2

申请日：2010-09-29

申请人：北京科技大学

法律状态：法律状态公告日：20110406;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20110525;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23K 1/005;申请日:20100929;?

法律状态公告日：20120801;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20161116;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):B23K 1/005;申请日:20100929;授权公告日:20120801;终止日期:20150929;?

**249、用于克隆技术的细胞核物质获取法**

摘要：本发明属于生物技术领域，涉及一种获取细胞核物质的方法，包括步骤：(1)用激光在细胞卵周隙较大的透明带部分打孔；(2)用持卵针固定住细胞，使透明带开口端位于与持卵针相对的位置；(3)用吸有液体的注射针从透明带开口处扎入胞浆中，并避免直接接触到核物质；(4)迅速增加注射针中的正压使针中的液体向外快速流动，以冲断核物质与胞浆之间的连接，使核物质周围无任何胞质部分，并利用整个细胞内正压的提高来使得核物质完整的从透明带开口处被压离细胞；(5)用注射针收集分离的核物质。本发明的获取核物质的方法不需要特殊仪器，可以方便简单地分离核物质，避免核物质破裂，获得的核物质便于进行细胞融合实验。

公开（公告）号：[CN102399821A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jHZy7BmBrZImr4kAd0KKkg&local=zh)

公开（公告）日：2012-04-04

申请号：CN201010281473.5

申请日：2010-09-13

申请人：山东大学; 山东山大附属生殖医院有限公司

法律状态：法律状态公告日：20120404;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20130522;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20120613;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C12N 15/873;申请日:20100913;?

**250、核岛主管道自动焊焊接方法**

摘要：本发明涉及核岛主管道自动焊焊接方法，所述管道直径≥325mm、壁厚≥40mm，使管道母材的相对端部组对焊前组合坡口，对根部钝边和下钝边的底部进行打底焊接，包括：熔透焊道、第一熔合焊道、第二熔合焊道、第一支撑焊道、第二支撑焊道、第三支撑焊道、第四支撑焊道；对下钝边和上坡口进行填充焊接，形成填充焊道；进行再填充焊接，形成末期填充焊道；进行盖面焊接，采用摆动焊道和/或线状焊道。本发明的核岛主管道自动焊焊接方法可有效保证根部焊道的焊接质量和焊接厚度，为填充焊道打下基础，焊接的稳定性强；且能有效避免层间和侧壁未融合现象，焊接的总体质量相对较好；焊接周期短，焊接效率高。

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申请日：2010-09-09

申请人：中广核工程有限公司; 中国广东核电集团有限公司

法律状态：法律状态公告日：20110216;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20110330;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):B23K 9/167;申请日:20100909;?

法律状态公告日：20120418;?

法律状态：授权;?

描述信息：授权;?

**251、Nuclear fusion power plant having a liquid reactor core of molten glass that is made laseractive and functions as a tritium breeding blanket which is capable of acousticly compressing/confining fuel so that it radiates and triggers outgoing laser cascades that will reflect from the blast chamber' s spherical inside wall and return like photonic Tsunamis, crushing, heating, and causing thermonuclear ignition of the fuel so that heat engines and piezoelectric harvesters can convert the released energy into electricity**

摘要：A nuclear fusion power plant having a spherical blast-chamber filled with a liquid coolant that breeds tritium, absorbs neutrons, and functions as both an acoustical and laser medium. Fuel bubbles up through the sphere' s base and is positioned using computer guided piezoelectric transducers that are located outside the blast-chamber. These generate phase-shifted standing-waves that tractor the bubble to the center. Once there, powerful acoustic compression waves are launched. Shortly before these reach the fuel, an intense burst of light is pumped into the sphere, making the liquid laser-active. When the shockwaves arrive, the fuel temperature skyrockets and it radiates brightly. This, photon-burst, seeds outgoing laser cascades that return, greatly amplified, from the sphere' s polished innards. Trapped within a reflecting sphere, squeezed on all sides by high-density matter, the fuel cannot cool or disassemble before thorough combustion. The blast' s kinetic energy is absorbed piezoelectrically.

公开（公告）号：[US20120014491A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rHeWPgNYEXiRSvqiiRNCwVT&local=zh)

公开（公告）日：2012-01-19

申请号：US12803901

申请日：2010-07-09

申请人：DEETH MIKE

**252、METHOD FOR PRODUCING HIGHLY MECHANICALLY DEMANDED PIECES AND SPECIALLY TOOLS FROM LOW COST CERAMICS OR POLYMERS**

摘要：The present invention is directed to a method for the production of highly demanded pieces at low cost. The method is especially well suited for deep drawing dies, but also any other type of tooling. It is also very well suited for machine components of big dimensions and with high mechanical solicitations, like rotors and cages in wind mills and other big machines. The pieces or tools are cast with a low cost ceramic, like a high resistance concrete (with special mention to HPC or UHPC) or a low water admixture castable or any other low cost high mechanical resistance material (low cost ceramics or high resistance polymers arc especially suited). Once cast, the working surface of the die or piece is coated with a metal, an intermetallic or a high performance ceramic. Projection or deposition techniques are used to obtain the high value working surface. Optionally localized fusion treatments (IR, laser, HDIR or any other localized energy source) are applied to obtain full density on the surface. Also welding, laser deposition or any other deposition by melting can be applied (often on top of a deposited or projected intermediate layer). Different layers can be applied, and trough proper masking a specific surface functionality can be attained. Rolls, jaws, bearing supports, machine benches and other structural parts and any other highly solicited part can be obtained at low cost by means of the present invention.

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公开（公告）日：2011-03-30

申请号：ZA201004863

申请日：2010-07-09

申请人：ROLVALMA S A

**253、Laser nuclear fusion device**

摘要：PROBLEM TO BE SOLVED : To provide a laser nuclear fusion device that can achieve a stable energy output at a practical level while avoiding the problem of uneven compression of a fuel.SOLUTION : An ion bunch B composed of fusion fuel ions that belong to a predetermined energy range is injected from one end of an elongated target 12 in the axial direction. Laser beams Ls1, Ls2 are irradiated from the lateral side of the target 12 in synchronization with the movement of the ion bunch B that moves inside the target 12 toward a terminal e2 so that plasma of the fusion fuel is generated inside the target 12 to promote the fusion reaction of the ions in the ion bunch B.COPYRIGHT : (C)2012, JPO&INPIT

公开（公告）号：[JP2012007989A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZBDm3g3Y3M9mGuxfaWZrjp&local=zh)

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申请号：JP2010143762

申请日：2010-06-24

申请人：SUZUKI MOTOR CORP

法律状态：法律状态公告日：20130313;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 5527536B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20130312法律状态公告日：20131111;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 5527536B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20131108法律状态公告日：20131228;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 5527536B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20131227法律状态公告日：20140314;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 5527536B2法律状态公告日：20140320;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 5527536B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20140319法律状态公告日：20140424;?

状态效果：+;?

状态代码：A61;?

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状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 5527536B2

**254、Nuclear fusion ignition method**

摘要：PROBLEM TO BE SOLVED : To provide an effective nuclear fusion ignition method in implosion type inertia confinement nuclear fusion.SOLUTION : There is provided a nuclear fusion ignition method which includes two stages. In the first stage, a periphery of a target including a nuclear fusion reaction substance is irradiated with a laser beam, etc. to explode the periphery of the target, so that the explosive reaction compresses the inside of the target to create high-temperature and high-density plasma. In the second stage, a light, able to penetrate the periphery of the high-density plasma that has higher frequency than plasma frequency in a relatively low-density periphery and nearly the same frequency as plasma frequency in a high-density core with high density in the high density plasma and that is to be absorbed into the high-density core is delivered to the high-density core to heat electron temperature of the high-density plasma to substantially 10 to 20 keV, so that ion temperature of the center of the high-density core is heated to 5 keV or more that is the nuclear fusion ignition temperature, by the relaxation of high-speed electron in the high-density plasma, ion energy.COPYRIGHT : (C)2012, JPO&INPIT

公开（公告）号：[JP2012002789A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXa9MFcwFTKQhGGuxfaWZrjp&local=zh)

公开（公告）日：2012-01-05

申请号：JP2010151453

申请日：2010-06-15

申请人：INAI MOTOHIKO

**255、一种超短激光脉冲输出的光纤啁啾脉冲放大器**

摘要：本发明公开了一种超短激光脉冲输出的光纤啁啾脉冲放大器，具有高脉冲重复率、高功率、超短激光脉冲输出，属光信息技术领域。它利用光纤型凹型衰减的长周期光纤光栅作为高功率啁啾飞秒激光脉冲放大器种子激光脉冲或前级放大器放大后激光脉冲的光谱整形元件，消除了高功率飞秒啁啾激光脉冲光纤放大器中放大过程中产生的增益光谱窄化效应，从而增大了放大后激光脉冲的光谱带宽，压缩后可以得到的脉冲宽度更窄、峰值功率更高的激光脉冲。这种高重复率、高功率、结构简单、高效率的可以全光纤化的高功率啁啾飞秒激光脉冲放大器适用半导体器件、金属材料精密加工、精密光刻、激光核聚变等工业领域和生物医学成像等基础科学研究。

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申请号：CN201010189094.3

申请日：2010-06-02

申请人：苏州大学

法律状态：法律状态公告日：20101110;?

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描述信息：公开;?

法律状态公告日：20101222;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G02F 1/39;申请日:20100602;?

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法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G02F 1/39申请公布日:20101110;?

**256、LASER FUSION NEUTRON SOURCE EMPLOYING COMPRESSION WITH SHORT PULSE LASERS**

摘要：A method and system for achieving fusion is provided. The method includes providing laser source that generates a laser beam and a target that includes a capsule embedded in the target and filled with DT gas. The laser beam is directed at the target. The laser beam helps create an electron beam within the target. The electron beam heats the capsule, the DT gas, and the area surrounding the capsule. At a certain point equilibrium is reached. At the equilibrium point, the capsule implodes and generates enough pressure on the DT gas to ignite the DT gas and fuse the DT gas nuclei.

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申请日：2010-04-23

申请人：Lawrence Livermore National Security LLC

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状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2011261919A1New Owner:;LAWRENCE LIVERMORE NATIONAL SECURITY, LLC, CALIFORFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:SEFCIK, JOSEPH A.;WILKS, SCOTT C.;REEL/FRAME:024290/0676Effective Date:;20100422法律状态公告日：20100805;?

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法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2011261919A1New Owner:;U.S. DEPARTMENT OF ENERGY, DISTRICT OF COLUMBIAFree Text Description:;CONFIRMATORY LICENSE;ASSIGNOR:LAWRENCE LIVERMORE NATIONAL SECURITY, LLC;REEL/FRAME:024793/0317Effective Date:;20100514法律状态公告日：20170111;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 2011261919A1Fee Payment-year:;4

**257、CONTROL OF A LASER INERTIAL CONFINEMENT FUSION-FISSION POWER PLANT**

摘要：A laser inertial-confinement fusion-fission energy power plant is described. The fusion-fission hybrid system uses inertial confinement fusion to produce neutrons from a fusion reaction of deuterium and tritium. The fusion neutrons drive a sub-critical blanket of fissile or fertile fuel. A coolant circulated through the fuel extracts heat from the fuel and that heat is used to generate electricity. The inertial confinement fusion reaction can be implemented using central hot spot or fast ignition fusion, and direct or indirect drive. The fusion neutrons result in ultra-deep burn-up of the fuel in the fission blanket, thus enabling the burning of nuclear waste. Fuels include depleted uranium, natural uranium, enriched uranium, spent nuclear fuel, thorium, and weapons grade plutonium. LIFE engines can meet worldwide electricity needs in a safe and sustainable manner, while drastically shrinking the highly undesirable stockpiles of depleted uranium, spent nuclear fuel and excess weapons materials.

公开（公告）号：[IN2710DELNP2010A](https://www.incopat.com/detail/init2?formerQuery=cfhcEOn5ak067W4A%2BVjfY5%2BjJ70tiPxB&local=zh)

公开（公告）日：2011-02-04

申请号：IN2710DELNP2010

申请日：2010-04-20

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC

**258、SYNTHESIS THIS CONTROL METHOD AND DEVICE FOR ITS REALIZATION**

摘要：The invention relates to experimental physics of high energies. -Safe in control of experimental sample pulse reactor for thermonuclear synthesis deuterium from protons. Synthesis process is interrupted at any time between pulses of synthesis and for vozbuzhdennogo pulse of, and are excited following impulse after the previous. With this for for producing first pulse chamber synthesis of small variable at, purified from air, is pumped hydrogen for conducting synthesis reaction : proton + proton to pressure of 1 atm and are excited synthesis of powerful laser beam of. At the end of each subsequent pulse is blowing chamber synthesis of of hydrogen, releasing the, thereof from deuterium. Chamber synthesis of represents cylinder with additional containers specific, inside of which is moved sleeve with inner surface, a polished to mirror shine, in which are excited fusion reaction. Main coil is attached to upper cover of chamber synthesis and extended with in sleeve. Continuous process control by synthesis is performed automatically by means of time relay.

公开（公告）号：[EA201000826A1](https://www.incopat.com/detail/init2?formerQuery=F0ljR%2FGU7wNzrbc7sXmkLxl3Z10vNpVJ&local=zh)

公开（公告）日：2011-10-31

申请号：EA201000826

申请日：2010-03-02

申请人：ПУЗАНОВ АЛЕКСАНДР ПЕТРОВИЧ

**259、METHOD FOR GROWING NITRIDE SEMICONDUCTOR FILM**

摘要：PURPOSE : A nitride semiconductor thin film growth method is provided to eliminate crystal defect and structural anisotropy by easily inducing the fusion of crystal islands.CONSTITUTION : An a-side ZnO buffer layer(200) is formed a r-side sapphire substrate(100). A formation method of the a-side ZnO buffer layer is selected among CVD(Chemical Vapor Deposition) method, a PVD(Physical Vapor Deposition) method, a PLD(Pulsed Laser Deposition) method, and an MBE(Molecular Beam Epitaxy) method. The thickness of the a-side ZnO buffer layer is controlled in about 10-2000? range. An a-side semiconductor crystal island having a plurality of nucleation sites is formed on the a-side ZnO buffer layer. An a-side semiconductor layer is formed by mixing a plurality of a-side semiconductor crystal islands on the a-side ZnO buffer layer.COPYRIGHT KIPO 2012

公开（公告）号：[KR1020110097004A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczt0oWkLQsf9uK6EjLFRBYeP&local=zh)

公开（公告）日：2011-08-31

申请号：KR1020100016610

申请日：2010-02-24

申请人：LG ELECTRONICS INC

**260、纳米激光**

摘要：本发明提出纳米激光应用技术和制备纳米激光材料等。将基于晶体制成的激光器替换为基于序材制成的纳米激光器。则纳米激光器就可以同样应用于现有激光器所应用的一切领域和范围等；例如空间纳米激光通信、纳米激光立体快速成形、纳米激光生物制造、纳米激光快速成形、纳米激光无线通信、纳米激光显示、纳米激光引雷与驱雾、纳米激光测距、纳米激光雷达、纳米激光制导和导航、纳米激光加工、纳米激光核聚变、纳米激光的光电对抗等各个方面。同时纳米激光还在军事中、医学中、能源中、交通中、信息中、通信中和材料中等各个方面发挥巨大作用。纳米激光作为信息传递工具，在光通信、光信息处理与存储、机器人视觉等方面具有极好应用前景。

公开（公告）号：[CN101882751A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iTJOuNkmSdN2r4kAd0KKkg&local=zh)

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申请日：2009-12-28

申请人：刘文祥

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描述信息：公开;?

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描述信息：发明专利申请公布后的驳回IPC(主分类):H01S 3/16申请公布日:20101110;?

**261、一种激光与热喷涂复合工艺制备铜基钨涂层的方法**

摘要：一种激光与热喷涂复合工艺制备铜基钨涂层的方法。其特征是采用低压等离子体喷涂系统在铜基体表面制备镍基合金过渡底层，激光束重熔过渡底层；然后采用低压等离子体喷涂系统制备Ni-W合金中间过渡层和钨涂层，激光束重熔得到所述钨涂层。本发明采用梯度涂层结构，有效缓解了铜、钨热膨胀系数不匹配而造成的热应力问题，提高了钨涂层与基体以及钨涂层的内聚结合强度。采用激光束重熔可使涂层与基体达到冶金结合，提高结合性能，并获得表层致密的钨涂层。本方法制备的钨涂层具有较好的抗热辐照和抗热冲击性能，适合作为装备中的热端部件材料，如射线靶材、火箭喷嘴、飞机喷管喉衬、核聚变装置中的第一壁材料等。

公开（公告）号：[CN101717910A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2i%2BiWHMn5UXxGr4kAd0KKkg&local=zh)

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申请人：广州有色金属研究院

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描述信息：公开;?

法律状态公告日：20100721;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):C23C 4/08;申请日:20091222;?

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法律状态：授权;?

描述信息：授权;?

法律状态公告日：20180102;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利权的转移IPC(主分类):C23C 4/08;登记生效日:20171214;变更事项:专利权人;变更前权利人:广州有色金属研究院;变更后权利人:广东省新材料研究所;变更事项:地址;变更前权利人:510651 广东省广州市天河区长兴路363号;变更后权利人:510651 广东省广州市天河区长兴路363号;?

**262、NUCLEAR FUSION TARGET MATERIAL, NUCLEAR FUSION APPARATUS, AND NUCLEAR FUSION METHOD**

摘要：PROBLEM TO BE SOLVED : To induce a nuclear fusion reaction with higher efficiency and downsize an apparatus.SOLUTION : The nuclear fusion apparatus 1 includes a target substrate 7a containing deuterium or tritium, a nuclear fusion target material 7 laminated on the target substrate 7a and including a thin film layer 7b containing deuterium or tritium, a vacuum vessel 5 housing the nuclear fusion target material 7, and a laser device 3 irradiating with two continuous first and second pulse laser light P1, P2 to the thin film layer 7b of the nuclear fusion target material 7. The intensity of the first pulse laser light P1 and the intensity of the second pulse laser light P2 are arranged such that the former is smaller than the latter and the thin film layer 7b can be peeled from the target substrate 7a.COPYRIGHT : (C)2011, JPO&INPIT

公开（公告）号：[JP2011127968A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZf80XovZZIhWGuxfaWZrjp&local=zh)

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申请号：JP2009285383

申请日：2009-12-16

申请人：HAMAMATSU PHOTONICS KK; GRADUATE SCHOOL FOR THE CREATION OF NEW PHOTONICS IND; TOYOTA CENTRAL RES DEV; TOYOTA MOTOR CORP

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状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 5629089B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20121010法律状态公告日：20130814;?

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法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 5629089B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20140605法律状态公告日：20140918;?

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状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 5629089B2法律状态公告日：20140925;?

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法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 5629089B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20140924法律状态公告日：20141009;?

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法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 5629089B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20141003法律状态公告日：20141010;?

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状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 5629089B2Corresponding Publication Number:;5629089Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20171017;?

状态效果：+;?

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状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 5629089B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R313117法律状态公告日：20171226;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 5629089B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20180918;?

状态效果：+;?

状态代码：R250;?

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**263、利用激光-GMA电弧复合焊接装置实现摆动焊接的方法**

摘要：利用激光-GMA电弧复合焊接装置实现摆动焊接的方法，它涉及一种激光-熔化极气体保护焊复合焊接方法。本发明为解决利用激光-GMA电弧复合焊接装置焊接中、厚板过程中，易出现侧壁和层间未熔合、气孔、夹渣等缺陷的问题。方法：步骤一：开坡口；步骤二：装夹待焊工件；步骤三：确定电弧与激光束的位置：激光束垂直入射于待焊工件表面，电弧与激光束之间夹角为15～60°，激光束与GMA电弧焊丝尖端之间间距为2～6mm；步骤四：设定焊接工艺参数；步骤五：实施焊接：焊接时，电弧焊枪保持不动，激光束聚焦焊枪呈“S”形来回摆动焊接。本发明用于造船、石油管道、高压容器、战车及核装置等国防与民用领域中10mm以上厚板的对接焊。

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申请人：哈尔滨工业大学

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描述信息：公开;?

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**264、差动共焦与点衍射干涉相结合测量球体形貌及壁厚的方法与装置**

摘要：本发明属于光学精密测量领域，涉及差动共焦技术与点衍射干涉相结合测量球体内外表面形貌及壁厚的方法与装置。该方法利用点衍射干涉和被测球体的旋转及测量子孔径拼接，实现对球体外表面形貌高精度快速测量；利用差动共焦技术对透明或半透明球体的关键区域进行内外表面形貌及壁厚的逐点扫描测量。本发明将点衍射干涉技术与共焦显微技术有机融合，以期实现球体内外表面形貌和壁厚的同时测量。旨在解决现有AFM或单一共焦传感器等扫描法测量球体表面时存在测量速度慢、效率低、易漏测等难题。本发明在激光核聚变靶丸形貌和壁厚测试、球体表面形貌和轮廓测试等领域具有广泛的应用前景。

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申请人：北京理工大学

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**265、NEW ENERGIES**

摘要：We could use an intense plasma laser to start the reaction and keep it running... 1. First we start with the regular hydrogen atoms colliding creating helium and creating energy 2. Largest magnet ever tried surrounding the plasma. 3. The magnet can be one solid (thick walled) case surrounding the plasma in a vertically standing cylinder design, or change shape with to suit the roundness of the plasma so the magnet force is even. 4. In the bottom is a magnet floor (cradle possibly for stability having thick enough in its walls to support the magnets above) possibly with a small pool of water and/or source of water via nozzle such that the water clears the plasma, so it doesn' t touch the plasma (rather it vaporizes because of the heat of the plasma). 5. Surrounding the outside of the magnet layer (the magnet' s outer surface can be coated with a layer of ceramic to counter rust) is a huge boiler which is fed water (possibly salt water to produce disinfected water and fresh water), at bottlenecks, the boiler can be huge to absorb the heat from the plasma and also fast moving to keep any one contained area the salt water (possibly other liquids such as ethanol), from overheating (the expanding heat pressure turns the turbine). 6. There are large (robot controlled) slit/opening (such as sliding visors) at intervals from top to bottom that penetrate through the surrounding magnet that can be open and shut... closed when the plasma is not too cold and/or the salt water is too cold and open to cool off the plasma or heat the boiler more efficiently to expand heat pressure to turn turbine. 7. At the top can be an (oversized) roof platform with ceramic coating and and/or magnet also with open and (robot controlled) shut slits that increase or decrease heat into an exhaust. Above the roof is a boiler pool with exhaust that feed into a turbine. Salt water (and/or other liquid) is fed into the boiler. The roof is needed to be (possibly slide) opened especially when the pool of water below the plasma has vaporized and is causing increased expanded water pressure in the plasma core. 8. An extra layer of boiler can encapsulate the main boiler this extra layer of boiler can be made of ceramic on the outside to add extra layer from overheating the compartment holding the inner plasma chamber. The extra outer layer can also fill its outer chamber with salt water any and all liquids (even ethanol) to expand pressure to spin turbine (eg. and fresh/disinfected water). 9. Alternatively if the boiler is large enough (enough water sandwiched between plasma core (magnets) and the boiler' s walls the inside of the boiler walls can be lined with nanotube solar panels (that can withstand the extreme heat. 10. Additionally the more close contact/exposure material is to the plasma core the more heat resistant the material must be (eg. the magnets) therefore we will attempt to mix the magnet material the closer the more density per volume of magnet material mixed with carbon nano particles-tubes (even mix the molten magnet with diamond dust) used as heat sinks in electric motors to withstand motors' intense heat. The tiny structures embedded in materials regularly called upon to withstand extreme heat, such as those that form the exterior panels of airplanes and rockets. In the worse scenario we could mix and make diamond/nano particles-tubes shield in front of the magnets facing the plasma core... Since diamonds are so expensive we might need to play around with the sizes of the plasma core. The carbon nano particles-tubes are added as a cheap cutting cost measure to diamonds. 11. We could also layer a thin layer of either diamonds (container) and a thin layer of carbon nano particles-tubes (with openable slits to vent heat from the plasma core and introduce heat to the outer boilers). The layers of the diamonds and/or carbon nano particles-tubes insulate the magnet(s)... 12. Another material to explore is ceramics mixed with nanotubes The material shows electrical conductivity ten trillion times greater than pure alumina, and seven times that of previous ceramics made with nanotubes. Thermal properties, enable conducting heat in one direction, along the alignment of the nanotubes, but reflecting heat at right angles to the nanotubes, making it an attractive material for thermal barrier coatings. This seems the ideal low cost insulator to protect the magnets from overheating while conducting the magnets force back towards the plasma core.13. On top of the roof (above the plasma core) is a boiler where salt water (And/or liquids such as ethanol) is entered at high volume to boil to steam to turn turbines with possible walls made of nanotubes that absorb heat and convert into energy. (GP 0.24%) 14. Any and all components can be composed of ceramics, titanium, tungsten steel, carbon nano materials, magnets and/or diamonds (GP 0.1 %). 15. We could also use walls of water falling. 16. The walls of water falling unlike filling a choking/smothering the entire container in a tank/boiler (pool of) with water; can touch and cool off the magnets without smothering out the plasma core. In fact we could adjust the walls of water to vaporize before collecting at the bottom, so the is no rising level of pool of water on the floor of the boiler that surrounds/holds the magnets which in turn hole the plasma core within. 17. To keep one side from getting hotter than the other sides we could use more water on the overheated face to cool the hotter side... One hydrogen source is from any and all metals (eg aluminium, zinc... ), reacting with in a strong acid (eg. muriatic acid), producing hydrogen gas while crystal remains. The crystal can be used for any and all uses, from decorative, ornamental and any and all aesthetic, parts of walls, parts of interior furniture and fixtures, casings of electronics (and anything - objects -that are expensive are the slightest form of status and prestige symbol), jewelry, substitute metal and wood, eg. door knobs, sculptures, and decorative car interior/exteriors... The helium output can be used to power cars, and it has no moving parts. It runs by "thermoacoustics" we simply apply external heat to a cylinder or tank (treat can come from the plasma core production and/or mirrors) with the Helium gas (which is a by- product of the hydrogen atoms colliding) inside the cylinder), as the gas heats up it generates the acoustic waves making enough heat to make steam and then it is used to generate electricity. For cars the sound is converted into electricity, via steam. A microphone like devise, electo-acoustic transducer produces the sound waves. Which can be used to power cars without batteries. therefore no need to discard old batteries which cannot be charged, whereby electric cars without residual pollution later. And/or use the helium directly as fuel. There considerable growth in demand for helium around the world, eg. medical, industrial and electronic use.Re : Ocean/Seas (1. floors) Energy and/or 2. Hung from Above 1. We make (flatter) bladders that can be made of mix Teflon (for strength) and rubber for bounce back momentum when bent to much and too long, thus creating more bobbing frequency. The bladder can be filled with enough air to make it stable in water, neither too stringent floating up and/or less air in the hanging version (even slightly weighted at the bottom of the tip of each bladder unit), such that the bladders of the hanging version does not float buoyantly, but rather is the same density/mass as the water so it does not buoyantly float (in one direction and gets stuck there) but rather gets pushed from side to side (on a pivoting ball and socket - swaying) thus either pumping deep salt water (via deep pipe) to a platform and or seashore where the sea water can be used eg. (Gerard Voon' s patented mirrors/boiler/turbine/fresh dienfected water) and/or desalination slat water membranes and/orused to grow (on floating barges) salt water tolerant plants such as mangrove and switch grass (salicornia) for biofuel/biomass... 2. Entire groupings of grids can be installed on the sea/ocean floors with pipes that are pumped powered by the bladders, with excess enegy stored in our platform and shipping vessel battery power plants above. 3. Alternatively a less buoyant version of the bladders can be hung upside down from floatation objects above, such as strung between platforms and/or barges and or bobbing grids.., the difference about our floating bladder bobbers and existing bobber grid technology is that the existing bobber grids partially float out of the water, making the that old technology vulnerable to high/strong waves, while our new bladder bobbers are except for solid neck are fully submersed underwater. 4. We could strategically place higher tidal spinning blades secured to posts that clear to the bobbing bladders, to catch the most wave power out of the ocean. We could also string cables from high posts to high posts (or between platforms) and hang spinning blades at frequent intervals, underwater. (GP 0.24%)Re : Floating-Hose Teflon Rubber Ringed 1. The hose is shaped (and/or helixical, square, round, rectangular, diamond and/or triangular... ) along its length like a shipping vessel such that the bottom is shaped like a hull (without the narrowing in absolute width on both ends. 2. The top is flat and is thicker with a rubber layer to maintain stability (spinning of the hose), at the mercy of the waves. 3. Along most of the length of the hose are a loose skin of thin Teflon and/or mixed with plastic and/or mixed with zip log material bags along the front end and then stronger material (eg. Teflon to Teflon/rubber mix on the turbine end). 4. Along its length are rings (whose size must balance its stiffness interfering with the wave squeezing the bulge - eg. large enough to allow the bulge to pass without disrupting (if too small, the rubber ring may bleed the bulge' s force) also disrupting the squeezebility of the wave that is squeezing (bending the hose behind the bulge inwards) to result in being directed away from the hose (the vectors of the wave if the rubber rings are too big, may end up at or outwards of the perimeter of the rubber ring keeping in mind that the rubber rings may need to be wider than the alternate intervals of loose skin) while rubber rings their size and intervals are needed to provide support so the hose does not collapse inwardly. 5. Along its length in order maintain rigidity to keep the hose flexible with the waves while able to recover its orientation, (preventing collapsing and/or kinking, we line every sharp angle on the dissection of the perimeter of the hose all along the lengths with rubber (eg. tube). 6. In the front of the hose is are flaps that open (can dip inwards in a curved gradual design to get water to siphon into the hole while the gaps between sharp corners allow water to pass to surround the the hose exterior length, thus providing squeezing pressure) outwards, such that waves inside the flap are directed into the hose opening, while wave flow outside the flaps directs flow towards the outside of the hose thus squeezing the bulge from outside the hose.(GP 0.25%)Re : Stirling EngineWe could use helium waste (See pg. 165 Re : Fusion Reaction) from Fusion Reactors and/or gasoline, kerosene, diesel, vegetable oil, hydrogen, even wood-to power Stirling Engine any and all mechanical and any and all things requiring power/energy...On a large scale we could (Re : Battery Power Plant pg. 128 - for storage of the electricity produced and transport in large battery exchange programs with gas stations/parkades even delivery to homes/offices...any and all uses supplying fully charged batteries for used batteries like water cooler full for empty delivery and pick up, the delivery can even be like Automobile Association delivery to places where the member has run out of and/or low on low on energy) use helium waste (see pg. 165 Re : Fusion Reaction) from fusion reactors and/orgasoline, kerosene, diesel, vegetable oil, hydrogen, even wood... Re : Any and All contaminated land and Barren LandWe could build solar panels and Gerard Voon' s patented TALL GRAVITY TO ELECTRICITY INVENTION, on empty land (eg. from mountaintop mining).

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申请人：VOON GERARD

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**266、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device (100), method (200/300) and system for causing a controlled collapse of cavities (116) formed within liquid droplets (114) wherein a pressurized jet (109) comprising a liquid (104) and nanoparticle material (102) and possibly fuel produces droplets (114) from the breakup of the jet stream (109). The liquid droplets (114) are irradiated with energy (110) to produce and expand cavities (116) formed within the droplets (114) by irradiation (110) of the nanoparticles (102) contained within the droplets (114). The droplets (114) are collided (118) with a target (112) to collapse the cavities within the droplets (116). The irradiating and colliding are timed to enhance implosion energy resulting from the cavities’ collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction (113).

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申请号：IN3556KOLNP2009

申请日：2009-10-12

申请人：SYNERGY INNOVATIONS INC

**267、METHOD OF REPAIRING BOTTOM SECTION OF NUCLEAR REACTOR**

摘要：A laser beam for heating is emitted to a cracked portion to remove moisture from the cracked portion.  A laser beam for welding is emitted to the cracked portion to heat and melt the cracked portion.  The laser beam for heating and the laser beam for welding are emitted onto the entire surface of a tubular body section in the interior of the reactor such as a stub tube which extends through the bottom section of the reactor and is fixed, and onto the cracks in the welded section between the tubular body and the bottom section of the reactor.  Consequently, a new crack can be prevented from occurrence and water can be prevented from leakage out of the reactor.

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申请人：KABUSHIKI KAISHA TOSHIBA; HAMAMOTO Yoshio; MOTORA Yuuichi; KATO Hiromi; TAKEUCHI Masahiro; TAMURA Masataka; OKADA Satoshi; KOBAYASHI Taiji; YODA Masaki; MIYASAKA Hiroyuki; KONO Wataru; ABURA Masakazu

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法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2010038876A1Corresponding Publication Number:;20117007446Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20110404;?

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法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2010038876A1Designated State Authority:;DE法律状态公告日：20110428;?

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状态代码：WWE;?

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**268、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material and possibly fuel produces droplets from the breakup of the jet stream. The liquid droplets are irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction.

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申请人：SYNERGY INNOVATIONS INC

**269、FUSION FUEL CONTAINER AND REACTANT SPIN-ENHANCEMENT**

摘要：Fusion fuel container and reactant spin-enhancement for optimized fusion probability is disclosed. The enclosed nuclei in a cage-like molecule can include, for example, deuterium and tritium, and the cage-like molecule may be, for example, a fullerene molecule. A fusion reaction to consume the fusion fuel may be ignited, for example, via compression methods including chemical or laser.

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申请人：Carbon Labs Inc

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**270、Method for injecting electrons into a fusion-fuel derived plasma**

摘要：Disclosed is a method for injecting electrons of predetermined energy and quantity into an inertial confinement fusion fuel-derived plasma to enhance the pre-ignition conditions of thermonuclear fusion reactions using a plurality of electron or x-ray sources to control the ratio of ion and electron temperatures of the plasma. The method comprises providing a central target chamber for receiving a spherical pellet of fusion fuel; and providing a plurality of energy drivers arranged in symmetrical pairs about the fusion fuel pellet, and oriented to direct a first energy pulse of optical laser light, X-ray pulses or ions into the fusion fuel in a 3-dimensionally symmetric manner about the fusion fuel pellet and providing a plurality of electron sources, each of which creates an electron beam of a predetermined energy and quantity. The plurality of energy drivers are operated for illuminating and ionizing the spherical pellet to create a fusion fuel-derived plasma; and then the plurality of energy drivers are operated to cause the electron beams to permeate the fusion fuel-derived plasma. The energy level of the electron beams are adjusted via a controlled input. The current of the electron beams are adjusted via a controlled input. The electron sources focus the electron beams into the fusion fuel-derived plasma. The plurality of electron sources are controlled so that they inject a pulse of electrons of predetermined energy, pulse width, and quantity into the fusion fuel-derived plasma as a predetermined interval of picosecond or finer increments after said first energy pulse. An RF pulse is injected with a predetermined delay from the first energy pulse, into the fusion fuel-derived plasma.

公开（公告）号：[NZ610706A](https://www.incopat.com/detail/init2?formerQuery=wof1vUlq%2BrNyunWVhvh6Zw%3D%3D&local=zh)

公开（公告）日：2014-11-28

申请号：NZ610706

申请日：2009-08-28

申请人：ADVANCED FUSION SYSTEMS LLC

法律状态：法律状态公告日：20150327;?

状态效果：+;?

状态代码：PSEA;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; NZ 610706A 法律状态公告日：20150327;?

状态效果：+;?

状态代码：RENW;?

法律状态：RENEWAL (RENEWAL FEES ACCEPTED)描述信息：Docdb Publication Number:; NZ 610706A Free Text Description:;PATENT RENEWED FOR 3 YEARS UNTIL 28 AUG 2016 BY SHELSTON IPEffective Date:;20150304法律状态公告日：20160729;?

状态效果：+;?

状态代码：RENW;?

法律状态：RENEWAL (RENEWAL FEES ACCEPTED)描述信息：Docdb Publication Number:; NZ 610706A Free Text Description:;PATENT RENEWED FOR 1 YEAR UNTIL 28 AUG 2017 BY DENNEMEYER + CO.Effective Date:;20160722法律状态公告日：20170728;?

状态效果：+;?

状态代码：RENW;?

法律状态：RENEWAL (RENEWAL FEES ACCEPTED)描述信息：Docdb Publication Number:; NZ 610706A Free Text Description:;PATENT RENEWED FOR 1 YEAR UNTIL 28 AUG 2018 BY DENNEMEYER + COEffective Date:;20170726

**271、Fusion reactor with negligible radioactivity**

摘要：The reactor for the production of energy by means of fusion by unilateral laser impact on 10 2009, 004, 068.4 is restricted according to the invention for avoiding radioactivity patent application DE Combustible according main registration to ensure the operating conditions with respect to the.

公开（公告）号：[DE102009037640A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4925WtTqNFcnW3RdVLSKFxWgN&local=zh)

公开（公告）日：2011-02-17

申请号：DE102009037640

申请日：2009-08-14

申请人：Hora Heinrich Prof Dr Dr

法律状态：法律状态公告日：20110217;?

状态代码：AF;?

法律状态：IS ADDITION TO NO.描述信息：Docdb Publication Number:; DE102009037640A1Corresponding Publication Number:;102009004068Corresponding Authority:;DE法律状态公告日：20110324;?

状态代码：8122;?

法律状态：NONBINDING INTEREST IN GRANTING LICENCES DECLARED描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20120105;?

状态效果：+;?

状态代码：R140;?

法律状态：APPLICATION OF ADDITION NOW INDEPENDENT描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20120112;?

状态效果：+;?

状态代码：R140;?

法律状态：APPLICATION OF ADDITION NOW INDEPENDENT描述信息：Docdb Publication Number:; DE102009037640A1Effective Date:;20120112法律状态公告日：20130301;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20130301;?

状态代码：R409;?

法律状态：INTERNAL RECTIFICATION OF THE LEGAL STATUS COMPLETED描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20130507;?

状态代码：R409;?

法律状态：INTERNAL RECTIFICATION OF THE LEGAL STATUS COMPLETED描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20150303;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20150417;?

状态代码：R409;?

法律状态：INTERNAL RECTIFICATION OF THE LEGAL STATUS COMPLETED描述信息：Docdb Publication Number:; DE102009037640A1法律状态公告日：20150528;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102009037640A1Effective Date:;20150303法律状态公告日：20150528;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102009037640A1Effective Date:;20130301

**272、基于随机并行梯度下降算法的多光束共靶瞄准控制方法**

摘要：本发明涉及一种基于随机并行梯度下降算法的多光束共靶瞄准控制方法。 基于随机并行梯度下降(SPGD)算法，综合数字图像处理技术，通过对光束控 制器进行闭环控制，使得系统性能评价函数取得极值，实现多光束共靶瞄准。 整个系统包括激光源阵列1、光束控制器阵列2、分束器3、靶目标4、成像器 件5、性能评价函数产生器6、随机并行梯度下降算法控制器7。该多光束共靶 瞄准控制方法，空间扫描范围广，精度高，能够同时实现多光束的共靶瞄准， 在卫星跟踪、惯性约束核聚变、定向能技术等领域有广泛应用前景。

公开（公告）号：[CN101614883A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2h0H8Z1eJVDD2r4kAd0KKkg&local=zh)

公开（公告）日：2009-12-30

申请号：CN200910043996.3

申请日：2009-07-29

申请人：中国人民解放军国防科学技术大学

法律状态：法律状态公告日：20100224;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效;?

法律状态公告日：20120314;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G02F 1/01;公开日:20091230;?

法律状态公告日：20091230;?

法律状态：公开;?

描述信息：公开;?

**273、NUCLEAR FUSION IGNITION METHOD**

摘要：PROBLEM TO BE SOLVED : To provide an effective nuclear fusion ignition method in laser implosion inertia confinement nuclear fusion.SOLUTION : The nuclear fusion ignition method includes two stages. In the first stage, the outer periphery of a target containing a nuclear fuel reaction material is irradiated with a first laser beam pulse to explode the outer periphery of the target and the reaction compresses the inside of the target to heighten the temperature and density of it. In the second stage; a part of the outer periphery of the target is not irradiated with the first laser beam pulse, the region which is not irradiated with the first laser beam pulse is irradiated with a second laser beam pulse, the electric field strength of the second laser beam pulse is set at a range where charged particles are accelerated by a laser track field acceleration mechanism and the outer periphery of an implosion core 51 is irradiated with the charged particles accelerated by the laser track field acceleration mechanism to raise the temperature of the outer periphery of the implosion core to a nuclear fusion ignition temperature by heating it.COPYRIGHT : (C)2011, JPO&INPIT

公开（公告）号：[JP2010286462A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXbfqTO7WV52RGGuxfaWZrjp&local=zh)

公开（公告）日：2010-12-24

申请号：JP2009160213

申请日：2009-06-15

申请人：INAI MOTOHIKO

法律状态：法律状态公告日：20110303;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2010286462AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20110214法律状态公告日：20121120;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2010286462AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20121120法律状态公告日：20130409;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2010286462AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20130409

**274、雷射惯性约束融合－分裂发电厂之控制**

摘要：本发明揭示一种雷射惯性约束融合-分裂能量发电厂。该融合-分裂混合系统使用惯性约束融合以自氘与氚之一融合反应产生中子。该等融合中子驱动可裂或可孕燃料之次临界围包。一经由该燃料而循环之冷却剂自该燃料提取热且该热用以产生电力。可使用中央热点或快速点火融合及直接或间接驱动来实施该惯性约束融合反应。该等融合中子导致该分裂围包中之该燃料之超深燃耗，因此致能核废料之燃烧。燃料包括耗乏铀、天然铀、浓化铀、用过核燃料、钍及武器级鈈。LIFE引擎可以安全且可持续之方式满足世界范围之电力需要，同时急剧地缩减耗乏铀、用过核燃料及过量武器材料之高度不合需要的储量。

公开（公告）号：[TW201003670A](https://www.incopat.com/detail/init2?formerQuery=EIuEa2K8lNyNkwsa3%2FVtCGr4kAd0KKkg&local=zh)

公开（公告）日：2010-01-16

申请号：TW098118102

申请日：2009-06-01

申请人：罗伦斯立维摩国家安全有限公司

**275、一种多股绞合焊丝**

摘要：一种多股绞合焊丝，包括实芯焊丝和药芯焊丝，将多股实芯焊丝和药芯焊丝混合绞合为一体，或将多股药芯焊丝绞合为一体，其中：一根焊丝位于中间，称为核心丝，其余焊丝围绕中间的核心丝绞合，称为外围丝。本实用新型克服了传统药芯焊丝直径不够大，直径增大时不易盘绕、刚直性差等缺点，绞合的多股药芯焊丝直径变化范围大，可以获得较大的熔深、熔宽或宽厚的堆焊层，有利于大型金属构件的焊接，多股绞合药芯焊丝熔深大、熔宽大、熔敷效率高，其生产工艺简单，效率高，可盘绕性强，刚直性好，可以获得较大的熔深、熔宽或宽厚的堆焊层，具有较广的应用范围。

公开（公告）号：[CN201455562U](https://www.incopat.com/detail/init2?formerQuery=PrtJR6dtORPXEbd5Cc9CqGr4kAd0KKkg&local=zh)

公开（公告）日：2010-05-12

申请号：CN200920045272.8

申请日：2009-05-12

申请人：中国矿业大学

法律状态：法律状态公告日：20100512;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20160810;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利权的转移IPC(主分类):B23K 35/16;登记生效日:20160720;变更事项:专利权人;变更前权利人:中国矿业大学;变更后权利人:梁裕;变更事项:地址;变更前权利人:221116 江苏省徐州市南三环路中国矿业大学科技处;变更后权利人:213000 江苏省常州市天宁区景福苑6幢乙单元1101室;?

法律状态公告日：20180209;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利权的转移IPC(主分类):B23K 35/16;登记生效日:20180123变更前 ;专利权人:梁裕 ;地址:213000 江苏省常州市天宁区景福苑6幢乙单元1101室变更后 ;专利权人:江苏联捷焊业科技有限公司 ;地址:214400 江苏省无锡市江阴市高新技术产业开发区凤凰山路18号;?

**276、NEUTRON GENERATOR USING COMPRESSED FUSIBLE MATERIAL AND LASER PULSE**

摘要：To generate neutrons, a nuclei fusible material is placed between opposed anvils of a mechanical pressing device. Force is applied to an anvil face to compress the fusible material to a high pressure. A laser light pulse is then directed through the anvil face and into the compressed fusible material. This laser light pulse is focused by an optical system to a focal spot in the compressed fusible material, to cause a small portion of the compressed fusible material at the focal spot to be further locally compressed and heated to a temperature whereby a micro plasma is formed in which fusing of nuclei takes place. This fusion reaction of the nuclei in the fusible material thus generates neutrons. In a preferred embodiment, the mechanical pressing device is a diamond anvil, and the fusible material is one of deuterium, tritium, or a combination thereof.

公开（公告）号：[US20100290574A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rG926tXrePMqiKnnohyIMbS&local=zh)

公开（公告）日：2010-11-18

申请号：US12464377

申请日：2009-05-12

申请人：HUDGINS J STEPHEN

**277、低/中轨道双层卫星光网络自适应路由系统及代理路由计算方法**

摘要：本发明公开了低/中轨道双层卫星光网络自适应路由系统，该系统由空间段 路由连接星地接入段，中轨道卫星管理层至少由4颗管理员卫星和管理员卫星 组成，管理员卫星和管理员卫星直接管理低轨道卫星路由层，低轨道卫星路由 层是由一颗主代理卫星、4颗次级代理卫星和至少8颗普通卫星连接组成。计 算方法包括拓扑参数；确定低轨道卫星对中轨道卫星接入生存时间报告；主代 理节点和链路；星间链路时延；低轨道卫星时延报告；中轨道卫星时延报告； 波长使用率业务负载；路由代价函数计算。双层卫星光网络分为高度动态变化 的接入网和周期性变化的空间段核心网两部分，接入网负责空间段与地面网络 融合，空间段利用星间激光链路中继直至服务目地卫星。

公开（公告）号：[CN101552933A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jFSIB2aDNZrGr4kAd0KKkg&local=zh)

公开（公告）日：2009-10-07

申请号：CN200910022318.9

申请日：2009-05-04

申请人：中国人民解放军空军工程大学

法律状态：法律状态公告日：20091007;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20091202;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效;?

法律状态公告日：20121107;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20140625;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):H04Q 11/00;申请日:20090504;授权公告日:20121107;终止日期:20130504;?

**278、立体电路制造工艺及激光塑胶原料的复合组份、制造方法**

摘要：本发明涉及一种立体电路制造工艺及配套的激光塑胶原料复合组份、制造方法，具体是采用激光扫描在塑胶表面选择性沉积精密、紧密导电电路的并直接焊接电子元器件的成套技术。包括步骤一：合成一种含有机金属化合物的激光塑胶原料；步骤二：采用这种激光塑胶原料注塑成塑胶件；步骤三：激光选择性扫描塑胶件形成还原出金属粒子的图案；步骤四：快速超声波化学镀，增厚图案上金属层，形成连续导电图案；步骤五：等离子化学抛光(可选)。本发明还融合了激光分层烧结(SLS)快速成型技术并予以工艺和设备创新，是新一代电子、电器和机电一体化产品的环保、环境友好、柔性智能制造的核心技术，用于电子产业、航空航天、交通运输、工业控制等领域。

公开（公告）号：[CN101859613A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iMi1I2r1iUPmr4kAd0KKkg&local=zh)

公开（公告）日：2010-10-13

申请号：CN200910106506.X

申请日：2009-04-09

申请人：湖南美纳科技有限公司

法律状态：法律状态公告日：20101013;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20101124;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H01B 13/00;申请日:20090409;?

法律状态公告日：20110511;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):H01B 13/00;变更事项:申请人;变更前权利人:湖南美纳科技有限公司;变更后权利人:周红卫;变更事项:地址;变更前权利人:410005 湖南省长沙市高新技术产业开发区火炬城MO组团北七楼;变更后权利人:518126 广东省深圳市宝安区固戌桃源居14区7栋207;登记生效日:20110407;?

法律状态公告日：20110511;?

法律状态：著录事项变更;?

描述信息：著录事项变更IPC(主分类):H01B 13/00;变更事项:发明人;变更前:许小曙 周红卫;变更后:周红卫;?

法律状态公告日：20110629;?

法律状态：文件的公告送达;?

描述信息：文件的公告送达IPC(主分类):H01B 13/00收件人:周红卫文件名称:手续合格通知书;?

法律状态公告日：20120215;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利申请权的转移IPC(主分类):H01B 13/00;变更事项:申请人;变更前权利人:周红卫;变更后权利人:深圳市微航磁电技术有限公司;变更事项:地址;变更前权利人:518126 广东省深圳市宝安区固戌桃源居14区7栋207;变更后权利人:518126 广东省深圳市宝安区西乡街道112区河东航城工业区第一栋2楼;登记生效日:20111230;?

法律状态公告日：20120502;?

法律状态：文件的公告送达;?

描述信息：文件的公告送达IPC(主分类):H01B 13/00收件人:深圳市微航磁电技术有限公司 周红卫文件名称:手续合格通知书;?

法律状态公告日：20130327;?

法律状态：授权;?

描述信息：授权;?

**279、OPTICAL AMPLIFIER, AND FIBER LASER DEVICE**

摘要：PROBLEM TO BE SOLVED : To solve such the problem that, in a large output fiber laser, since laser beam easily leaks from the core of a large-output fiber laser and the output of an optical surge which is not amplified is large, the optical surge leaking from the core is propagated, i.e. goes upstream toward a pumping light source and is made incident to the pumping light source even when the pumping light source is not connected to the core in series, and breaks it.SOLUTION : A pumping light transmission fiber 123 is fused and spliced to the inner clad 112 of a double clad fiber 100 through an optical surge going-upstream suppression fiber 25 whose core is doped with thorium to inject the pumping light thereinto.COPYRIGHT : (C)2010, JPO&INPIT

公开（公告）号：[JP2010177315A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaFrzegVp3LBGGuxfaWZrjp&local=zh)

公开（公告）日：2010-08-12

申请号：JP2009016194

申请日：2009-01-28

申请人：PANASONIC CORP

**280、核能转化器**

摘要：激光束通过一个或多个波束信道、经过一道或多道激光射向样品室内的样品材料商，样品室放置在样品本体内。激光束在样品材料上生成等离子体，在原子核或电子壳层上直接或间接引起反应。这些反应可形成核裂变或核聚变，或生成伽马射线或中子。此外，伽马射线或中子可传递到样品本体或波束信道上，以此引起相同的反应。盘可防止或延迟热量或等离子体从波束信道上漏出。可向样品本体或样品本体内的电极施加正压U或负压，以此吸收或传递电子，便于引起所需要的反应。样品本体可全部或部分透明，以此调整激光束的焦点，保证焦点位于样品材料上。激光束可通过光波导传递到波束信道上。

公开（公告）号：[CN101960927A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jqsBtAsOXz72r4kAd0KKkg&local=zh)

公开（公告）日：2011-01-26

申请号：CN200980103158.9

申请日：2009-01-24

申请人：A 罗舍尔

法律状态：法律状态公告日：20110126;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20110323;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H05H 1/22;申请日:20090124;?

法律状态公告日：20140528;?

法律状态：发明专利申请公布后的驳回;?

描述信息：发明专利申请公布后的驳回IPC(主分类):H05H 1/22申请公布日:20110126;?

**281、Nuclear energy converter**

摘要：The assembly to break down or melt nuclei has a system to recover energy from the electrons. An electrode (1) is within a hollow body (7) with insulation (8) against it, connected to the plus pole of a voltage supply (2). The minus pole is earthed (8). The electrode tip carries material (3) heated by a laser beam (11), within a protective radioactive shrouding tube (4), to release the electrons as the material is heated and converted into energy. The electrons are taken off through the voltage supply. An inert gas from an inflow (6) passes through openings (10) in the shrouding tube.

公开（公告）号：[JP2011511278A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZke7eEnzWtN2GuxfaWZrjp&local=zh)

公开（公告）日：2011-04-07

申请号：JP2010544577

申请日：2009-01-24

申请人：Rochelle Alphonse510199454

法律状态：法律状态公告日：20111214;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2011511278AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20111213法律状态公告日：20120515;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2011511278AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20120515法律状态公告日：20120814;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2011511278AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20120813法律状态公告日：20120823;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2011511278AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20120822法律状态公告日：20121116;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2011511278AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20121115法律状态公告日：20130312;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2011511278AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20130312

**282、Nuclear Energy Converter**

摘要：One or more beam channels through which laser beams are directed, via one or more lasers, onto material of a sample in a sample chamber, are placed in a sample body. The laser beams generate a plasma in the material of the sample and directly or indirectly trigger reactions in the atomic nucleus or the electron shell. These reactions lead to a nuclear fission or fusion or to the generation of gamma rays or neutrons. Furthermore, gamma rays or neutrons can be conveyed to the sample body or to the beam channels, in order to trigger the same reactions. Discs can prevent or delay thermal energy or plasma from escaping in the beam channels. A positive or negative voltage U can be applied to the sample body or to electrodes situated within it, in order to suck up or convey electrons and favour the desired reactions. The sample body may be wholly or partially transparent, in order to adjust the focal points of the laser beams onto the material of the sample. The laser beams may be conveyed to the beam channels via optical wave guides.

公开（公告）号：[US20110170646A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGZPI4hVvWwVzkJJEbMdX8W&local=zh)

公开（公告）日：2011-07-14

申请号：US12863524

申请日：2009-01-24

申请人：ROSCHEL ALFONS

**283、NUCLEAR ENERGY CONVERTER**

摘要：One or more beam channels are arranged in a sample body, through which beam channels laser beams are directed from one or more lasers onto material of a sample in a sample chamber. The laser beams produce a plasma in the material of the sample, and directly or indirectly initiate reactions in the atom nucleus or the electron envelope. These reactions lead to nuclear fission or fusion or to the production of gamma rays or neutrons. Furthermore, gamma rays or neutrons can be supplied to the sample body or to the beam channels, in order to initiate the same reactions. In the beam channels, closure bodies can prevent or delay an escape of thermal energy or plasma. A positive or negative voltage U can be applied to the sample body or to electrodes located in it, in order to carry electrons away or to supply them, and to assist the desired reactions. The sample body may be entirely or partially transparent, in order to set the focal points of the laser beams on the material of the sample. The laser beams may be supplied to the beam channels via optical waveguides.

公开（公告）号：[WO2009094992A1](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU45kQ5abNGOnfNkPtwy7rjn&local=zh)

公开（公告）日：2009-08-06

申请号：WODE09000101

申请日：2009-01-24

申请人：ROSCHEL ALFONS

法律状态：法律状态公告日：20090124;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;200980103158.9Corresponding Authority:;CN法律状态公告日：20090930;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;09705648Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20100721;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;2010544577Corresponding Authority:;JP法律状态公告日：20100817;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;2009705648Corresponding Authority:;EP法律状态公告日：20100902;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;2010131325Corresponding Authority:;RU法律状态公告日：20101006;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;12863524Corresponding Authority:;US法律状态公告日：20101230;?

状态效果：+;?

状态代码：REF;?

法律状态：CORRESPONDS TO描述信息：Docdb Publication Number:; WO 2009094992A1Corresponding Publication Number:;112009000758Corresponding Authority:;DECorresponding Publication Date:;20101230

**284、Fusion reactor with Petawatt laser**

摘要：The reactor for power production by means of nuclear fusion by one-sided laser effect on fuel after disclosure writing DE 10208515 A1 reduced according to invention for the Sicherstellung of suitable conditions of work.

公开（公告）号：[DE102009004068A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4925B2s%2BhbvBbfUxSBlhsjFga&local=zh)

公开（公告）日：2010-07-08

申请号：DE102009004068

申请日：2009-01-01

申请人：Hora Heinrich Prof Dr Dr

法律状态：法律状态公告日：20100812;?

状态代码：8122;?

法律状态：NONBINDING INTEREST IN GRANTING LICENCES DECLARED描述信息：Docdb Publication Number:; DE102009004068A1法律状态公告日：20111215;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102009004068A1Effective Date:;20110802

**285、FUSION FUEL CONTAINERS AND SYSTEM**

摘要：A fusion fuel composition has two or more light nuclei combined with a cage-like molecule. The light nuclei may be, for example, deuterium and tritium, and the cage-like molecule may be, for example, a fullerene molecule. A fusion reaction to consume the fusion fuel may be ignited, for example, via compression methods including chemical or laser.

公开（公告）号：[US20090154630A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rG%2B2cQgYDp6l8PRaceoSxX2&local=zh)

公开（公告）日：2009-06-18

申请号：US12339705

申请日：2008-12-19

申请人：MILLER EDWARD DONALD

**286、METHOD FOR PRODUCING HIGHLY MECHANICALLY DEMANDED PIECES AND SPECIALLY TOOLS FROM CONCRETE, BY CASTING THE DESIRED SHAPE AND THEN COATING WITH A METALLIC LAYER**

摘要：The present invention is directed to a method for the production of highly demanded pieces at low cost. The method is especially well suited for deep drawing dies, but also any other type of tooling. It is also very well suited for machine components of big dimensions and with high mechanical solicitations, like rotors and cages in wind mills and other big machines. The pieces or tools are cast with a low cost ceramic, like a high resistance concrete (with special mention to HPC or UHPC) or a low water admixture castable or any other low cost high mechanical resistance material (low cost ceramics or high resistance polymers arc especially suited). Once cast, the working surface of the die or piece is coated with a metal, an intermetallic or a high performance ceramic. Projection or deposition techniques are used to obtain the high value working surface. Optionally localized fusion treatments (IR, laser, HDIR or any other localized energy source) are applied to obtain full density on the surface. Also welding, laser deposition or any other deposition by melting can be applied (often on top of a deposited or projected intermediate layer). Different layers can be applied, and trough proper masking a specific surface functionality can be attained. Rolls, jaws, bearing supports, machine benches and other structural parts and any other highly solicited part can be obtained at low cost by means of the present invention.

公开（公告）号：[EP2237939B1](https://www.incopat.com/detail/init2?formerQuery=I1gTAXeCxlw%2FfqhBq1FCuPR0OjOTHMZL&local=zh)

公开（公告）日：2018-04-18

申请号：EP08861812

申请日：2008-12-16

申请人：Rovalma S A

法律状态：法律状态公告日：20101013;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2237939A2Effective Date:;20100714法律状态公告日：20101013;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2237939A2Corresponding Authority:;EPCorresponding Kind:;A2Legal Designated States:;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MT;NL;NO;PL;PT;RO;SE;SI;SK;TR;法律状态公告日：20101013;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 2237939A2Countries Concerned:;AL;BA;MK;RS;法律状态公告日：20110323;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2237939A2法律状态公告日：20110817;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 2237939A2Effective Date:;20110718法律状态公告日：20171206;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2237939A2Effective Date:;20171110法律状态公告日：20180418;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2237939A2Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MT;NL;NO;PL;PT;RO;SE;SI;SK;TR;法律状态公告日：20180418;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20180430;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20180515;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;989945Corresponding Authority:;ATEffective Date:;20180515法律状态公告日：20180516;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20180517;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602008054939Corresponding Authority:;DE法律状态公告日：20180822;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20180418法律状态公告日：20180822;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;ESDesignated State Event Code:;FG2ADesignated State Description:;DEFINITIVE PROTECTIONCorresponding Publication Number:;2679103Corresponding Authority:;ESCorresponding Kind:;T3Effective Date:;20180822法律状态公告日：20180910;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT法律状态公告日：20180928;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180718法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180718法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180418法律状态公告日：20181130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180719法律状态公告日：20181215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;989945Corresponding Authority:;ATEffective Date:;20180418法律状态公告日：20181231;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2237939A2Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20180820

**287、The desired shape by casting or metal coated with a ceramic layer is then high characteristics due to the low cost of ceramic or polymer such as highly mechanically from parts requiring special tools and method of manufacturing**

摘要：The present invention is directed to a method for the production of highly demanded pieces at low cost. The method is especially well suited for deep drawing dies, but also any other type of tooling. It is also very well suited for machine components of big dimensions and with high mechanical solicitations, like rotors and cages in wind mills and other big machines. The pieces or tools are cast with a low cost ceramic, like a high resistance concrete (with special mention to HPC or UHPC) or a low water admixture castable or any other low cost high mechanical resistance material (low cost ceramics or high resistance polymers arc especially suited). Once cast, the working surface of the die or piece is coated with a metal, an intermetallic or a high performance ceramic. Projection or deposition techniques are used to obtain the high value working surface. Optionally localized fusion treatments (IR, laser, HDIR or any other localized energy source) are applied to obtain full density on the surface. Also welding, laser deposition or any other deposition by melting can be applied (often on top of a deposited or projected intermediate layer). Different layers can be applied, and trough proper masking a specific surface functionality can be attained. Rolls, jaws, bearing supports, machine benches and other structural parts and any other highly solicited part can be obtained at low cost by means of the present invention.

公开（公告）号：[JP2011508715A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXb%2FyRr6nGWfLmGuxfaWZrjp&local=zh)

公开（公告）日：2011-03-17

申请号：JP2010538644

申请日：2008-12-16

申请人：ROVALMA S A

法律状态：法律状态公告日：20120314;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20120314法律状态公告日：20120328;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20120327法律状态公告日：20120627;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20120626法律状态公告日：20120704;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20120703法律状态公告日：20120927;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20120926法律状态公告日：20130213;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20130212法律状态公告日：20130511;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130510法律状态公告日：20130520;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130517法律状态公告日：20130810;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20130809法律状态公告日：20140205;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20140204法律状态公告日：20140813;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2011508715AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20140812

**288、METHOD FOR PRODUCING HIGHLY MECHANICALLY DEMANDED PIECES AND SPECIALLY TOOLS FROM LOW COST CERAMICS OR POLYMERS**

摘要：The present invention refers to low-cost manufacturing method, on which the parts are mechanically very request relates to. Use of the method in particular deep drawing dies very adapted, .also suitable for other type of tool. Cage rotor and in windmill in addition, and other large machine such as high mechanical of a larger size having the highest priority are well suited for mechanical components.. Strength concrete are implemented with component or said (referred to specially to UHPC or HPC) or casting a high mechanical strength material matters admixture or all low cost (low cost ceramic or high intensity polymer is in particular finds suitable application) such as Multicast ceramic low cost. Multicast the, work surface of a workpiece or components die said metal, intermetallic or high power ceramic coating is disposed on.. Projection or expensive deposition techniques is used to obtain a work surface is value.

公开（公告）号：[KR101430593B1](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczu3EZa5RqaAvxl3Z10vNpVJ&local=zh)

公开（公告）日：2014-08-08

申请号：KR1020107015760

申请日：2008-12-16

申请人：Robalma essay Ah

**289、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material produces droplets from the breakup of the jet stream. The liquid droplets may be irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets or alternatively, a volatile fluid with or without a metal nanoparticle may form the cavity. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating (if provided) and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction or from any other purposes.

公开（公告）号：[US20110228890A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rFfJHGGI9IEvsPRaceoSxX2&local=zh)

公开（公告）日：2011-09-22

申请号：US12263901

申请日：2008-11-03

申请人：Synergy Innovations Inc

法律状态：法律状态公告日：20090212;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2011228890A1New Owner:;SYNERGY INNOVATIONS, INC., NEW HAMPSHIREFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEAN, ROBERT C., JR.;ROY, RONALD A.;HOLT, R. GLYNN;SIGNING DATES FROM 20090205 TO 20090206;REEL/FRAME:022250/0695法律状态公告日：20150508;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 2011228890A1法律状态公告日：20150927;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 2011228890A1法律状态公告日：20151117;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 2011228890A1Effective Date:;20150927

**290、LASER-INERTIAL CUMULATIVE THERMONUCLEAR REACTOR AND REACTIVE [SITEMA] BEYOND ITS BASIS**

摘要：1. The device of laser-inertial cumulative thermonuclear reactor, which includes spherical thermonuclear target, pulse laser multiple-beam system and source of electromagnetic energy for the synchronous starting of device, that is characterized by the fact that, for the purpose to increase the energy release of thermonuclear fuel, are used the shaped charges with the revetment. ! 2. device of laser-inertial cumulative thermonuclear reactor on [p].1, which is characterized by the fact that the synchronous starting of shaped charges follows the first, and the synchronous starting of laser system is achieved before the synchronous action of cumulative jets beyond the thermonuclear target. ! 3. device of laser-inertial cumulative thermonuclear reactor on [p].2, which is characterized by the fact that, for the purpose of the optimization of energy release in the thermonuclear target, the moment of the action of cumulative jets beyond the thermonuclear target coincides for the sake of the moment of the maximum compression of thermonuclear target due to the direct or indirect action of laser emission. ! 4. device of laser-inertial cumulative thermonuclear reactor on [p].3, which is characterized by the fact that the revetment of shaped charges is made from the material, whose density before the cumulative jet down the maximum degree approaches substance density of thermonuclear target at the moment of maximum compression as far as laser emission. ! 5. device of laser-inertial cumulative thermonuclear reactor on [p].4, which is characterized by the fact that down the center of explosive camera periodically are placed the pulse thermonuclear modules of the single action, which include the thermonuclear target, down center of which are directed the axes of tubular to [kumulyati]

公开（公告）号：[RU2008141621A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4Kg2bsZxgPdomGuxfaWZrjp&local=zh)

公开（公告）日：2010-04-27

申请号：RU2008141621

申请日：2008-10-22

申请人：Пономаренко Андрей Викторович (RU)

法律状态：法律状态公告日：20120727;?

状态效果：-;?

状态代码：FA93;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2008141621AEffective Date:;20111023

**291、Converter for converting heat from atomic reactions and for producing radioactive radiation comprises a protective sleeve for triggering reactions in the atom in a sample body leading to core splitting or fusing to release heat**

摘要：The nuclear energy converter Notes within a working space from the heat released on atomic reactions. This of fissionable material is released in one or more samples with atomic reactions, such as nuclear fission and- fusion, . This atomic reactions via light guides or mirror and a focusing optical system by supplying laser beams are in a specimen, the fissile material contains, triggered. Neutrons and protons as well as their decay products, as well as radioactive radiation can also be released. The test piece, are thereby heated or even destroyed. By the supply of many test specimen is heated by the heat released in this the protective sheath. His heat is delivered to a heat exchanger. Protective sheath and heat exchanger can via a further, outer protective sheath for heat and sound insulation are surrounded. Test piece, can be worked up again light guide and mirror. The slipcovers may also contain openings, by the radioactive rays or neutrons as well as their decay products without additional attenuation [...] and may exit. To this end, the protective covers may also even eliminated. Are converted by the nuclear reactions in the test piece elements can also, which then can be removed from the test bodies.

公开（公告）号：[DE102008052128A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4927v7wHBHOf%2FQ%2FhqlkZleayq&local=zh)

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申请号：DE102008052128

申请日：2008-10-20

申请人：ROSCHEL ALFONS

法律状态：法律状态公告日：20110901;?

状态效果：-;?

状态代码：R119;?

法律状态：APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; DE102008052128A1Effective Date:;20110502

**292、Of Melt-Fission, And, Plant Melt-Fission Energy**

摘要：A laser inertial-confinement fusion-fission energy power plant is described. The fusion-fission hybrid system uses inertial confinement fusion to produce neutrons from a fusion reaction of deuterium and tritium. The fusion neutrons drive a sub-critical blanket of fissile or fertile fuel. A coolant circulated through the fuel extracts heat from the fuel that is used to generate electricity. The inertial confinement fusion reaction can be implemented using central hot spot or fast ignition fusion, and direct or indirect drive. The fusion neutrons result in ultra-deep burn-up of the fuel in the fission blanket, thus enabling the burning of nuclear waste. Fuels include depleted uranium, natural uranium, enriched uranium, spent nuclear fuel, thorium, and weapons grade plutonium. LIFE engines can meet worldwide electricity needs in a safe and sustainable manner, while drastically shrinking the highly undesirable stockpiles of depleted uranium, spent nuclear fuel and excess weapons materials.

公开（公告）号：[BRPI0818452A2](https://www.incopat.com/detail/init2?formerQuery=NtABT%2FmxwnQze%2B56c8a73bZURLeXO8oE&local=zh)

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申请号：BRPI0818452

申请日：2008-09-30

申请人：L LIVERMORE NAT SECURITY LLC

法律状态：法律状态公告日：20170523;?

状态效果：-;?

状态代码：B08F;?

法律状态：APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW描述信息：Docdb Publication Number:; BR PI0818452A2

**293、激光惯性约束聚变裂变核电站的控制**

摘要：本发明描述了激光惯性约束聚变裂变能发电站。聚变裂变混合系统利用惯性约束聚变以由氘和氚的聚变反应产生中子。聚变中子驱动可裂变的或能产生裂变物质的燃料的亚临界再生区。循环通过燃料的冷却剂提取燃料的热用于发电。惰性约束聚变反应可以利用中心热斑或快点火聚变和直接或间接驱动来实现。聚变中子导致燃料在裂变再生区中超深度燃尽，从而使得核废料能够燃烧。燃料包括贫化铀、天然铀、浓缩铀、乏核燃料、钍和武器级钚。LIFE热机以安全和可持续方式满足世界范围的电力需求，同时显著缩减极不可取的贫化铀、乏核燃料和多余武器级材料的储存。

公开（公告）号：[CN101889483A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2gNULqtGhQOhmr4kAd0KKkg&local=zh)

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申请号：CN200880119622.9

申请日：2008-09-30

申请人：劳伦斯 利弗莫尔国家安全有限责任公司

法律状态：法律状态公告日：20101117;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20101229;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H05H 1/22;申请日:20080930;?

法律状态公告日：20131120;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20151118;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G21B 1/01;申请日:20080930;授权公告日:20131120;终止日期:20140930;?

**294、CONTROL OF A LASER INERTIAL CONFINEMENT FUSION-FISSION POWER PLANT**

摘要：A laser inertial-confinement fusion-fission energy power plant is described. The fusion-fission hybrid system uses inertial confinement fusion to produce neutrons from a fusion reaction of deuterium and tritium. The fusion neutrons drive a sub-critical blanket of fissile or fertile fuel. A coolant circulated through the fuel extracts heat from the fuel that is used to generate electricity. The inertial confinement fusion reaction can be implemented using central hot spot or fast ignition fusion, and direct or indirect drive. The fusion neutrons result in ultra-deep burn-up of the fuel in the fission blanket, thus enabling the burning of nuclear waste. Fuels include depleted uranium, natural uranium, enriched uranium, spent nuclear fuel, thorium, and weapons grade plutonium. LIFE engines can meet worldwide electricity needs in a safe and sustainable manner, while drastically shrinking the highly undesirable stockpiles of depleted uranium, spent nuclear fuel and excess weapons materials.

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公开（公告）日：2010-06-16

申请号：EP08846082

申请日：2008-09-30

申请人：Lawrence Livermore National Security LLC

法律状态：法律状态公告日：20100616;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2196070A2Effective Date:;20100409法律状态公告日：20100616;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2196070A2Corresponding Authority:;EPCorresponding Kind:;A2Legal Designated States:;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MT;NL;NO;PL;PT;RO;SE;SI;SK;TR;法律状态公告日：20100616;?

状态效果：+;?

状态代码：AX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:描述信息：Docdb Publication Number:; EP 2196070A2Countries Concerned:;AL;BA;MK;RS;法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;KRAMER, KEVIN法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;FARMER, JOSEPH C.法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;ABBOTT, RYAN P.法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;DE LA RUBIA, TOMAS DIAZ法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;STORM, ERIC P.法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;LATKOWSKI, JEFFERY F.法律状态公告日：20101013;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2196070A2Inventor Name:;MOSES, EDWARD I.法律状态公告日：20120815;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2196070A2法律状态公告日：20140729;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;DEDesignated State Event Code:;R079Designated State Description:;AMENDMENT OF IPC MAIN CLASSCorresponding Publication Number:;602008048603Corresponding Authority:;DEFree Text Description:;PREVIOUS MAIN CLASS: H05H0001220000Ipc:;G21B0001010000法律状态公告日：20140903;?

状态效果：+;?

状态代码：A4;?

法律状态：DESPATCH OF SUPPLEMENTARY SEARCH REPORT描述信息：Docdb Publication Number:; EP 2196070A2Effective Date:;20140805法律状态公告日：20140903;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2196070A2Ipc:;G21B 1/19 20060101ALI20140729BHEP法律状态公告日：20140903;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 2196070A2Ipc:;G21B 1/01 20060101AFI20140729BHEP法律状态公告日：20160831;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2196070A2Effective Date:;20160805法律状态公告日：20170111;?

状态代码：INTC;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT (DELETED)描述信息：Docdb Publication Number:; EP 2196070A2法律状态公告日：20170125;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2196070A2Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MT;NL;NO;PL;PT;RO;SE;SI;SK;TR;法律状态公告日：20170125;?

状态效果：+;?

状态代码：INTG;?

法律状态：ANNOUNCEMENT OF INTENTION TO GRANT描述信息：Docdb Publication Number:; EP 2196070A2Effective Date:;20161216法律状态公告日：20170125;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20170131;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20170215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ATDesignated State Event Code:;REFDesignated State Description:;REFERENCE TO AT NUMBER (EP PATENT ENTERS AUSTRIAN NATIONAL PHASE)Corresponding Publication Number:;864542Corresponding Authority:;ATEffective Date:;20170215法律状态公告日：20170222;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20170309;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;DEDesignated State Event Code:;R096Designated State Description:;DPMA PUBLICATION OF MENTIONED EP PATENT GRANTCorresponding Publication Number:;602008048603Corresponding Authority:;DE法律状态公告日：20170525;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;LTDesignated State Event Code:;MG4DDesignated State Description:;INVALIDATED EUROPEAN PATENT法律状态公告日：20170531;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;NLDesignated State Event Code:;MPDesignated State Description:;PATENT VOIDED (INVALID IN THE NETHERLANDS AS NO TRANSLATION HAS BEEN FILED)Effective Date:;20170125法律状态公告日：20170615;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ATDesignated State Event Code:;MK05Designated State Description:;REVOCATION OF THE TRANSLATION OF THE EP PATENTCorresponding Publication Number:;864542Corresponding Authority:;ATEffective Date:;20170125法律状态公告日：20170630;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;NOFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170425法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;HRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;LTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170426法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ISFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170525法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170525法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;PLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;LVFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20170831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;BGFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170425法律状态公告日：20170925;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;10法律状态公告日：20171026;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;DEDesignated State Event Code:;R097Designated State Description:;NO OPPOSITION FILED AGAINST GRANTED PATENT, OR EPO OPPOSITION PROCEEDINGS CONCLUDED WITHOUT DECISIONCorresponding Publication Number:;602008048603Corresponding Authority:;DE法律状态公告日：20171031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;SKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20171031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;CZFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20171031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ROFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20171031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;EEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20171031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;ITFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20171031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;GBPayment Date:;20170927Fee Payment-year:;10法律状态公告日：20171031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;FRPayment Date:;20170925Fee Payment-year:;10法律状态公告日：20171130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20180103;?

状态效果：+;?

状态代码：26N;?

法律状态：NO OPPOSITION FILED描述信息：Docdb Publication Number:; EP 2196070A2Effective Date:;20171026法律状态公告日：20180131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;DEPayment Date:;20170927Fee Payment-year:;10法律状态公告日：20180228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;SIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20180430;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;CHDesignated State Event Code:;PLDesignated State Description:;PATENT CEASED法律状态公告日：20180531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;MCFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20170125法律状态公告日：20180627;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;IEDesignated State Event Code:;MM4ADesignated State Description:;PATENT LAPSED法律状态公告日：20180628;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;BEDesignated State Event Code:;MMEffective Date:;20170930法律状态公告日：20180629;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;LUFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20170930法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;LIFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20170930法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;CHFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20170930法律状态公告日：20180731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;IEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20170930法律状态公告日：20180831;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;BEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20170930法律状态公告日：20180928;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 2196070A2Designated State Authority:;MTFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20170930

**295、· Laser inertial confinement nuclear fusion fission power plant control**

摘要：A fuel pebble for use in a fusion-fission engine includes a buffer material and a fertile or fissile fuel shell surrounding the buffer material. The fuel pebble also includes a containment shell surrounding the fertile or fissile fuel shell. The containment shell includes silicon carbide. The fuel pebble further includes a composite material layer surrounding the containment shell and a cladding layer surrounding the composite material layer.

公开（公告）号：[JP2010540962A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZTthJcBB9q2WGuxfaWZrjp&local=zh)

公开（公告）日：2010-12-24

申请号：JP2010527970

申请日：2008-09-30

申请人：Lawrence Livermore National Security LLC

法律状态：法律状态公告日：20110708;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20110707法律状态公告日：20130911;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130910法律状态公告日：20130919;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130918法律状态公告日：20131011;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20131010法律状态公告日：20131011;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20131010法律状态公告日：20131021;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20131018法律状态公告日：20131021;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20131018法律状态公告日：20131109;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20131108法律状态公告日：20131118;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20131115法律状态公告日：20131211;?

状态代码：A524;?

法律状态：WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A524Effective Date:;20131210法律状态公告日：20131212;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20131211法律状态公告日：20140806;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20140805法律状态公告日：20150204;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2010540962AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20150203

**296、CONTROL OF A LASER INERTIAL CONFINEMENT FUSION-FISSION POWER PLANT**

摘要：A laser inertial-confinement fusion-fission energy power plant is described. The fusion-fission hybrid system uses inertial confinement fusion to produce neutrons from a fusion reaction of deuterium and tritium. The fusion neutrons drive a sub-critical blanket of fissile or fertile fuel. A coolant circulated through the fuel extracts heat from the fuel that is used to generate electricity. The inertial confinement fusion reaction can be implemented using central hot spot or fast ignition fusion, and direct or indirect drive. The fusion neutrons result in ultra-deep burn-up of the fuel in the fission blanket, thus enabling the burning of nuclear waste. Fuels include depleted uranium, natural uranium, enriched uranium, spent nuclear fuel, thorium, and weapons grade plutonium. LIFE engines can meet worldwide electricity needs in a safe and sustainable manner, while drastically shrinking the highly undesirable stockpiles of depleted uranium, spent nuclear fuel and excess weapons materials.

公开（公告）号：[KR1020100103457A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczsFdHJWxB9Au%2FXKY3bKPT9r&local=zh)

公开（公告）日：2010-09-27

申请号：KR1020107009778

申请日：2008-09-30

申请人：L LIVERMORE NAT SECURITY LLC

法律状态：法律状态公告日：20130902;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20100103457A 法律状态公告日：20140822;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 20100103457A 法律状态公告日：20141029;?

状态效果：-;?

状态代码：E601;?

法律状态：DECISION TO REFUSE APPLICATION描述信息：Docdb Publication Number:; KR 20100103457A

**297、Control of a Laser Inertial Confinement Fusion-Fission Power Plant**

摘要：A laser inertial-confinement fusion-fission energy power plant is described. The fusion-fission hybrid system uses inertial confinement fusion to produce neutrons from a fusion reaction of deuterium and tritium. The fusion neutrons drive a sub-critical blanket of fissile or fertile fuel. A coolant circulated through the fuel extracts heat from the fuel that is used to generate electricity. The inertial confinement fusion reaction can be implemented using central hot spot or fast ignition fusion, and direct or indirect drive. The fusion neutrons result in ultra-deep burn-up of the fuel in the fission blanket, thus enabling the burning of nuclear waste. Fuels include depleted uranium, natural uranium, enriched uranium, spent nuclear fuel, thorium, and weapons grade plutonium. LIFE engines can meet worldwide electricity needs in a safe and sustainable manner, while drastically shrinking the highly undesirable stockpiles of depleted uranium, spent nuclear fuel and excess weapons materials.

公开（公告）号：[US20110286563A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rE6czAfnU%2F8UIqqxKR9kPS0&local=zh)

公开（公告）日：2011-11-24

申请号：US12681165

申请日：2008-09-30

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC

法律状态：法律状态公告日：20100824;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2011286563A1New Owner:;LAWRENCE LIVERMORE NATIONAL SECURITY, LLC, CALIFORFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MOSES, EDWARD I.;LATKOWSKI, JEFFREY F.;KRAMER, KEVIN J.;REEL/FRAME:024880/0219Effective Date:;20100726

**298、CONTROL OF A LASER INERTIAL CONFINEMENT FUSION-FISSION POWER PLANT**

摘要：A laser inertial-confinement fusion-fission energy power plant is described. The fusion-fission hybrid system uses inertial confinement fusion to produce neutrons from a fusion reaction of deuterium and tritium. The fusion neutrons drive a subcritical blanket of fissile or fertile fuel. A coolant circulated through the fuel extracts heat from the fuel and that heat is used to generate electricity. The inertial confinement fusion reaction can be implemented using central hot spot or fast ignition fusion, and direct or indirect drive. The fusion neutrons result in ultra-deep burn-up of the fuel in the fission blanket, thus enabling the burning of nuclear waste. Fuels include depleted uranium, natural uranium, enriched uranium, spent nuclear fuel, thorium, and weapons grade plutonium. LIFE engines can meet worldwide electricity needs in a safe and sustainable manner, while drastically shrinking the highly undesirable stockpiles of depleted uranium, spent nuclear fuel and excess weapons materials.

公开（公告）号：[WO2009058185A2](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU4LO7MxZcq4YHtd8LfwwKeV&local=zh)

公开（公告）日：2009-05-07

申请号：WOUS08011335

申请日：2008-09-30

申请人：LAWRENCE LIVERMORE NATIONAL SECURITY LLC; MOSES Edward I; DE LA RUBIA Tomas Diaz; LATKOWSKI Jeffrey F; FARMER Joseph C; STORM Eric K; ABBOTT Ryan P

法律状态：法律状态公告日：20080930;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;200880119622.9Corresponding Authority:;CN法律状态公告日：20090701;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;08846082Corresponding Authority:;EPCorresponding Kind:;A2法律状态公告日：20100402;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;2010527970Corresponding Authority:;JP法律状态公告日：20100406;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;204858Corresponding Authority:;IL法律状态公告日：20100407;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2009058185A2Designated State Authority:;DE法律状态公告日：20100409;?

状态效果：+;?

状态代码：REEP;?

法律状态：REQUEST FOR ENTRY INTO THE EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;2008846082Corresponding Authority:;EP法律状态公告日：20100409;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;2008846082Corresponding Authority:;EP法律状态公告日：20100420;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;2710/DELNP/2010Corresponding Authority:;IN法律状态公告日：20100503;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;20107009778Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20110516;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;12681165Corresponding Authority:;US法律状态公告日：20170502;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2009058185A2Corresponding Publication Number:;PI0818452Corresponding Authority:;BRCorresponding Kind:;A2Effective Date:;20100405

**299、A method of recovering a turbine element**

摘要：The process for recovering a turbomachine component such as blade (10) or wiper constituted by a substrate forming the body of the component and a protective coating adhering to the substrate, comprises checking the turbomachine component to identify a joining defect between the protective coating and the substrate, suppressing the joining defects by passing a laser beam (14) on each area having the defects, and performing a localized fusion of the protective coating and the underlying substrate to allow a defect free joining after cooling the area. The process for recovering a turbomachine component such as blade (10) or wiper constituted by a substrate forming the body of the component and a protective coating adhering to the substrate, comprises checking the turbomachine component to identify a joining defect between the protective coating and the substrate, suppressing the joining defects by passing a laser beam (14) on each area having the defects, and performing a localized fusion of the protective coating and the underlying substrate to allow a defect free joining after cooling the area. The zones areas having the defects are analyzed geometrically in three dimensions and then recorded so as to provide a determined direction and characteristics to the laser beam. The localized fusion caused by the laser beam is carried out under inert or reducing atmosphere. The laser beam is directed on the defect zone using an optical fiber (12), and is emitted from yttrium aluminum garnet (YAG) laser (11). After suppressing the joining defects, the turbomachine component is rechecked for verifying the joining defects between the protective coating and the substrate.

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公开（公告）日：2014-06-04

申请号：JP2008240359

申请日：2008-09-19

申请人：SNECMA505277691

法律状态：法律状态公告日：20110915;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20110914法律状态公告日：20120620;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20120619法律状态公告日：20120625;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20120621法律状态公告日：20120915;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20120914法律状态公告日：20120921;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20120920法律状态公告日：20121110;?

状态代码：RD02;?

法律状态：NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A7422Effective Date:;20121109法律状态公告日：20121212;?

状态代码：RD04;?

法律状态：NOTIFICATION OF RESIGNATION OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A7424Effective Date:;20121211法律状态公告日：20130410;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20130409法律状态公告日：20130706;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130705法律状态公告日：20130711;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130710法律状态公告日：20131106;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20131105法律状态公告日：20140201;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20140131法律状态公告日：20140303;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 5511167B2法律状态公告日：20140312;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20140311法律状态公告日：20140403;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20140325法律状态公告日：20140404;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 5511167B2Corresponding Publication Number:;5511167Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20170404;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 5511167B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250

**300、CO2工质联产核聚变热能低温发电装置**

摘要：一种CO2工质联产核聚变热能低温发电装置。外设驱动源是高功率激 光或粒子束，它是模拟核弹研究所需而发展起来的。与磁约束聚变反应堆 相比，其显著优点：驱动器与堆芯等离子体的联结松散。驱动器虽复杂， 但堆芯简单，而易于更换、防护。它的能量是瞬间释放，对于平均功率的 主要目标是低成本、高重复率，输出能量增益。由反应堆产生的热外引后， 用CO2工质经热交换，低温五十度以上就超临界膨胀作功，进入汽轮机， 带动发电机，由热能变为电动。

公开（公告）号：[CN101656121A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jY3EGNhSDLWmr4kAd0KKkg&local=zh)

公开（公告）日：2010-02-24

申请号：CN200810141056.3

申请日：2008-08-18

申请人：河南省长葛市新能源研究所

法律状态：法律状态公告日：20100428;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):G21D 5/04;申请日:20080818;?

法律状态公告日：20100224;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20120523;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G21D 5/04;公开日:20100224;?

**301、A Sunbeam-Burner**

摘要：PURPOSE : A solar energy burner is provided to reduce the manufacturing cost of generating hydrogen using a funnel-shaped mirror.CONSTITUTION : A solar energy burner comprises a sunlight collecting and heating unit(100), a funnel-shaped mirror(120) and a sunlight reflecting mirror(110). A sunlight focusing hole(200) is formed in the middle of the sunlight collecting and heating unit. The sunlight reflecting mirror is attached to the inner wall of the sunlight collecting and heating unit. The funnel-shaped mirror is located on the sunlight collecting and heating unit. The funnel-shaped mirror focuses the sunlight inside of the sunlight collecting and heating unit through the sunlight focusing hole. The funnel-shaped mirror reflects the sunlight back towards the sunlight collecting and heating unit in order to increase the internal temperature of the sunlight collecting and heating unit. The sunlight collecting and heating unit uses a pre-heater, a heater, and a reformer in order to make hydrogen.COPYRIGHT KIPO 2010

公开（公告）号：[KR1020100002344A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczt0V81YKBVW9lRnkZT85Sqj&local=zh)

公开（公告）日：2010-01-07

申请号：KR1020080062192

申请日：2008-06-30

申请人：PARK JUNG IL

法律状态：法律状态公告日：20080630;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20100002344A 法律状态公告日：20100331;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 20100002344A 法律状态公告日：20100630;?

状态效果：-;?

状态代码：E601;?

法律状态：DECISION TO REFUSE APPLICATION描述信息：Docdb Publication Number:; KR 20100002344A

**302、IGNITION METHOD IN NUCLEAR FUSION**

摘要：PROBLEM TO BE SOLVED : To provide a method of forming a region where an ion temperature is raised efficiently to a nuclear fusion ignition temperature by a method other than a fast ignition method on imploded high-density plasma of a condition which is easier to attain, 100 g/cm3 in density and about 1 million °C in temperature, in an inertial-confinement nuclear fusion device.SOLUTION : An ignition method in nuclear fusion is constituted and characterized in that it includes a step of forming high-density plasma by imploding a target containing hydrogen isotopes as fuel with a laser beam, an electron beam, an ion beam, X rays or plasma and a step of irradiating the outer periphery of the imploded high-density plasma with the laser beam to heat electrons there, setting the average temperature of the heated electrons up to around 10 keV and using fast electron-ion energy relaxation in the high-density plasma to set the average temperature of ions at the nuclear fusion ignition temperature of 5 keV or higher.COPYRIGHT : (C)2010, JPO&INPIT

公开（公告）号：[JP2009288229A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaSQTezbZNI7WGuxfaWZrjp&local=zh)

公开（公告）日：2009-12-10

申请号：JP2008162551

申请日：2008-05-26

申请人：INAI MOTOHIKO

法律状态：法律状态公告日：20100213;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2009288229A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20100125法律状态公告日：20111213;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2009288229A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20111213法律状态公告日：20120417;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2009288229A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20120417

**303、LASER FUSION OF TISSUE LAYERS**

摘要：A laser tissue fusion device is optimized for particular surgical applications to join tissue layers. The device has two opposed arms that engage and disengage to clamp and release layers of tissue therebetween. The distal end of the first arm is disposed opposite the distal end of the second arm. A laser energy source generates therapeutic laser energy is either integrated within the device is a separate unit. An energy pathway transmits the laser energy to the distal end of the first arm to deliver the laser energy to tissue layers clamped between the distal ends of the arms. An actuator decreases the separation distance between the distal ends of the arms to clamp the tissue layers and activates the laser energy source upon engagement. The laser energy source delivers a burst of energy at a predetermined wavelength for a predetermined period of time sufficient to spot weld the tissue.

公开（公告）号：[WO2008143955A2](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU7GflqL9b7Pintd8LfwwKeV&local=zh)

公开（公告）日：2008-11-27

申请号：WOUS08006261

申请日：2008-05-14

申请人：UNIV COLORADO; LARSON MICHAEL; MCCLURE JESSE; HOOPER LUKE

法律状态：法律状态公告日：20090218;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2008143955A3Corresponding Publication Number:;08767729Corresponding Authority:;EPCorresponding Kind:;A2法律状态公告日：20091113;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008143955A3Corresponding Publication Number:;12600087Corresponding Authority:;US法律状态公告日：20091117;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008143955A3Designated State Authority:;DE法律状态公告日：20100602;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APP. NOT ENT. EUROP. PHASE描述信息：Docdb Publication Number:; WO 2008143955A3Corresponding Publication Number:;08767729Corresponding Authority:;EPCorresponding Kind:;A2

**304、System and method for creating liquid droplet impact forced collapse of laser nanoparticle nucleated cavities for controlled nuclear reactions**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material and possibly fuel produces droplets from the breakup of the jet stream. The liquid droplets are irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction.

公开（公告）号：[AU2008237300A1](https://www.incopat.com/detail/init2?formerQuery=hWvsrKaKkiWgBceHoZVFRvNkPtwy7rjn&local=zh)

公开（公告）日：2008-10-16

申请号：AU2008237300

申请日：2008-04-04

申请人：SYNERGY INNOVATIONS INC

法律状态：法律状态公告日：20141030;?

状态效果：-;?

状态代码：MK4;?

法律状态：APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION描述信息：Docdb Publication Number:; AU 2008237300A1

**305、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device (100), method (200/300) and system for causing a controlled collapse of cavities (116) formed within liquid droplets (114) wherein a pressurized jet (109) comprising a liquid (104) and nanoparticle material (102) and possibly fuel produces droplets (114) from the breakup of the jet stream (109). The liquid droplets (114) are irradiated with energy (110) to produce and expand cavities (116) formed within the droplets (114) by irradiation (110) of the nanoparticles (102) contained within the droplets (114). The droplets (114) are collided (118) with a target (112) to collapse the cavities within the droplets (116). The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction (113).

公开（公告）号：[CA2682957A1](https://www.incopat.com/detail/init2?formerQuery=wwbgfSgkAP5ylz7fyDbUZvR0OjOTHMZL&local=zh)

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申请号：CA2682957

申请日：2008-04-04

申请人：SYNERGY INNOVATIONS INC

法律状态：法律状态公告日：20130409;?

状态效果：+;?

状态代码：EEER;?

法律状态：EXAMINATION REQUEST描述信息：Docdb Publication Number:; CA 2682957A1Effective Date:;20130403法律状态公告日：20150602;?

状态效果：-;?

状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2682957A1Effective Date:;20150407

**306、产生用于受控核反应的液体微滴的激光纳米颗粒成核空腔的撞击受迫坍塌的系统和方法**

摘要：一种装置(100)、方法(200/300)和系统，用于引起在液体微滴(114) 内形成的空腔(116)受控坍塌，其中增压射流(109)包含液体(104)和纳 米颗粒材料(102)，且燃料可能由射流(109)的分裂而产生微滴(114)。 液体微滴(114)由能量(110)照射，以通过包含在微滴(114)内的纳米颗 粒(102)的照射(110)，来产生形成于微滴(114)内的空腔(116)并使 空腔(116)扩张。微滴(114)与靶(112)相撞(118)而使得微滴(116) 内的空腔坍塌。照射和相撞被定时，以增大空腔坍塌的聚爆能量。聚爆能量 和空腔中的燃料可被用于激发和维持聚变反应(113)。

公开（公告）号：[CN101682980A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iUrzCfArWWaGr4kAd0KKkg&local=zh)

公开（公告）日：2010-03-24

申请号：CN200880018238.X

申请日：2008-04-04

申请人：协同创新公司

法律状态：法律状态公告日：20100324;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20121128;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):H05H 6/00申请公布日:20100324;?

法律状态公告日：20100519;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效IPC(主分类):H05H 6/00;申请日:20080404;?

**307、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material and possibly fuel produces droplets from the breakup of the jet stream. The liquid droplets are irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction.

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申请号：EP08745092

申请日：2008-04-04

申请人：SYNERGY INNOVATIONS INC

法律状态：法律状态公告日：20091216;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 2132966A1Effective Date:;20090930法律状态公告日：20091216;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 2132966A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HR;HU;IE;IS;IT;LI;LT;LU;LV;MC;MT;NL;NO;PL;PT;RO;SE;SI;SK;TR;法律状态公告日：20100310;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2132966A1Inventor Name:;DEAN, ROBERT C., JR.法律状态公告日：20100310;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2132966A1Inventor Name:;HOLT, R. GLYNN法律状态公告日：20100310;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 2132966A1Inventor Name:;ROY, RONALD A.法律状态公告日：20100714;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 2132966A1法律状态公告日：20150422;?

状态效果：-;?

状态代码：18D;?

法律状态：APPLICATION DEEMED TO BE WITHDRAWN描述信息：Docdb Publication Number:; EP 2132966A1Effective Date:;20141101

**308、For the purpose of controlling the nuclear reaction, laser binuclear nano-particles in the cavities formed by the liquid droplet impingement method and system for generating a forced collapse**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material and possibly fuel produces droplets from the breakup of the jet stream. The liquid droplets are irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction.

公开（公告）号：[JP2010523985A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYCjFbVSSvabmGuxfaWZrjp&local=zh)

公开（公告）日：2010-07-15

申请号：JP2010502318

申请日：2008-04-04

申请人：Synergy Innovations Inc509274957

法律状态：法律状态公告日：20110405;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20110404法律状态公告日：20110405;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20110404法律状态公告日：20130109;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20130108法律状态公告日：20130409;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130408法律状态公告日：20130416;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130415法律状态公告日：20130509;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130508法律状态公告日：20130516;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130515法律状态公告日：20130608;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130607法律状态公告日：20130617;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130614法律状态公告日：20130925;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2010523985A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20130924

**309、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device (100), method (200/300) and system for causing a controlled collapse of cavities (116) formed within liquid droplets (114) wherein a pressurized jet (109) comprising a liquid (104) and nanoparticle material (102) and possibly fuel produces droplets (114) from the breakup of the jet stream (109). The liquid droplets (114) are irradiated with energy (110) to produce and expand cavities (116) formed within the droplets (114) by irradiation (110) of the nanoparticles (102) contained within the droplets (114). The droplets (114) are collided (118) with a target (112) to collapse the cavities within the droplets (116). The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction (113).COPYRIGHT KIPO & WIPO 2010

公开（公告）号：[KR1020090129453A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkczvqoajcxfReFAcrjL57TqD2&local=zh)

公开（公告）日：2009-12-16

申请号：KR1020097020796

申请日：2008-04-04

申请人：SYNERGY INNOVATIONS INC

法律状态：法律状态公告日：20110406;?

状态代码：A201;?

法律状态：REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20090129453A 法律状态公告日：20120906;?

状态效果：-;?

状态代码：E902;?

法律状态：NOTIFICATION OF REASON FOR REFUSAL描述信息：Docdb Publication Number:; KR 20090129453A 法律状态公告日：20130201;?

状态效果：-;?

状态代码：E601;?

法律状态：DECISION TO REFUSE APPLICATION描述信息：Docdb Publication Number:; KR 20090129453A

**310、SYSTEM AND THE METHOD OF CREATING THE FORCED IMPACT COLLAPSE OF THE CAVITIES, FORMED BEFORE THE LIQUID MICRODROPLETS BY MEANS OF THE LASER IRRADIATION OF NANOS-PARTICLE, FOR THE CONTROLLED NUCLEAR REACTIONS**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material and possibly fuel produces droplets from the breakup of the jet stream. The liquid droplets are irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction.

公开（公告）号：[RU2009135902A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4KATb8WWB2VwmGuxfaWZrjp&local=zh)

公开（公告）日：2011-05-10

申请号：RU2009135902

申请日：2008-04-04

申请人：СИНЭДЖИ ИНЭУВЭЙШНС, ИНК. (US)

法律状态：法律状态公告日：20130327;?

状态效果：-;?

状态代码：FA92;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)描述信息：Docdb Publication Number:; RU 2009135902A Effective Date:;20130226

**311、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device (100), method (200/300) and system for causing a controlled collapse of cavities (116) formed within liquid droplets (114) wherein a pressurized jet (109) comprising a liquid (104) and nanoparticle material (102) and possibly fuel produces droplets (114) from the breakup of the jet stream (109). The liquid droplets (114) are irradiated with energy (110) to produce and expand cavities (116) formed within the droplets (114) by irradiation (110) of the nanoparticles (102) contained within the droplets (114). The droplets (114) are collided (118) with a target (112) to collapse the cavities within the droplets (116). The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction (113).

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公开（公告）日：2008-10-16

申请号：WOUS08059383

申请日：2008-04-04

申请人：SYNERGY INNOVATIONS INC; DEAN Robert C Jr; HOLT R Glynn; ROY Ronald A

法律状态：法律状态公告日：20080404;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;200880018238.XCorresponding Authority:;CN法律状态公告日：20081203;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;08745092Corresponding Authority:;EPCorresponding Kind:;A1法律状态公告日：20090929;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;2008745092Corresponding Authority:;EP法律状态公告日：20091001;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;201286Corresponding Authority:;IL法律状态公告日：20091002;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;2682957Corresponding Authority:;CA法律状态公告日：20091002;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;2010502318Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20091005;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;20097020796Corresponding Authority:;KRCorresponding Kind:;A法律状态公告日：20091006;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008124574A1Designated State Authority:;DE法律状态公告日：20091007;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;2008237300Corresponding Authority:;AU法律状态公告日：20091012;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;3556/KOLNP/2009Corresponding Authority:;IN法律状态公告日：20091105;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;2008237300Corresponding Authority:;AUCorresponding Publication Date:;20080404Corresponding Kind:;A法律状态公告日：20091105;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;2009135902Corresponding Authority:;RU法律状态公告日：20140916;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2008124574A1Corresponding Publication Number:;PI0809170Corresponding Authority:;BRCorresponding Kind:;A2Effective Date:;20091002

**312、LASER APPARATUS**

摘要：PROBLEM TO BE SOLVED : To provide a laser apparatus suitable to the driver for a laser nuclear fusion reactor.SOLUTION : In the laser apparatus 1, an equilateral polygon along which laser-beam incident/outgoing surfaces 18a of laser media 18 are arranged includes n sides. When a laser beam performs its incidence on the k-th laser medium 18 counted from the laser medium 18 wherefrom the laser beam has gone out, the incident angle [!theta!] (degree) of the laser beam on the laser-beam incident/outgoing surface 18a of the k-th laser beam medium 18 satisfies the relational expression of 0.9×90×(n-2k)/n≤[!theta!]≤1.1×90×(n-2k)/n, wherein n/k is not an integer and (the least common multiple of n and k)≥n×k is existent in the case of [n>3, k≥1], [k1]. Thereby, all the laser media 18 are so used as to be able to make the laser beam come and go among the laser media 18 and amplify and output the laser beam.COPYRIGHT : (C)2009, JPO&INPIT

公开（公告）号：[JP2009182053A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXbDWMBb2UMysGGuxfaWZrjp&local=zh)

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申请号：JP2008018008

申请日：2008-01-29

申请人：HAMAMATSU PHOTONICS KK

法律状态：法律状态公告日：20101102;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2009182053A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20101101法律状态公告日：20120209;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2009182053A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20120208法律状态公告日：20121024;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2009182053A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20121023法律状态公告日：20130313;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2009182053A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20130312

**313、AGRICULTURAL PRODUCTS**

摘要：We plan to grow algae, bamboo, sugar cane and corn to make ethanol. The sugar cane will be shredded and its liquids squeezed out for ethanol.The remaining fibers will be shredded and cut to an optimal length for agricultural use. Sugar is a form of fertilizer. These fibers will be cooked in manure tea (stirred even blended to instil fertilizing potency - wider blend of nutrients) and rolled and squeezed and cooked in manure tea (stirred even blended to instil fertilizing potency - wider blend of nutrients) rolled and squeezed (depending on whether the results of such a process - high quality organic fertilizer are worthwhile). The fertilizer can even be pelletized.The tea manure as well as the powdered sugar cane can be used to grow algae. The algae could be bagged with transparent bags and solar panels underneath the bags could further make the most use of the site by both producing energy; Solar panel energy and algae converted into ethanol. A self brewed medium for algae includes Glucose, Na2HPO4, KH2PO4, NH4Cl, NaCl, MgSO4, CaCl2...The sugar cane fibers as well as the corn shredded husks can also be used to make soil substrate (GP 0.05%) as well as biodegradable seeding and trans planting and all planting pots, biodegradable packaging, bags, imitation cardboard, pulp and paper, envelopes, books, treated with preservatives and mixed with adhesive and compressed to produce a form of gypsum; fiber board, faux wood cabinetry, door, frames, posts, exterior finishing, all construction usage, including wood floors, wood ceilings, roofing, shutters, closet doors, faux wood furniture 2%, all housing, all office, all real estate, all condominiums, all sky scrappers, all apartments, all wood finishings, all shelves, (all decorations 5%), all wood decks, all gazebos, all wood structures, all sheds, all extra wood structures (eg. pool house or tree house), The powdered sugar cane fiber and powdered corn husks can be mixed with resin; As well as the 3-dimensional modeling printer, we could also build plastic/resin (perhaps mixed with particle/gypsum board) or glues/adhesives structures. We are the first to make and sell the following novel products because they are to be developed using mix with nano particles or nano fibres or biodegradable substances such as shredded and powdered corn husks) possibly sprayed or spun/woven and) create strong/durable and yet flexible (if need be) and light weight products (where the addition of nano material or the 3 - dimensional model creator can be used to make a better product - or at least a niche).New products include all sportsobjects/accessories, all construction materials and all aeroplane (flying) parts, all boating parts, all electronic parts and accessories, all furnishings, all infrastructure (eg. roads and bridges) materials, carpets, all toys, all fabrics, all frames and cages, all floating devices, all containers, all packaging materials, spray on collagen or other biodegradable structural products for tissue culture, all windows, all metal frames, allmechanical parts, all kitchen ware and utensils, all appliances, all heaters/ all air conditioners, skeletal structures, all stationary, all ink - photo and laser and ink jet qualities, all business to consumer, all business to business, all infrastructure products, all hard ware--software-communications products, all coverings, faux constructions and decorative objects, all handles, locks, all glass and glass substitutes, all vehicles parts, all consumer products, all industrial parts and machines and safety gears, all cups-spoons-forks-knives-mugs--glasses, all racks, all hangers, all storage bins, lightings - street lamps to candies to bulbs, furnaces, lawn mower parts, vacuum cleaners, shells for engines, engine parts, indoor/outdoor furnishings and their parts, bricks and mortar - barbeques and buildings, all wheels, all tires, all inner tubes, chains, cosmetics, toileterties, all wires, all cables, all televisions - all electronic audio/video entertainment products, all construction tools, all elastics, all tethers, all erasers, all stationary, eg. all pencils, all pens, all pencil cases, all liquid paper...all board game parts, all lenses, all eye glass frames, all fitting tools for assembly of parts for all the products herein listed, all contact lenses, all wiping clothes for wind shields and eye glasses, all wiping cloths for CD' s and DVD' s, carrying cases for all products, from soft (eg. leather or other skins) to faux fur, all buttons metal and plastic, all lasers and cameras and all their components, all garbage bins, all radios, all DVD players, all CD players, all servers... all railways, all monorails (intercity), all highspeed trains, all cargo trains, all cargo ships, all pleasure boats, all fishing boats, all cruise ships, all yachts, a small boats/dingy, all life boats, all life jackets, all diver' s suits, all plastic and all paper bags, all plastic housed (Ch; GV) (eg pencil sharpeners or pencil cases) goods, all blades, all aluminium housed products, all scissors, all brooms, all fluids from antifreeze to high performance additives, to viscous fluids, all binders, all staplers, all professional tables anddesks, all dividers (all professional furnishings), all video conferencing, all mobile batteries, all cell phones, and all land line phones and all wireless phones, all PDA' s, all itune devices, all texting devices, all e-readers, all mobile video devices, all light bulbs, all Plasma and all HDTV' s, all gardening watering and all hoses and all containers and all plastic and all biodegradable pots, all clay pots and all spray guns, all garden equipment, all peripheral and accessories for computer and all electronic and mobile devices, all protective clothing (especially heavy duty), all shoes, all fishing overalls, all boots, all gum boots, all snow boots, all skis, all snowboards, all winter boots, all jackets, all winter pants, all hockey and football, protective gear, all mouth guards, all helmets, all practice equipment, all goalie nets, all golf clubs, all golf carts, all golf balls, all golf bags, all bats, all mitts, all baseballs, all tennis rackets, all tennis balls, all basket balls, all basket ball net and hoops and back boards, all soccer balls and all cricket balls and all cricket bats and all cricket pads, and all stadiums and all courts, all linens (Ja), all comforters, all pillows, all mattresses, all beddings, all blankets, all belts, all water resistant clothing, all diver' s suits, all diapers (possibly biodegradable), all bottles, all ATM machines, all fast food kitchen units, all heating - cooling enclosures, for presenting the food where the front is glass that the customer picks the piece they want, all fast food bags, all drink cups, all cup holders, all food fast food wrappings, all drinking fountains machines, all on tap fountain machines, all heavy duty all restaurant fringed, all freezers, all stoves/frying surfaces, all heavy duty dishwashers, all microwaves, all, envelopes, all linoleum, all siding, all saucers, all saucers, all plates, all bowls, all cutting tools, all sharpening tools, all main frame computer (parts), all CD' s and DVD' s, all wire meshes, all metal grills, substitute deck material, all pots, all pans, all ceramics, all chains, all chain saws, all spades, all shovels, all heavy duty trucks, all heavy duty tractor trailers, all book bindings, all mobile homes/recreational vehicles, all car wax, roofing, all water absorbent material, all gerters, all slippers, all jet engines, all booster rockets, all springs, all tethers, all preservatives on furs and skins, all musical instruments, all handles, all rivets, all screws, all nails, all pruning saws, all ladders, all tall reach snippers, all wrenches, all splicers, all pincers, allscrewdrivers, all tapes, all spanners, all pliers, all weed-eaters, all dyke walls and all sand bag materials, all uses for inflatable rubbers, all helicopters, all propeller planes, all boat engines, all tunnelling machines, all professional cinematic as well as amateur film making and editing equipment and all numbered pixel projectors, as well as all forms of film projectors, all films medium and all micro fiche, all toys, all saws, from carpenter' s band saw to all saw mills, all mulching, all pulp and paper, all compost digesters, all wifi and all hubs equipment, all routers, all paper plates (Ch), all plastic utensils, all wooden and metal spatulas; stirring spoons, all ladles, all chopsticks, all plumbing pipes andall connectors, all tap controls, all soldering mix, all cushions materials, all couches made of material, all chairs and all tables materials used, all car seating material used, all children' s car seat and all strollers materials made of, all plastic plant pots, all door knobs and all sockets, all RIFD, all micro chips, all semiconductors, all felts, all crayons, all furnaces, all the venting materials, and all the vent fans for all buildings, all water beds, all life preservers, all inflatable..., all water dispensers, all water filter technologies, all desalination plant facilities, all water containers, delivered of thermos, all water heating containers, all kettles, all table clothes, all out door activities, all volleyball ball and all nets and all badminton rackets, cocks, and nets, all tenting fabric, form holding ribs, all fishing rod components, all lures (possibly infused with developed odours eg. herring), all fire prodding pokers and air blowers, all fire grills, all bicycles components, all kayacks, all all terrain vehicles parts, all seadoos, all skidoos, all fences (wooden, metal to concrete... ), all Styrofoam, all vending machines, all garbage bags, all frames, eg. for doors or pictures, all fireplaces and all chimneys, all bricks, all tubs, all buckets, all tissue paper, all amplifiers, all pile drivers, all towels, all diapers, all rugs, all paper towels, all soaps, all candy wrappers, all power bars, all vans, all Sport Utility Vehicles, all mid sized vehicles, all vehicles in general, all pesticides, all jewelry, all watches, all chains, all necklaces, all pendants, all crystal (personal and chandeliers), all china wares, all high (fancy) end beverage containers (eg. XO containers), all pad locks, all bandages, all medical equipment (all machinery, all x-rays machines, all MRI' s all PET, all surgical robots, all blood testing equipments...) and all medical materials and all supplies, all canvases, all VHS, VCR devices and all their tapes, all hair dryers, all spray bottles/cans, all beds, all hair treatment substances, all mousses and all hair gels, all shampoos, all conditioners, all candies, all chap sticks, all ski, snowboard racks, all trailers, all canoes, all sailing boats components, all flags, all GPS devices, all buoys, all shelves, all parts for nuclear reactors, all wind mills, all Gravity Chain Machines, all airplanes, all weigh scales, all luggage belts, all luggage materials, all portable travelling containers, all attach? bags, all lap top and all notebook computers, all lined paper, all note books and all their holding bags, all pipes, all fake cigarettes and all cigarette holders and lighters all matches (soft and hard), all fire hydrants, all sewer pipes, all hydro meters, all parking meters, all debit and credit card swipers (verifiers), all microchips embedded in to all payment cards, all ticket reader; processors; dispensers (eg. monorail, train station also airport), all wine and liquor and champagne, bottles and glasses, all paper napkins, all paper napkin holders, all materials that might be incorporated into a all counter tops at all restaurants, all cafes and all home kitchens (eg. where nano particles make a better (more cut resistant) cutting board while like wood cutting boards does not blunt the knife and is still decorative..., all cutting boards, all caps to bottles, all tackle boxes, all tool boxes, all tools that go in a tool box or bag, all tool bags, all steel toed boots, all tools that are mobile (eg. welding gear), all larger machines, all velcro, all tunnel walls, all bridge components, all cranes, all forklifts, all robots, all zippers, all clothing patches, all boots/shoes soles, shoe laces and nano fibre glue to repair them, all hats, all hard hats, all baseball caps and all helmets, all golf hats, all cowboy hats, all fishing hats, all berets, all speakers, all woofers, all tweakers, all equalizers, all sound machines, all car audio equipment, all car glass and skyscraper glass, all doors, ALL tar for roof tops and pavement, all materials and equipment for road, faux stone construction material, all pond waterproof material, all sprinklers, faux wood construction material, all telephone poles, or all surround or strap on supporting an old telephone pole, all plastics for kites, all plastic sticks for gardening creeping vines, all frames and netting in-between for gardening creeping vines, all material for terraces and decks, all barbeques, all stairways including wood, to metal, all ice machines, all rain applications (eg. seeding clouds, suppressing-anti seeding tornados, from above or collection the rain into tanks when abundant that will prevent evaporation and loss of this precious resource), all transparent skins for greenhouses (all glass for green houses as well), all garden hose roller/wheels, all gloves/mitts - winter or gardening orfashionable, all toques, all goggles, all scarves, face protectors from snow storms, all clothing, all fabrics, all computer scanners, all bar code scanners, all batteries, all tin containers, all faux wood planks, all faux wood logs, all drapes and all curtains, and all theirhanging components (rods), all retractable screens, and all blinds, and all shutters, all mini bars, all pillows, all clocks, all watches (digital or analog), all bicycle and all bicycle frames and all bicycle components, all protective gear for extreme bicycling (Ra 1%), allmotorcycling parts and components and accessories, all video game consoles and controls, all video cartridges/discs, all rakes, all hoes, all insulation (Je 0.5% GV in earlier patent already), all clothing insulator, all jacket liners, all wallets, all laminates and all laminating machines, all toasters and broiler ovens, all racks for allfridges, and all freezers, all ice scrappers, all ice picks, all mountain climbing gear, all ropes, all metal clips, all spikes, all off--road vehicles, all hybrids, all biofuel (eg. ethanol and/or coconut) vehicles and parts/components, all hydrogen vehicles, all satellite components, always the latest version of audio/video, electronics, all weapons, all submarines and all submersbiles, all faux flowers, all faux plants, all special effects (eg. face sculpting, robotic under the disguise... ) movies, all faux trees, all faux food, all faux, fruits, all faux banzai plants, all tapes (eg. all electric tapes, masking tapes, scotch tapes, duct tapes...), all the cushion layer under carpets, all yoga/pilates mats, all weight lifting versions of all resistance and all free and all universal weights and all balancing practice, all gym and in general, institutional lockers' wall/doors and keys, all locks and keys, all combination locks, all safety/security and such as closure of parks' chains, all concrete mixtures, all foam or glue to fill cracks and tears, all car grounds blocking devices, all bricks, all outdoor/indoor lamps, all lanterns, all outdoor heaters, all carts, all newspaper carts, all grocery carts, all travelling carts, all go-carts, all racing vehicles' components/parts (eg. Daytona, Formula 1), all water, all currencies, all coins (lighter and more durable coins) and lighter and all financial notes (lighter and more durable), all meshes, all grills, all vents, all fishing line, all fishing reels, all hunting equipment, all gasoline containers, all gasoline tankers and pumps (comprised of components), all tankers, all big rigs, all flat beds, all one tonnes, all train and all ship cargo tankers, all barges, all snow blowers and all snow shovelling trucks, all personal newspaper printers, all tug boats, all cameras, all cell phones, all mobile email devices, all PDA' s, all text messaging, all kiosks carts (eg. coffee, hot dogs, doughnuts), all garage door materials, all bread machine components and all juice machine components, all surf boards, all boogie boards, all drain pipes, all sonar components for fishing, all ship navigation equipment, all ships engines and components/parts, all tread mills, all elypitical machines, all stationary cycles, all stair machines, all water filters, for drinking, for fish aquariums and ponds, for swimming pools, all pace makers, all artificial hearts, all brain micro chips, all electrodes components and all neuron - nerve patch parts and all mind sounds, machines, all fridge magnets, all plastic, all glass, all ceramic, all clay, products, including all cups, all bottles, and all lids, all bio technology and high technology (B2B, B2C and infrastructure), all health care equipment and machines, all air freshners, all insect repellents, all pesticides, all metal detectors, all flag poles, all rice cookers, all punch bowls, all hot pads, all oven mitts, all styrafoam cups, all rubber balls, all pet toys, all food and water bowls for pets, all additives for oil and gas and coal technologies and equipments, all components for wind mills and Gravity Chain Machines (and updated versions), all staplers-staples, all clips, all detergents, all thermometers and all thermometers, all gels, all delicate scrubbing agents needed (possibly mixed with solvents-to disperse grease and grime; window/mirror/utencils washer; car garage floor... or shining polishing solution), all arcade games components including unique interactive mechanisms/features, all golf video practice games and on the driving range cameras, all ice rinks machineries needed, all industrial machinery-control consoles, robotics, gear, and processing equipment that goes into searching, analyzing, dinging and producing all minerals, all plastic containers, all night tables, all desks, all drawers, all stools, all bedroom furniture, all boardroom furniture, all partitions, all bath tubs, all whirl pools, all saunas materials, all steam room materials, all industrial products company - any where along the vertical chains, all coffee makers, all coffee perculators, duffle bags, all assets, all appliances, all washers, all dryers, all dish washers, all sinks and sink products, all spanners, all nails, all pliers, all construction tools and all materials, all nails, all screws, all nuts, all bolts, all screw drives, all photo paper, all envelopes, all photo inks, all Japanese paper wall dividers, all faux rocks, all glossy paper (eg. magazines), all faux stones, all faux marbles, all faux construction marbles, all faux pebbles, all large vacuum cleaners parts and components, all faux carpet cleaning solutions, all curling equipments, all hockey sticks, all hockey pucks, all street hockey equipment, all plastic pots for plants, all plastic bowls, all bicycle helmets, all perforated bags for charcoal, all ammonia remover perforated bags, all perforated tea bags, all casino gambling chips, all casino gaming tables, all pool tables, all billiards tables, all slot machines, all seating in stadiums, all chairs in airplanes and all buses, all buses' components and parts, all blades and machinery on airplanes, helicopters and, hover vehicles, windmills, all digital boards, all wrist phones, all ear aid (eg. no hands cellular, amp, or music), all mp3 players, all portable CD, DVD players, all LED, plasma, HDTVs' , all kitchen scoopers, all drainage bowls, all turf, all fake grass, all toilet bowls, all urinals, all book papers and all bindings and all binding glue, and all covers, all bullet proof coverings, all vinyls, all gameboards and all pieces, all mechanics garage equipment, eg. tire remover, and hydraulic lift, and diagnostic and repair tools..., all dining ala carte and all bus push carts, all safe walls and doors and locks, all better heat resistant (and/or cold maintainence) plastic products (such as coffee cups) - one possibility by layering where plastic is on the outer and inner layer and the space in between is a solid mix of plastic and nano material, all water heating pads, all camping coolers, all water tubs, all water tanks, all beverage coolers, all ice makers, all books' papers, bindings, binding glue, all hole puncher, and all covers, all measuring tapes, all hammers, all mallets, all electric food cutter, all bread making machines, all meat slicing machines, all space springs, all new computers, all back pack computers, all movies on demand - devices all parts and components, all comics, all sports and moviecards, all most interactive computers, all Artificial Intelligence eg. hardware - television console/adaptors..., all laundry baskets, all heating vents, all elevators, all cranes, all furniture wheels, all laquers, all varnishes, all water proofing (Ch 0.5%), all paints indoor and outdoor, all enamels and all their applications, all sanders, all buffers, all car wash equipments and materials and machines, all space springs, all new computers, all back pack computers, all movies on demand - devices all parts and components, all comics, all sports and movie cards...In addition to the above uses the powdered corn husks, can be used for all (because of its safe (non toxic) and biodegradable nature) fodder and filler (food and beverage industry) for the all agricultural/pharmaceutical/holistic diet supplements/consumer goods that require powdered corn husk' s (mixed into its material) characteristics as an ingredient/additive (eg. safe as baking or soup or sausages ingredients) but for the sake of saving the environment (or safe ingestion) do not require the end product to be long lasting (cosmetics, paper bags, foods ingredients and candy added for consistency and bulk, as well as all personal hygiene, all papers - all paper for telephone books and advertisements (posters), all fast food-cups-utencils-chopsticks, all calendars, all post-it notes and all its adhesives, all stents and all vending machine foods, all tissue paper, perhaps an additive to all beers/ales/and other beverages (eg. all sodas, all all coffees, all teas), bulk for all Mexican foods to mix or replace corn kernels (eg. tortillas... ), all medical supplies (Je; GV), all shelf life packaging for all foods that expire before the packaging biodegradable nature begins to degrade, all shelves, all furniture (perhaps disposable out door furniture that last only one season), all casings and packaging and other parts for e-devices that are disposable once the contract is up or, the version has outdated the old version, all milk and other drink cartons, a substitute for allwax-paper containers, all cigarette fillers, all tobacco (eg. all cigars and all and all pipes), all dailyconsumer goods, all clothing that you only plan to use for one season, all containers for allchocolates or sweets, corn husks shredded and pelleted or compressed into standard sizedlogs and burned for energy, powdered com husk addictive to bulk foods that will fill thestomach and provide ruffage for digestion, that can be flavoured eg. with meat substitutes, ordrank in shakes (Ch 1%) used as a thickener, while the caloric intake in low, all faux flowers, all faux plants, all special effects for (eg. face sculpting, robotic under the disguise... ) movies, all faux trees, all faux food, all faux, fruits, all faux banzai plants, (as well as thickeners ormain ingredients for the following low fat high ruffage) all gelatos, all ice creams (Ch), alldoughnuts, all yoghurts, all muffins, all chais, all forms of coffee, all minced meat, allchocolates, all smoothies, all cakes, all desserts, all pastries, all gravies, all mixed with anyand all seasonings, all hot dogs, all creamers, all batters, all crispy layers or coverings, mixedwith all sauces (Ch), all foods and beverages with flavour and aromas absorbed in thepowdered corn husks and then combination with other ingredients for new foods andbeverages for low fat diet, added to all finger foods and all formal foods, and all ethnic foods, and all fusion foods, all detergents, all soaps, all bath oils, all shampoos and all hairconditioners, all hair sprays, all mousse, all gels, biodegradable (safe to ingest)washing/scrubbing solution or additive, all paper towels, all tissue, all paper napkins, powdered corn husks mixed with plastic to form semi biodegradable containers, thepowdered corn husks could also be composted in mass digesters for all use as fertilizers(perhaps mixed with liquid impregnation or mixed dry with chemical or other more naturalfertilizers), all malts, com husks' pellets and logs (and mixture eg. with cedar) can be usedfor barbeques, camp fires and/or fireplace and stoves, all household goods, mixed with allgranola bars, mixed with all rice crispes, blended into all cereals (low fat, yet filling for thetummy), mixed with all protein shakes, all milk thickeners, all book papers and all bindingsand all binding glue, and all covers, all barrels, all wine presses and its components andparts, , all breads, all chicken, turkey and beef pies, all pastries, all samosas, all mashedpotatoes, all foods that need binding (whose ingredients can be mixed with the powderedcorn husks), all salisbury steaks, all meat loafs, all cakes, all already prepared foods, all soupcans (tomatoes, creams...), all canned tuna, all canned salmon, all canned sardines, allcanned oysters, all fried chicken and fries, all foods that need crusts...Longer sugar cane fibers can be used to make brooms and the finer fibers could be used forpainting (0.5%).The bamboo can be used for construction, it can be grown in a shaded area such assurrounding our TALL GRAVITY TO ELECTRICITY INVENTION (2, 602, 133). To its soil wecan apply sugar cane fibers (instilled with manure tea nutrients), and regular manure tea andthe left over manure from the tea bags which can be mixed with the sugar cane fibers and orpeat moss.We could hedge in sugar (market(s) supply and demand) and ethanol (and energy) marketsbased on how successful our algae crop and corn crop (market(s) supply and demand forethanol) and solar panels, and manure tea bagged material of which methane is collectedfrom, and TALL GRAVITY TO ELECTRICITY INVENTION (market(s) supply and demand forenergy) and the market(s) supply - competing alternate products and based on quality, cost... demand for the side products made from sugar cane scraps and corn husks...

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申请日：2007-10-30

申请人：VOON GERARD G V

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状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2608174A1法律状态公告日：20121225;?

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**314、天车定位系统及定位方法**

摘要：一种天车定位系统及定位方法。本发明采用工业控制计算机作为核心，将工业控制计算机、数据采集卡、下位机PLC和传感器有机地融合在一起，充分发挥各自的优点。该系统在不影响原天车设计和控制方案的基础上，采用高精度激光传感器和编码器测取天车x、y、z三个方向的距离，经过不同类型的数据采集卡送入工业控制计算机CPU中，同时，采用OPC技术通过现场总线将天车运行的状态实时从下位机PLC读到上位机－工业控制计算机中，然后在工业控制计算机中利用Visual Basic等高级语言编写数据处理和界面显示程序，达到实时显示天车运行位置和状态的目的，从而为天车操作人员提供天车运行的精确数据，同时为实现高精度天车的无人驾驶提供了较雄厚的研究基础。

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申请人：天津理工大学

法律状态：法律状态公告日：20080319;?

法律状态：公开;?

描述信息：公开;?

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法律状态：实质审查的生效;?

描述信息：实质审查的生效;?

法律状态公告日：20091209;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20141126;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):B66C 13/16;申请日:20070928;授权公告日:20091209;终止日期:20130928;?

**315、Method for the cell analysis**

摘要：The analysis of cell for diagnosing cancer, comprises introducing cells to be analyzed on a carrier, coloring the cells by a first coloring means, creating and storing a first digital image of the colored cells, treating the cells on the carrier according to the reception of the first digital image with a second coloring means in such a manner that their optically measurable characteristics change, and creating and storing a second digital image of the cells introduced on the carrier. A group in preparations with the cells is colored by a coloring means of a highly sensitive analysis method. The analysis of cell for diagnosing cancer, comprises introducing cells to be analyzed on a carrier, coloring the cells by a first coloring means, creating and storing a first digital image of the colored cells, treating the cells on the carrier according to the reception of the first digital image with a second coloring means in such a manner that their optically measurable characteristics change, and creating and storing a second digital image of the cells introduced on the carrier. A group in preparations with the cells is colored by a coloring means of a highly sensitive analysis method and then the preparations with positive findings are further-treated. A selection is encountered from the cells and further analysis steps are concentrated on this selection. The selection on the cells takes a control function for further analysis steps. The group on the preparations is subjected to an automatic analysis step, which is used as pre-analysis for indicating suspicious cells. The digital image is produced with a linear scanner. The first- and the second digital image are brought to congruence, in that by the fusion of local image data a fine alignment is obtained. By the congruence, a larger area with lower resolution and a smaller area with higher resolution are gathered. The fine structuring of certain cell areas is analyzed on the basis of a multidimensional picture vector from the pixel values of different coloring. The object carrier is used with lattices or markers. The cells, which are separated during the coloring process from their position, are seized. A tissue area is analyzed by a histological investigation. Cell nucleus characteristics are used for classification of the cells. The cells from the histological preparation are distinguished with a computer-assisted scalpel. The cell is automatically conveyed in computer-controlled manner. A material is applied on the cells and its adhesive property is increased with a laser beam. By a position-controllable laser the coordinates before selected cells is illuminated. A data base-based workplace system is used in the analysis.

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申请日：2007-08-15

申请人：Motic China Group Co Ltd Xiamen CN

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法律状态：CHANGE OF REPRESENTATIVE描述信息：Docdb Publication Number:; DE112007001907T5Representative Name:;LIERMANN-CASTELL, DE法律状态公告日：20120124;?

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法律状态：CHANGE OF REPRESENTATIVE描述信息：Docdb Publication Number:; DE112007001907T5Representative Name:;LIERMANN-CASTELL, 52349 DUEREN, DE法律状态公告日：20120124;?

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法律状态：CHANGE OF REPRESENTATIVE描述信息：Docdb Publication Number:; DE112007001907T5Representative Name:;PATENTANWALTSKANZLEI LIERMANN-CASTELL, DE

**316、Method for cell analysis**

摘要：The analysis of cell for diagnosing cancer, comprises introducing cells to be analyzed on a carrier, coloring the cells by a first coloring means, creating and storing a first digital image of the colored cells, treating the cells on the carrier according to the reception of the first digital image with a second coloring means in such a manner that their optically measurable characteristics change, and creating and storing a second digital image of the cells introduced on the carrier. A group in preparations with the cells is colored by a coloring means of a highly sensitive analysis method. The analysis of cell for diagnosing cancer, comprises introducing cells to be analyzed on a carrier, coloring the cells by a first coloring means, creating and storing a first digital image of the colored cells, treating the cells on the carrier according to the reception of the first digital image with a second coloring means in such a manner that their optically measurable characteristics change, and creating and storing a second digital image of the cells introduced on the carrier. A group in preparations with the cells is colored by a coloring means of a highly sensitive analysis method and then the preparations with positive findings are further-treated. A selection is encountered from the cells and further analysis steps are concentrated on this selection. The selection on the cells takes a control function for further analysis steps. The group on the preparations is subjected to an automatic analysis step, which is used as pre-analysis for indicating suspicious cells. The digital image is produced with a linear scanner. The first- and the second digital image are brought to congruence, in that by the fusion of local image data a fine alignment is obtained. By the congruence, a larger area with lower resolution and a smaller area with higher resolution are gathered. The fine structuring of certain cell areas is analyzed on the basis of a multidimensional picture vector from the pixel values of different coloring. The object carrier is used with lattices or markers. The cells, which are separated during the coloring process from their position, are seized. A tissue area is analyzed by a histological investigation. Cell nucleus characteristics are used for classification of the cells. The cells from the histological preparation are distinguished with a computer-assisted scalpel. The cell is automatically conveyed in computer-controlled manner. A material is applied on the cells and its adhesive property is increased with a laser beam. By a position-controllable laser the coordinates before selected cells is illuminated. A data base-based workplace system is used in the analysis.

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申请号：GB0904267

申请日：2007-08-15

申请人：MOTIC CHINA GROUP CO LTD

**317、The storage and delivery system for gases**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

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申请日：2007-06-27

申请人：ADVANCED TECH MATERIALS

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法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20090424法律状态公告日：20100630;?

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状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20100928法律状态公告日：20101004;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20101001法律状态公告日：20101027;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20101026法律状态公告日：20101101;?

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法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20101029法律状态公告日：20110105;?

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状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20110421法律状态公告日：20110721;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20110720法律状态公告日：20110726;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20110725法律状态公告日：20110823;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20110822法律状态公告日：20120131;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2007309524A 法律状态公告日：20120203;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20120202法律状态公告日：20120209;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01法律状态公告日：20120223;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20120220法律状态公告日：20120224;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20120227;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;PAYMENT UNTIL: 20150224Fee Payment-year:;3法律状态公告日：20150203;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150610;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313111法律状态公告日：20150715;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2007309524A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20151013;?

状态效果：-;?

状态代码：EXPY;?

法律状态：CANCELLATION BECAUSE OF COMPLETION OF TERM描述信息：Docdb Publication Number:; JP 2007309524A

**318、FUSION FUEL IMPLOSION DEVICE**

摘要：PROBLEM TO BE SOLVED : To provide a fusion fuel implosion device which can implode fusion fuel by a laser system with a small-scaled and simple structure.SOLUTION : In the fusion fuel implosion device 1, the irradiation of a bottom face section 4 in a recess 3 of a support 2 with laser light L for imploding deuterium DT, that is, an isotope of hydrogen, through the agency of a light-transmissive member 5 causes the bottom face section 4 made of copper to be heated, which creates a state of a very high temperature and a very high density in a section between the bottom face section 4 and the light-transmissive member 5. Consequently, the deuterium DT, an isotope of hydrogen, sandwiched by the bottom face section 4 and the light-transmissive member 5 can be imploded.COPYRIGHT : (C)2009, JPO&INPIT

公开（公告）号：[JP2008304328A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYRRnaF9S3nmGGuxfaWZrjp&local=zh)

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申请号：JP2007151875

申请日：2007-06-07

申请人：HAMAMATSU PHOTONICS KK

法律状态：法律状态公告日：20100331;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2008304328A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20100330法律状态公告日：20120111;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2008304328A 法律状态公告日：20120118;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2008304328A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20120117法律状态公告日：20120119;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2008304328A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01法律状态公告日：20120209;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2008304328A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20120203法律状态公告日：20120210;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2008304328A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20120213;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2008304328A Free Text Description:;PAYMENT UNTIL: 20150210Fee Payment-year:;3法律状态公告日：20150210;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2008304328A

**319、METHOD AND SYSTEM FOR INERTIAL CONFINEMENT FUSION REACTIONS**

摘要：METHOD AND SYSTEM FOR INERTIAL CONFINEMENT FUSION REACTIONS FIELD OF THE INVENTION [0001] The present invention relates to methods and systems for extracting energy from fusion reactions. BACKGROUND OF THE INVENTION [0002] It is widely recognized that controlled fusion offers a clean and plentiful energy source. However, despite billions of dollars invested, only limited success has been achieved in creating an efficient, self-sustaining fusion reaction. All prior approaches have been limited by three major factors : (a) Only a single means of energy extraction is used. (b) Instead of focusing on Direct Drive X-ray driven reactions, the bulk of the work has been focused on indirect drive reactions, particularly using large lasers as drivers. (c) Hydrodynamic Instability is a serious problem. This occurs when the compression of the target pellet is not sufficiently uniform. It gives rise to local thermal non-uniformity which, in turn, causes local cooling. This results in an unsymmetrical burn of the fuel. [0003] Energy can be extracted from a fusion reaction by two primary means : Thermal and Electrical. Thermal extraction is a straightforward application of the Rankine Thermal Cycle, which is used in almost every electrical power plant. In this process, a coolant is heated, the heated coolant used to turn a turbine, and the turbine used to turn a generator. This process has a nominal 55% efficiency. [0004] It is both possible and practical to extract electricity directly from fusion plasma. This has been demonstrated many times, and is a process with an efficiency of about 85%. The disadvantage of this technique to prior art fusion power systems is that it produces high voltage DC. High voltage DC is difficult to work with and, more importantly, not suitable for long distance power transmission and distribution. It cannot be readily or efficiently shifted in voltage as AC power can. 1 [0005] Hydrodynamic Instability is a major problem that the designer of every fusion power system faces. Formally known as Rayleigh-Taylor Instability, it is a problem that arises from non- uniform compression of the fuel pellet. Non-uniformities in excess of 1% in compression result in the formation of "jets" of energy that surge outward and locally cool the target pellet. The current generation of laser driven fusion systems use multiple beams (as many as 192 in one system) to attempt to provide a sufficiently uniform compression of the fuel pellet. [0006] It would be desirable to provide a system for extracting energy from controlled fusion reactions in which both thermal energy and high voltage DC energy are extracted. [0007] It would be desirable if extracted high voltage DC energy can be used as an energysource to sustain controlled fusion reactions. [0008] It would be further desirable to design a system from extracting energy form controlled fusion reactions, with a high hydrodynamic stability for achieving highly uniform compression of fuel pellets. SUMMARY OF THE INVENTION [0009] One embodiment of the invention provides a system for extracting energy from controlled fusion reactions. The system includes a central target chamber for receiving fusion target material. A plurality of energy drivers are arranged around the target chamber so as to supply energy to fusion target material in the chamber to initiate a controlled fusion reaction of the material, releasing energy in the forms of fusion plasma and heat. A plurality of means for extracting energy from the fusion reaction are provided, and comprise means to extract high voltage DC power from the fusion plasma; and means to extract thermal energy from the central target chamber. [00010] The foregoing embodiment increases efficiency of a fusion power system by extracting both high voltage DC energy and thermal energy. [00011] Another embodiment of the invention provides a system for extracting energy from controlled fusion reactions wherein the plurality of energy drivers are powered by an energy storage means. The energy storage means receives power from a first power supply and provides start-up and make-up power, and a second power supply derives energy from high voltage DC power extracted from the fusion plasma. The "start-up power" is the total energy 2 required for initiate the fusion reaction and the "make-up power" is the energy that is added to the energy from the second power supply to maintain operation of the fusion reaction. [00012] The foregoing embodiment achieves high efficiency by using the high voltage DC power extracted from the fusion reaction as a source of power for the energy drivers that drive the fusion reactions. This means that most of the energy required to drive the fusion reaction is derived from the (previous) fusion reaction itself. [00013] A further embodiment of the invention provides a system for extracting energy from controlled fusion reactions in which each of the plurality of energy drivers comprises a unitary apparatus. The unitary apparatus produces both (a) an x-ray pulse for causing the fusion target material to undergo a controlled fusion reaction so as to cause energy release in the forms of fusion plasma and heat, and (b) RF energy to simultaneously heat the fusion target material. [00014] The foregoing embodiment of the invention has the ability to produce an RF heating pulse simultaneously with the x-ray drive pulse without reducing efficiency. This allows the use of RF heating to increase the efficiency of the fusion power system at little additional cost andwith no energy penalty. [00015] A still further embodiment of the invention provides a fusion power system in which an apodizing structure is associated with each energy driver for reshaping the wavefront of the x-ray pulse to be concave from the perspective of the fusion target material. [00016] The foregoing embodiment of the invention corrects the wavefront errors that give rise to Rayleigh-Taylor Hydrodynamic Instability by means of the mentioned Apodizing Filter. As the target pellet is a sphere, the Apodizing filter is used to change the shape of the compression wavefront to a highly concave surface whose radius matches the radius of the target. By this means, the wavefront "wraps around" one face of the target and provides totally uniform compression of the target. [00017] A direct benefit of the use of Apodizing Filters to correct the compression wavefront is that the number of beams used to illuminate the target is reduced. Instead of the 192 beams that the National Ignition Facility Fusion Reactor at Lawrence Livermore lab in California uses, the current embodiment of the invention may allow the use of as far fewer beams, such as 6. This directly reduces the cost and size of the reactor, while increasing its reliability. 3

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申请号：CA2923259

申请日：2007-05-30

申请人：ADVANCED FUSION SYSTEMS LLC

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状态效果：+;?

状态代码：EEER;?

法律状态：EXAMINATION REQUEST描述信息：Docdb Publication Number:; CA 2923259A1Effective Date:;20160311

**320、LASER ANNEALING METHOD AND LASER ANNEALING DEVICE**

摘要：PROBLEM TO BE SOLVED : To form a polycrystalline semiconductor film having a uniform crystal grain size by generating homogeneous nucleuses in a crystallizing process for a semiconductor film.SOLUTION : A photocatalyst layer 4 is formed as a base layer or a cap layer of the semiconductor film. While the photocatalyst layer 4 is irradiated with excitation light 8 having such a wavelength that it is absorbed by the photocatalyst layer 4, the semiconductor film 5 is irradiated with a laser beam 1 and the semiconductor film 5 is fused and solidified to be crystallized. In this method, the wettability of semiconductor melt is improved by the super-hydrophilic operation of the photocatalyst layer 4. Consequently, crystal nucleuses can be generated almost at the fusion point of the semiconductor film 5 on the interface between the semiconductor film 5 and photocatalyst layer 4 and then the polycrystalline semiconductor film can be formed which has the uniform crystal grain size.COPYRIGHT : (C)2009, JPO&INPIT

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申请人：IHI CORP

法律状态：法律状态公告日：20081015;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 2008300514AFree Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20080905法律状态公告日：20100513;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2008300514AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20100512法律状态公告日：20100513;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2008300514AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20100512法律状态公告日：20121121;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2008300514AFree Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20121121法律状态公告日：20121205;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2008300514AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20121204法律状态公告日：20130116;?

状态效果：-;?

状态代码：A761;?

法律状态：WRITTEN WITHDRAWAL OF APPLICATION描述信息：Docdb Publication Number:; JP 2008300514AFree Text Description:;JAPANESE INTERMEDIATE CODE: A761Effective Date:;20130115

**321、NUCLEAR FUSION FUEL HOLDING MEMBER AND NUCLEAR FUSION FUEL CAPSULE**

摘要：PROBLEM TO BE SOLVED : To generate easily a nuclear fusion reaction with a simple constitution.SOLUTION : This member is equipped with each opening part 211 provided on both ends, in which a nuclear fusion fuel 22 is filled; an introduction passage 212 communicating both end opening parts 211, and extending in the axis C direction; and a nuclear fusion part 213 provided on the center part in the axis C direction of the introduction passage 212, for generating a nuclear fusion reaction by igniting the fusion fuel 22. The introduction passage 212 is reduced gradually toward the nuclear fusion part 213 from both end opening parts 211, and laser light is irradiated from both end sides along the axial direction, and thereby the nuclear fusion fuel 22 is imploded as the nuclear fusion fuel 22 is advanced to the nuclear fusion part 213 along the introduction passage 212.COPYRIGHT : (C)2009, JPO&INPIT

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申请日：2007-05-09

申请人：GRADUATE SCHOOL FOR THE CREATI

法律状态：法律状态公告日：20100501;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20100430法律状态公告日：20120409;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 4989301B2法律状态公告日：20120418;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20120417法律状态公告日：20120419;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01法律状态公告日：20120510;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20120427法律状态公告日：20120511;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20120514;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;PAYMENT UNTIL: 20150511Fee Payment-year:;3法律状态公告日：20150310;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20160426;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20170314;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4989301B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250

**322、SYSTEM AND METHOD FOR CREATING LIQUID DROPLET IMPACT FORCED COLLAPSE OF LASER NANOPARTICLE NUCLEATED CAVITIES FOR CONTROLLED NUCLEAR REACTIONS**

摘要：A device, method and system for causing a controlled collapse of cavities formed within liquid droplets wherein a pressurized jet comprising a liquid and nanoparticle material and possibly fuel produces droplets from the breakup of the jet stream. The liquid droplets are irradiated with energy to produce and expand cavities formed within the droplets by irradiation of the nanoparticles contained within the droplets. The droplets are collided with a target to collapse the cavities within the droplets. The irradiating and colliding are timed to enhance implosion energy resulting from the cavities' collapse. The implosion energy and the fuel in the cavity may be used to activate and sustain a fusion reaction.

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申请人：Synergy Innovations Inc

法律状态：法律状态公告日：20070404;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2008037694A1New Owner:;SYNERGY INNOVATIONS, INC., NEW HAMPSHIREFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:DEAN, JR., ROBERT C.;HOLT, R. GLYNN;ROY, RONALD A.;REEL/FRAME:019114/0609;SIGNING DATES FROM 20070305 TO 20070317法律状态公告日：20120417;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 2008037694A1Fee Payment-year:;4法律状态公告日：20160617;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 2008037694A1法律状态公告日：20161104;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 2008037694A1法律状态公告日：20161227;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 2008037694A1Effective Date:;20161104

**323、激励热核聚变的载能因子能量作能源的转换装置**

摘要：该装置是利用激光技术将热核聚变的载能因子能量激励后，通过半导体光电转换技术转换为电流以使用电器做功，以及使荧光灯发光照明，使可控热核聚变研究成果转变为商业利用价值。

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申请日：2007-03-05

申请人：曾庆尧

法律状态：法律状态公告日：20080910;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20101215;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回IPC(主分类):G21B 1/00;公开日:20080910;?

**324、METHOD OF OBTAINING THE AMORPHIZED MICROPARTICLES OF THE MONOFRACTIONAL COMPOSITION**

摘要：1. The method of obtaining the amorphized microparticles of monofractional composition, for example, for creating the amorphized nuclear fuel ([AYAT]), that is characterized by the fact that source material itself with the required component mix prepares in the form flat flow chart, which through the input sluice will be given beside the constructed special device, before composition of which before the single hermetically sealed complex use the following most main functional systems and they accomplish the appropriate technological actions, namely uses the scanning system of the laser [amorfiziruyushchego] fusion of the upper thin layer of the surface of initial flow chart, which after the completion of the processes of amorphization indicated, through the butt sluice will be given down the entrance beside the second the system used - the planar preparatory grinding the of previously created amorphized layer and after the completion of its works indicated (map) through the sequential butt sluice they will give before third the systems used, before which with the aid of the application of a special multilayer cutter, and also the corresponding devices of the precision cyclic permutation of initial flow chart relative to the cutting edges of the revolving cutter, is accomplished the layered milling cutting of the required amorphized microparticles of in the form obtained monofractional micro-shaving, and after the completion of layered milling, with the completing removal based on the flow chart amorphized layer the it is previously created on it, it (map) they again return through the appropriate sluice down the first the system for the repeated creation of the additional upper- pointed out above

公开（公告）号：[RU2007101422A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4J9pYoO9UhqpGGuxfaWZrjp&local=zh)

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申请人：Максимов Лев Николаевич (RU)

法律状态：法律状态公告日：20110820;?

状态效果：-;?

状态代码：FA94;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NON-PAYMENT OF FEES)描述信息：Docdb Publication Number:; RU 2007101422AEffective Date:;20110511

**325、低温多晶硅薄膜制造方法**

摘要：本发明涉及一种低温多晶硅薄膜制造方法，其包括下列步骤：a.提供一衬底，在该衬底上形成一非晶硅薄膜；b.提供一准分子激光发生器，其射出一面光源脉冲激光束，该面光源脉冲激光束照射该非晶硅薄膜形成一照射区域，该照射区域处于熔融状态；c.该准分子激光发生器移动一小距离，使该面光源脉冲激光束照射该非晶硅薄膜上形成另一照射区域，该两照射区域间形成一间隔区域，该照射区域与该间隔区域的界面发生非均匀成核，以形成低温多晶硅薄膜；d.重复步骤c，在该非晶硅薄膜上形成多个照射区域和多个间隔区域。此方法能节省照射时间，可增大所形成的低温多晶硅薄膜的晶粒尺寸，提高该低温多晶硅薄膜的电子迁移率。

公开（公告）号：[CN101168474B](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2iT5PT7UrWYnGr4kAd0KKkg&local=zh)

公开（公告）日：2011-02-09

申请号：CN200610063347.6

申请日：2006-10-27

申请人：群康科技(深圳)有限公司; 群创光电股份有限公司

法律状态：法律状态公告日：20080430;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20080625;?

法律状态：实质审查的生效;?

描述信息：实质审查的生效;?

法律状态公告日：20110209;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20110406;?

法律状态：专利权人的姓名或者名称、地址的变更;?

描述信息：专利权人的姓名或者名称、地址的变更IPC(主分类):C03C 17/22;变更事项:专利权人;变更前:群康科技(深圳)有限公司;变更后:群康科技(深圳)有限公司;变更事项:地址;变更前:518109 广东省深圳市宝安区龙华镇富士康科技工业园E区4栋1层;变更后:518109 广东省深圳市宝安区龙华镇富士康科技工业园E区4栋1层;变更事项:共同专利权人;变更前:群创光电股份有限公司;变更后:奇美电子股份有限公司;?

**326、High peak and average power of high optical pulse amplifier**

摘要：The invention relates to an optical pulse amplifier comprising a first optical fiber amplifier adapted to receive an input pulse, a splitter connected to said first optical fiber, said splitter having a plurality of outputs; a plurality of optical fiber amplifiers, each optical fiber amplifier being connected to one of said plurality of outputs, said plurality of optical fiber amplifiers generating a plurality of output pulse signals. The optical pulse amplifier of the invention has the advantage that it can produce high peak and high average power.

公开（公告）号：[JP2009509351A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaoUf8R%2BSIV8GGuxfaWZrjp&local=zh)

公开（公告）日：2009-03-05

申请号：JP2008531814

申请日：2006-09-21

申请人：Ekolu Polytechnic Nik508084526

法律状态：法律状态公告日：20090918;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20090917法律状态公告日：20110921;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20110920法律状态公告日：20111220;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20111219法律状态公告日：20111228;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20111227法律状态公告日：20120317;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20120316法律状态公告日：20121031;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20121030法律状态公告日：20130130;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20130129法律状态公告日：20130206;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20130205法律状态公告日：20130427;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20130426法律状态公告日：20130807;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20130806法律状态公告日：20131206;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20131205法律状态公告日：20140123;?

状态代码：A911;?

法律状态：TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A911Effective Date:;20140122法律状态公告日：20140213;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 5507841B2法律状态公告日：20140219;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20140218法律状态公告日：20140327;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20140320法律状态公告日：20140328;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 5507841B2Corresponding Publication Number:;5507841Corresponding Authority:;JPFree Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20170328;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20180403;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 5507841B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250

**327、Inertial fusion reactor device**

摘要：An inertial fusion reactor 10 is disclosed comprising an outer containment chamber 12 and an inner containment chamber 14 supported within the outer containment chamber to define a space 16 between respective walls of the outer and inner containment chambers 12, 14. Water is contained within the space 16 for generating steam which feeds turbine generators. Fuel for a fusion reaction is suspended within the centre 50 of the inner containment chamber by a suitable mechanism. The reaction is initiated by focussing a plurality of laser beams on the fuel. The structure permits the water to be used both for producing usable steam and for absorbing blast impact due to its incompressible nature.

公开（公告）号：[GB0618415D0](https://www.incopat.com/detail/init2?formerQuery=RdXyUXp%2BNPDXGLKzOL%2FXyfR0OjOTHMZL&local=zh)

公开（公告）日：2006-11-01

申请号：GB0618415

申请日：2006-09-19

申请人：LAMONT JOHN S

法律状态：法律状态公告日：20120718;?

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状态代码：WAP;?

法律状态：APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED \*\* AFTER PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 2445011A

**328、Method for flying a spacecraft comprises melting protons and neutrons to form a single ball having a charge on the surface with a complex tetrahedron structure**

摘要：After it has been achieved, to show that it with a reusable, discus-shaped, single-stage orbital glider is possible, from the orbit to land and back to the surface of a planet and orbit to arrive to achieve (P. [...] ) is now shown that it is also possible, to build a space parent ship, can reach almost the speed of light. For this purpose it was necessary, for the fusing of protons and neutrons containing isotopes deuterium and tritium to throw light on the mathematical Backgrounds, how these isotopes to helium merge (P. [...] ). It is now a cylindrical [...] build, with lasers in a concave mirror nuclear fusion lightline accelerators and generates a, the stops for propelling and provides almost permanently with a g fusion drive after reaching of the speed of light. To Invert in the planetary system must slow down to achieve a different sun another orbit, the spacecraft and one year.

公开（公告）号：[DE102006036941A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4924pdXN6YR290VnN5blIOTqY&local=zh)

公开（公告）日：2008-02-14

申请号：DE102006036941

申请日：2006-08-08

申请人：PLICHTA PETER

法律状态：法律状态公告日：20090702;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE102006036941A1

**329、PIXEL STRUCTURE AND REPAIR METHOD THEREOF**

摘要：PROBLEM TO BE SOLVED : To provide a pixel structure that can improve a display quality of a liquid crystal display panel, and to provide a repair method for repairing the pixel structure.SOLUTION : The pixel structure includes a scan line, a gate, a first dielectric layer, a channel layer, a source, a drain, a data line, a second dielectric layer and a pixel electrode. The gate is electrically connected to the scan line and has a first notch. The first dielectric layer covers the scan line and the gate. The channel layer is disposed on the first dielectric layer over the gate and exposed by the first notch. The source and the drain are disposed on the channel layer. Part of the drain is located over the first notch. The data line is disposed on the first dielectric layer and electrically connected to the source. The second dielectric layer covers the source, the drain and the data line. The pixel electrode is disposed on the second dielectric layer and electrically connected to the drain.COPYRIGHT : (C)2008, JPO&INPIT

公开（公告）号：[JP2007279648A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZ1OoY90Sozs2GuxfaWZrjp&local=zh)

公开（公告）日：2007-10-25

申请号：JP2006147194

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申请人：CHUNGHWA PICTURE TUBES LTD

法律状态：法律状态公告日：20090902;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20090901法律状态公告日：20100421;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20100420法律状态公告日：20100821;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20100820法律状态公告日：20101012;?

状态代码：A911;?

法律状态：TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A911Effective Date:;20101008法律状态公告日：20101029;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 4642700B2法律状态公告日：20101104;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20101102法律状态公告日：20101111;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01法律状态公告日：20101209;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20101201法律状态公告日：20101210;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20101213;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;PAYMENT UNTIL: 20131210Fee Payment-year:;3法律状态公告日：20130917;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20140924;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150818;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20160913;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20170829;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4642700B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250

**330、Magnitites Pycnonuclear Reactions within Electrochemical, Radioactive and Electromagnetic Medias**

摘要：The electrochemically active elements of the transition series include both the third, fourth and fifth d block elements, the lanthanides and the actinides. These transition elements have distinct electrochemistry for driving many chemical reactions, in particular the absorption of large volumes of hydrogen and the formation of various hydrides. In particular, Pd, Th, Ti, Ag, Au and La hydrides exhibit anomalous effects. The chemical reactions for forming, decomposing and rearranging the bonds of metal hydrides involve large energies. Furthermore these metal hydrides and mixtures are here demonstrated to exhibit greater strange cold nuclear reactions both cold fission and cold fusion. This invention provides magnetic, x-ray, laser irradiation, pressure, neutron beam, beta ray, alpha ray, gamma ray and catalytic technology for accommodating the special conditions for more controlled and accelerated cold nuclear reactions within the dense plasma (pycno) provided by the lattice of these metal hydrides. Under these conditions, the cold nuclear reactions are controllably enhanced to rates for practical energy sources but the very nonsynergistic nature of these pycnonuclear phenomena diminishes the possibility of runaway or explosive systems.

公开（公告）号：[US20140140461A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rF8btsKekZp8CvqiiRNCwVT&local=zh)

公开（公告）日：2014-05-22

申请号：US13987298

申请日：2006-04-25

申请人：Reginald B Little

**331、FUSION FUEL CONTAINERS AND SYSTEM**

摘要：A fusion fuel composition has two or more light nuclei combined with a cage-like molecule. The light nuclei may be, for example, deuterium and tritium, and the cage-like molecule may be, for example, a fullerene molecule. A fusion reaction to consume the fusion fuel may be ignited, for example, via compression methods including chemical or laser.

公开（公告）号：[CA2603742A1](https://www.incopat.com/detail/init2?formerQuery=wwbgfSgkAP6rFdOvVd%2F5yvR0OjOTHMZL&local=zh)

公开（公告）日：2007-07-26

申请号：CA2603742

申请日：2006-04-04

申请人：CARBON LABS INC

法律状态：法律状态公告日：20110404;?

状态效果：-;?

状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2603742A1

**332、FUSION FUEL CONTAINERS AND SYSTEM**

摘要：A fusion fuel composition has two or more light nuclei combined with a cage-like molecule. The light nuclei may be, for example, deuterium and tritium, and the cage-like molecule may be, for example, a fullerene molecule. A fusion reaction to consume the fusion fuel may be ignited, for example, via compression methods including chemical or laser.

公开（公告）号：[US20080317658A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGSruG0TIwV%2BYsGkO06SUdj&local=zh)

公开（公告）日：2008-12-25

申请号：US11278652

申请日：2006-04-04

申请人：MILLER EDWARD DONALD

法律状态：法律状态公告日：20060404;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 2008317658A1New Owner:;CARBON LABS, INC., CALIFORNIAFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:MILLER, EDWARD DONALD;REEL/FRAME:017420/0396Effective Date:;20060404法律状态公告日：20120827;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 2008317658A1法律状态公告日：20130110;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 2008317658A1Fee Payment-year:;4法律状态公告日：20130110;?

状态效果：+;?

状态代码：SULP;?

法律状态：SURCHARGE FOR LATE PAYMENT描述信息：Docdb Publication Number:; US 2008317658A1法律状态公告日：20160826;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 2008317658A1法律状态公告日：20161213;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 2008317658A1Fee Payment-year:;8法律状态公告日：20161213;?

状态效果：+;?

状态代码：SULP;?

法律状态：SURCHARGE FOR LATE PAYMENT描述信息：Docdb Publication Number:; US 2008317658A1Fee Payment-year:;7

**333、FUSION FUEL CONTAINERS AND SYSTEM**

摘要：A fusion fuel composition has two or more light nuclei combined with a cage-like molecule. The light nuclei may be, for example, deuterium and tritium, and the cage-like molecule may be, for example, a fullerene molecule. A fusion reaction to consume the fusion fuel may be ignited, for example, via compression methods including chemical or laser.

公开（公告）号：[WO2007084161A2](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU5f%2Bh90JrM3dHtd8LfwwKeV&local=zh)

公开（公告）日：2007-07-26

申请号：WOUS06012550

申请日：2006-04-04

申请人：CARBON LABS INC; MILLER Edward Donald

法律状态：法律状态公告日：20071003;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2007084161A2Corresponding Publication Number:;2603742Corresponding Authority:;CA法律状态公告日：20071005;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2007084161A2Designated State Authority:;DE法律状态公告日：20071010;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2007084161A2法律状态公告日：20071104;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2007084161A2Designated State Authority:;RU法律状态公告日：20080521;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 2007084161A2Corresponding Publication Number:;06849323Corresponding Authority:;EPCorresponding Kind:;A2

**334、METHOD FOR DIAGNOSING AND RECOVERING VISION FUNCTIONS IN RETINAL DYSTROPHY CASES IN CHILDREN**

摘要：FIELD : medicine.SUBSTANCE : method involves determining critical frequency of flicker fusion. Irrigation therapy is administered for 10 days with Decinon, ATP, cocarboxylase, Tauphon, Emoxipin and riboflavin being introduced. The preparations are introduced one after another with 2h long pauses. Single blue light photostimulation session is applied in arbitrary sequence daily during pauses between preparations introductions. Blue light stimulation frequency is selected to be 11-15% below the initial critical frequency of flicker fusion level. Retinal laser stimulation is carried out in one stage with SPECLE apparatus.EFFECT : enhanced effectiveness of complex treatment at all visual analyzer levels.2 cl

公开（公告）号：[RU2310369C1](https://www.incopat.com/detail/init2?formerQuery=6NGdSrmmsR%2FrRFNYMhPt%2BvR0OjOTHMZL&local=zh)

公开（公告）日：2007-11-20

申请号：RU2006108915

申请日：2006-03-22

申请人：FEDERAL' NOE GOSUDARSTVENNOE UCHREZHDENIE "MEZHOTRASLEVOJ NAUCHNO TEKHNICHESKIJ KOMPLEKS "MIKROKHIRURGIJA GLAZA" IMENI AKADEMIKA S N FEDOROVA FEDERAL' NOGO AGENTSTVA PO ZDRAVOOKHRANENIJU I SOTSIAL' NOMU RAZVITIJU"

法律状态：法律状态公告日：20100327;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2310369C1Effective Date:;20080323

**335、FUSION APPARATUS AND METHODS**

摘要：Improved apparatus adapted to utilize available fuels and components to produce practical nuclear fusion in a comparatively confined space. In an exemplary embodiment, one or more glass fibers are used as a containment medium for the nuclear fuel (e.g., Deuterium or Lithium). The fibers are also optionally tapered and porous in order to permit introduction of gaseous fuel along a portion of their length. A high-intensity energy source (e.g., pulsed femto-second laser) is used to excite and contain the fuel to fusion temperature through, inter alia, pondermotive forces generated within the fiber(s). The effluent from the device can be used for any

公开（公告）号：[IN124KOLNP2006A](https://www.incopat.com/detail/init2?formerQuery=ThgrgLVI5fMHoVTGbgiyAsuyNsT1wo3b&local=zh)

公开（公告）日：2007-06-22

申请号：IN124KOLNP2006

申请日：2006-01-13

申请人：LOWELL ROSEN ROBERT GAZDZINSKI

**336、细胞核操作的自动化装置**

摘要：一种「细胞核操作的自动化装置」，其主要构造包括由一自动化操作运动单元、一三向自由度运动单元、一双轴显微镜单元、一雷射光机电单元及一电脑控制单元所组成；其系利用一个具有微流体的玻片载入卵细胞、体细胞与培养液後放置於一自动化操作运动单元设备上，再利用一组双轴显微镜撷取XY与XZ的平面影像以定出卵细胞在Z轴的高程位置，再利用设置於垂直显微镜正下方之雷射光机电单元进行对卵细胞穿孔、去核，以及牵引与注射体细胞之操作，最後可以光学融合或以化学激活，而达到自动化操作细胞核之功效者。

公开（公告）号：[TWM290505U](https://www.incopat.com/detail/init2?formerQuery=LRRkigy9yp4UmOCvMZBx7g%3D%3D&local=zh)

公开（公告）日：2006-05-11

申请号：TW094220790

申请日：2005-11-30

申请人：纪大任

**337、防水型宽带高增透薄膜及其制备方法**

摘要：本发明属光学薄膜材料技术领域，具体为一种新 型防水性能良好且能实现多窗口宽带增透薄膜及其制备方法。 该薄膜通过sol－gel法形成SiO2 溶胶，加入聚苯乙烯(PS)或聚甲基丙烯酸甲酯(PMMA)，旋涂 镀膜后经三甲基氯硅烷、正己烷表面改性而成。与以往各类保 护膜相比该保护膜不仅实现了宽带增透，掺入PS或PMMA都 可以在351nm，527nm和1054nm有高的透光率，最高值均超 过了98％，而且具有良好的防水性能，接触角均达到了100° －110°，是极佳的KDP晶体防水增透膜的候选替换材料，可 在高能核聚变模拟实验的超激光系统中获得应用。

公开（公告）号：[CN1794015A](https://www.incopat.com/detail/init2?formerQuery=V7Ki7HR%2B1ZDbdsV1eM2G2A%3D%3D&local=zh)

公开（公告）日：2006-06-28

申请号：CN200510110456.4

申请日：2005-11-17

申请人：复旦大学

法律状态：法律状态公告日：20060628;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20061206;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20071031;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20120125;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G02B 1/10;申请日:20051117;授权公告日:20071031;终止日期:20101117;?

**338、Laser cutter/welder for thick materials used e.g. in nuclear industry has cooler with at least one vortex tube fed with compressed gas and connected to laser head**

摘要：The invention relates to an installation of laser cutting/welding including/understanding a laser head (2) able to deliver a laser beam intended to generate a bath of fusion (74), the installation also comprising a cooler (21) of the laser head. According to the invention, this cooler comprises at least a tube of vortex (50) fed out of compressed gas, the tube (50) having at least a cold gas exit (54) connected to the laser head (2) for the cooling of this one, as well as at least hot gas exit (56).

公开（公告）号：[FR2891483A1](https://www.incopat.com/detail/init2?formerQuery=IxljUG%2BivENRKeat%2FN2q8vR0OjOTHMZL&local=zh)

公开（公告）日：2007-04-06

申请号：FR05053001

申请日：2005-10-05

申请人：COMMISSARIAT ENERGIE ATOMIQUE

法律状态：法律状态公告日：20100723;?

状态代码：CL;?

法律状态：CONCESSION TO GRANT LICENCES描述信息：Docdb Publication Number:; FR 2891483B1法律状态公告日：20160729;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2891483B1Effective Date:;20160630

**339、METHOD OF THE INITIATION OF STEPPED THERMONUCLEAR FUSION BY DOUBLE-SIDED LASER EMISSION IN THE BINARY ISOHYDROGEN TARGET**

公开（公告）号：[RU2005128773A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4K0vHIGaW7etmGuxfaWZrjp&local=zh)

公开（公告）日：2007-03-27

申请号：RU2005128773

申请日：2005-09-16

申请人：Худ?ков Валентин Иванович (RU); Худ?ков Олег Иванович (RU); Дегт?рева Мари? Валентиновна (RU);

法律状态：法律状态公告日：20081210;?

状态效果：-;?

状态代码：FA93;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2005128773AEffective Date:;20050916法律状态公告日：20081227;?

状态效果：-;?

状态代码：FA93;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2005128773AEffective Date:;20050916

**340、一种多窗口宽带增透PMMA－SiO2薄膜及其制备方法**

摘要：本发明属光学薄膜材料技术领域，具体为一种新 型多窗口宽带增透PMMA－ SiO2薄膜及其制备方法。该薄膜 通过sol－gel法在形成SiO2溶胶 后加入聚甲基丙烯酸甲酯(PMMA)，热处理旋涂成膜。与以往 各类改性的SiO2增透膜相比该 类增透膜实现了宽带增透，在351nm，527nm和1054nm均有 高的透光率，最高值均超过了98％，是极佳的KDP晶体增透 膜的候选替换材料，可在高能核聚变模拟实验的超强激光系统 中获得应用。

公开（公告）号：[CN1740823A](https://www.incopat.com/detail/init2?formerQuery=V7Ki7HR%2B1ZBZMVqmo0LPNg%3D%3D&local=zh)

公开（公告）日：2006-03-01

申请号：CN200510027778.2

申请日：2005-07-15

申请人：复旦大学

法律状态：法律状态公告日：20060301;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20060426;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20071003;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20110921;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G02B 1/00;申请日:20050715;授权公告日:20071003;终止日期:20100715;?

**341、一种多窗口宽带增透PS－SiO2薄膜及其制备方法**

摘要：本发明属光学薄膜材料技术领域，具体为一种新 型多窗口宽带增透PS－SiO2薄 膜及其制备方法。该薄膜通过sol－gel法在形成 SiO2溶胶后加入聚苯乙烯(PS)， 热处理旋涂成膜。与以往各类改性的 SiO2增透膜相比该类增透膜实 现了宽带增透，掺入不同分子量的PS后在351nm，527nm和 1054nm均有高的透光率，最高值均超过了98％，是极佳的KDP 晶体增透膜的候选替换材料，可在高能核聚变模拟实验的超强 激光系统中获得应用。

公开（公告）号：[CN1740824A](https://www.incopat.com/detail/init2?formerQuery=V7Ki7HR%2B1ZAfbx3LC1CFGg%3D%3D&local=zh)

公开（公告）日：2006-03-01

申请号：CN200510027779.7

申请日：2005-07-15

申请人：复旦大学

法律状态：法律状态公告日：20060301;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20060426;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20071031;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20110921;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):G02B 1/00;申请日:20050715;授权公告日:20071031;终止日期:20100715;?

**342、Tabletop nuclear fusion generator**

摘要：The invention provides systems and methods for generating nuclear fusion by generating and collapsing bubbles, comprising using a conduit for enclosing a liquid; a source of pressure to force said liquid to flow in said conduit; a bubble generator designed to generate bubbles in said conduit; and at least one of a pulsed laser positioned so that pulses of said pulsed laser impinge liquid in said conduit and a variation in cross-section of said conduit designed to induce rapid pressure changes in liquid flowing in said conduit; wherein said system is designed such that operation results in flow of liquid in the conduit and nuclear fusion of nuclei of atoms in said liquid.

公开（公告）号：[US20070002996A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGrc08%2FoP0ODzkJJEbMdX8W&local=zh)

公开（公告）日：2007-01-04

申请号：US11170768

申请日：2005-06-30

申请人：NEIFELD RICHARD

**343、一种宽时间分辨分幅管的控制方法**

摘要：一种宽时间分辨分幅管的控制方法，其用两组微 带线彼此相交的微通道板形成可曝光区域，通过控制电源选通 脉冲、脉冲脉宽以及选通脉冲之间的时间间隔，进行光电子图 像选通，可实现ps～μs级多时间分辨、高增益的二维多分幅 图像的获取。本发明解决了背景技术在ns～μs级时间分辨下 画幅数较少的技术问题，可应用于惯性约束核聚变、激光等离 子体产生、等离子体箍缩(Z－pinch)等众多X射线诊断领域， 也可应用于紫外探测、可见光探测、红外探测等技术领域。

公开（公告）号：[CN1877445A](https://www.incopat.com/detail/init2?formerQuery=zWNsEAJ8F6FJyko%2FgM2Uyg%3D%3D&local=zh)

公开（公告）日：2006-12-13

申请号：CN200510042764.8

申请日：2005-06-07

申请人：中国科学院西安光学精密机械研究所

法律状态：法律状态公告日：20061213;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20070214;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20090211;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：发明专利申请公布后的视为撤回;?

**344、STRAIN OF THE CULTIVATED CELLS OF THE MOUSE HYBRIDOMA Of [a]3, UTILIZED FOR OBTAINING THE MONOCLONAL of anti-thoseLC TO THE ANTIGEN OF CHROMATOSPHERITE OF THE CELLS OF THE MAN**

摘要：FIELD : microbiological and immunological methods. ^ SUBSTANCE : invention is intended for use to study structural and functional arrangement of nucleolus and mechanisms of action of pharmacological preparations on human cells. Mouse hybridoma cell strain, called A3, is obtained through fusing mouse splenocytes immunized by coarse fraction of nuclei of human cell line RAMOS with cells of mouse myeloma line P30X63-Ag8.653. Resulting hybridoma secretes monoclonal antibodies against antigen, called A3 antigen, localized inhuman cell nucleoli irrespective of their tissue or line origin. In cases of different cell fixation ways. A3 antigen is revealed as incorporated in discrete (typically several tens) foci located exclusively in the zone of nucleoli. Unique property of A3 antigen is its high sensitivity to the action of various protein synthesis inhibitors, e.g. emetine, anisomicyne, cycloheximide, and puromicyne. During incubation of cells in presence of above-listed substances, A3 antigen migrates from nucleoli to numerous foci located in nuclear nucleoplasma. This A3 antigen migration precedes apoptotic death of cells. Monoclonal antibodies A3 produced by the strain A3 are recommended to reveal nucleoli and to estimate total level of protein synthesis in human cells by cell biology techniques. Antibodies can be used to reveal possible contamination of human cell cultures with another-species cells as well as to investigate biological activity of known and novel protein synthesis inhibitors, including pharmacological preparations in human in vitro cells. ^ EFFECT : expanded microbiological and immunological possibilities. ^ 2 cl, 6 dwg

公开（公告）号：[RU2005115525A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4LhpJVokW0AAWGuxfaWZrjp&local=zh)

公开（公告）日：2006-11-20

申请号：RU2005115525

申请日：2005-05-23

申请人：Гематологический научный центр РАМН (RU); Институт биоорганической химии им. акад. М.М. Шем?кина и Ю.А. Овчинникова РАН (RU);

法律状态：法律状态公告日：20080727;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2296159C2Effective Date:;20070524法律状态公告日：20081227;?

状态效果：+;?

状态代码：NF4A;?

法律状态：REINSTATEMENT OF PATENT描述信息：Docdb Publication Number:; RU 2296159C2Effective Date:;20081227法律状态公告日：20120320;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2296159C2Effective Date:;20110524

**345、INERTIAL FUSION ENERGY POWER STATION**

摘要：An inertial fusion reactor device comprises an outer containment chamber and an inner containment chamber supported within the outer containment chamber to define a space between respective walls of the inner and outer containment chambers. Water is contained within the space for generating steam which feeds turbine generators. Fuel for a fusion reaction is suspended within the centre of the inner containment chamber by a suitable mechanism. The reaction is initiated by focussing a plurality of laser beams on the fuel. The structure permits the water to be used both for producing usable steam and for absorbing blast impact due to its incompressible nature.

公开（公告）号：[CA2505105A1](https://www.incopat.com/detail/init2?formerQuery=w78bK7hUkooj6sviKPXD1fR0OjOTHMZL&local=zh)

公开（公告）日：2006-10-12

申请号：CA2505105

申请日：2005-04-12

申请人：LAMONT JOHN S

法律状态：法律状态公告日：20091123;?

状态效果：+;?

状态代码：EEER;?

法律状态：EXAMINATION REQUEST描述信息：Docdb Publication Number:; CA 2505105A1法律状态公告日：20120412;?

状态效果：-;?

状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2505105A1

**346、METHOD OF LASER NUCLEAR FUSION**

公开（公告）号：[RU2005102015A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4LmsQvhI5sAaGGuxfaWZrjp&local=zh)

公开（公告）日：2006-07-10

申请号：RU2005102015

申请日：2005-01-28

申请人：Еньшин Анатолий Васильевич (RU); Илиодоров Владимир Александрович (RU);

法律状态：法律状态公告日：20080327;?

状态效果：-;?

状态代码：FA93;?

法律状态：ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)描述信息：Docdb Publication Number:; RU 2005102015AEffective Date:;20080129

**347、发动机叶片铸造缺陷激光修复用合金粉末和制法及应用**

摘要：本发明是一种发动机叶片铸造缺陷激光修复用 合金粉末和制法及应用，由混合的合金粉末、变质剂和稀土 Y2O3制备而成，本发明的核心是在激光熔覆合金粉末中同时加 入稀土氧化物和变质剂，改善熔覆层的结晶状态，从而大大降 低了熔覆层的开裂敏感性，采用本发明进行激光修复有铸造缺 陷的叶片，经激光修复后叶片无裂纹，孔洞，特别适合航空发 动机叶片的修复。

公开（公告）号：[CN1631603A](https://www.incopat.com/detail/init2?formerQuery=aisphrcaS7FnatMDJd7%2BDw%3D%3D&local=zh)

公开（公告）日：2005-06-29

申请号：CN200510200010.0

申请日：2005-01-06

申请人：贵州大学

法律状态：法律状态公告日：20050629;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20060222;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20071003;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20160224;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):B23K 35/30;申请日:20050106;授权公告日:20071003;终止日期:20150106;?

**348、METHOD OF THE INITIATION OF THERMONUCLEAR FUSION BY COLLIDING LASER BEAMS BEFORE THE GASEOUS AND SOLID ISOHYDROGEN MIXTURE**

公开（公告）号：[RU2004127705A](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4JTdJjsoRdYBGGuxfaWZrjp&local=zh)

公开（公告）日：2005-03-27

申请号：RU2004127705

申请日：2004-09-17

申请人：Худ?ков Валентин Иванович (RU); Худ?ков Олег Иванович (RU); Дегт?рева Мари? Валентиновна (RU);

**349、HIGH-DENSITY STORAGE OF EXCITED ONE POSITRONIUM BY USE OF PHOTONI BAND GAP TRAPS**

摘要：A device is provided that can capture and store electrically neutral excited species of antimatter or exotic matter (a mixture of antimatter and ordinary matter), in particular, excited positronium (Ps\*). The antimatter trap comprises a three-dimensional or two-dimensional photonic bandgap (PBG) structure containing at least one cavity therein. The species are stored in the cavity or in an array of cavities. The PBG structure blocks premature annihilation of the excited species by preventing decays to the ground state and by blocking the pickoff process. A Bose-Einstein Condensate form of Ps\* can be used to increase the storage density. The long lifetime and high storage density achievable in this device offer utility in several fields, including medicine, materials testing, rocket motors, high power/high energy density storage, gamma-ray lasers, and as an ignition device for initiating nuclear fusion reactions in power plant reactors or hybrid rocket propulsion systems.

公开（公告）号：[DE602004028943D1](https://www.incopat.com/detail/init2?formerQuery=8EG3vHd1Ey8Xz7mvQyxvaZuDk0n1LvOl&local=zh)

公开（公告）日：2010-10-14

申请号：DE602004028943

申请日：2004-07-09

申请人：RAYTHEON CO

**350、HIGH DENSITY STORAGE OF EXCITED POSITRONIUM USING PHOTONIC BANDGAP TRAPS**

摘要：A device is provided that can capture and store electrically neutral excited species of antimatter or exotic matter (a mixture of antimatter and ordinary matter), in particular, excited positronium (Ps\*). The antimatter trap comprises a three-dimensional or two-dimensional photonic bandgap (PBG) structure containing at least one cavity therein. The species are stored in the cavity or in an array of cavities. The PBG structure blocks premature annihilation of the excited species by preventing decays to the ground state and by blocking the pickoff process. A Bose-Einstein Condensate form of Ps\* can be used to increase the storage density. The long lifetime and high storage density achievable in this device offer utility in several fields, including medicine, materials testing, rocket motors, high power/high energy density storage, gamma-ray lasers, and as an ignition device for initiating nuclear fusion reactions in power plant reactors or hybrid rocket propulsion systems.

公开（公告）号：[EP1652194A2](https://www.incopat.com/detail/init2?formerQuery=M2sWWgSx5uMueq3%2F6jwWAvR0OjOTHMZL&local=zh)

公开（公告）日：2006-05-03

申请号：EP04756788

申请日：2004-07-09

申请人：RAYTHEON COMPANY

法律状态：法律状态公告日：20060503;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 1652194A2Effective Date:;20051207法律状态公告日：20060503;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 1652194A2Corresponding Authority:;EPCorresponding Kind:;A2Legal Designated States:;DE;FR;GB;法律状态公告日：20061102;?

状态代码：DAX;?

法律状态：REQUEST FOR EXTENSION OF THE EUROPEAN PATENT (TO ANY COUNTRY) (DELETED)描述信息：Docdb Publication Number:; EP 1652194A2法律状态公告日：20061102;?

状态效果：+;?

状态代码：RBV;?

法律状态：DESIGNATED CONTRACTING STATES (CORRECTION)描述信息：Docdb Publication Number:; EP 1652194A2Legal Designated States:;DE;FR;GB;法律状态公告日：20070530;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 1652194A2Inventor Name:;SHAH, NITESH, N.法律状态公告日：20070530;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 1652194A2Inventor Name:;SCHMITT, HARRY, A.法律状态公告日：20070530;?

状态代码：RIN1;?

法律状态：INVENTOR CHANGED BEFORE GRANT描述信息：Docdb Publication Number:; EP 1652194A2Inventor Name:;BARKER, DELMAR, L.法律状态公告日：20080402;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 1652194A2Effective Date:;20080229法律状态公告日：20100901;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 1652194A2Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;DE;FR;GB;法律状态公告日：20100901;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTED法律状态公告日：20101014;?

状态代码：REF;?

法律状态：CORRESPONDS TO:描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;EPCorresponding Publication Number:;602004028943Corresponding Authority:;DECorresponding Publication Date:;20101014法律状态公告日：20110810;?

状态效果：+;?

状态代码：26N;?

法律状态：NO OPPOSITION FILED描述信息：Docdb Publication Number:; EP 1652194A2Effective Date:;20110606法律状态公告日：20111006;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;DEDesignated State Event Code:;R097Designated State Description:;NO OPPOSITION FILED AGAINST GRANTED PATENT, OR EPO OPPOSITION PROCEEDINGS CONCLUDED WITHOUT DECISIONCorresponding Publication Number:;602004028943Corresponding Authority:;DEEffective Date:;20110606法律状态公告日：20160613;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;13法律状态公告日：20170613;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;14法律状态公告日：20180612;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;FRDesignated State Event Code:;PLFPDesignated State Description:;FEE PAYMENTFee Payment-year:;15法律状态公告日：20180831;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;FRPayment Date:;20180612Fee Payment-year:;15法律状态公告日：20181031;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;DEPayment Date:;20180626Fee Payment-year:;15法律状态公告日：20181130;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1652194A2Designated State Authority:;GBPayment Date:;20180704Fee Payment-year:;15

**351、Using the accumulated high density of exciting photon band gap trappositronium**

摘要：A device is provided that can capture and store electrically neutral excited species of antimatter or exotic matter (a mixture of antimatter and ordinary matter), in particular, excited positronium (Ps\*). The antimatter trap comprises a three-dimensional or two-dimensional photonic bandgap (PBG) structure containing at least one cavity therein. The species are stored in the cavity or in an array of cavities. The PBG structure blocks premature annihilation of the excited species by preventing decays to the ground state and by blocking the pickoff process. A Bose-Einstein Condensate form of Ps\* can be used to increase the storage density. The long lifetime and high storage density achievable in this device offer utility in several fields, including medicine, materials testing, rocket motors, high power/high energy density storage, gamma-ray lasers, and as an ignition device for initiating nuclear fusion reactions in power plant reactors or hybrid rocket propulsion systems.

公开（公告）号：[JP2007500349A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYs0Xeh%2BDTMqGGuxfaWZrjp&local=zh)

公开（公告）日：2007-01-11

申请号：JP2006521861

申请日：2004-07-09

申请人：Raytheon Company

法律状态：法律状态公告日：20070510;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2007500349A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20070509法律状态公告日：20100714;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2007500349A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20100713法律状态公告日：20101208;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2007500349A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20101207

**352、HIGH DENSITY STORAGE OF EXCITED POSITRONIUM USING PHOTONIC BANDGAP TRAPS**

摘要：A device is provided that can capture and store electrically neutral excited species (16) of antimatter or exotic matter (a mixture of antimatter and ordinary matter), in particular excited positronium (Ps\*) (16). The antimatter trap comprises a three-dimensional or two-dimensional photonic bandgap (PBG) structure (14) containing at least one cavity (10) therein. The species (16) are stored in the cavity (10) or in an array (110) of cavities (10). The PBG structure (14) blocks premature annihilation of the excited species (16) by preventing decays to the ground state and by blocking the pickoff process. A Bose-Einstein Condensate form of Ps\* (16) can be used to increase the storage density. The long lifetime and high storage density achievable in this device offer utility in several fields, including medicine, materials testing, rocket motors, high power/high energy density storage, gamma-ray lasers, and as an ignition device for initiating nuclear fusion reactions in power plant reactors or hybrid rocket propulsion systems.

公开（公告）号：[WO2005013287A2](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU5%2FjODPCNpVLHtd8LfwwKeV&local=zh)

公开（公告）日：2005-02-10

申请号：WOUS04021894

申请日：2004-07-09

申请人：RAYTHEON CO

法律状态：法律状态公告日：20050210;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 2005013287A3Corresponding Kind:;A2Legal Designated States:;AE;AG;AL;AM;AT;AU;AZ;BA;BB;BG;BR;BW;BY;BZ;CA;CH;CN;CO;CR;CU;CZ;DE;DK;DM;DZ;EC;EE;EG;ES;FI;GB;GD;GE;GH;GM;HR;HU;ID;IL;IN;IS;JP;KE;KG;KP;KR;KZ;LC;LK;LR;LS;LT;LU;LV;MA;MD;MG;MK;MN;MW;MX;MZ;NA;NI;NO;NZ;OM;PG;PH;PL;PT;RO;RU;SC;SD;SE;SG;SK;SL;SY;TJ;TM;TN;TR;TT;TZ;UA;UG;US;UZ;VC;VN;YU;ZA;ZM;ZW;法律状态公告日：20050210;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 2005013287A3Corresponding Kind:;A2Legal Designated States:;GM;KE;LS;MW;MZ;NA;SD;SL;SZ;TZ;UG;ZM;ZW;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HU;IE;IT;LU;MC;NL;PL;PT;RO;SE;SI;SK;TR;BF;BJ;CF;CG;CI;CM;GA;GN;GQ;GW;ML;MR;NE;SN;TD;TG;法律状态公告日：20050406;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2005013287A3法律状态公告日：20051207;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2005013287A3Corresponding Publication Number:;2004756788Corresponding Authority:;EP法律状态公告日：20060116;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2005013287A2Corresponding Publication Number:;2006521861Corresponding Authority:;JPCorresponding Kind:;A法律状态公告日：20060116;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2005013287A3Corresponding Publication Number:;2006521861Corresponding Authority:;JP法律状态公告日：20060503;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 2005013287A3Corresponding Publication Number:;2004756788Corresponding Authority:;EP

**353、铁电元件之制造方法及铁电材料之热处理方法**

摘要：本发明提供一种铁电元件之制造方法及铁电材料之热处理方法，系在形成铁电薄膜之後，采用低能量之雷射退火为第一阶段处理，以使铁电薄膜表面形成结晶核并改善薄膜内应力状态，接着施以高能量之第二阶段热处理，以大幅改善整体铁电薄膜结晶结构，进而获得良好之铁电特性。因此本发明提供一种低制程温度及低热应力之铁电材料热处理方法，可有效降低交互扩散及低熔点成分的挥发，具有高可靠、低热处理成本、快速热处理、元件产出效率高等功效。

公开（公告）号：[TW200600601A](https://www.incopat.com/detail/init2?formerQuery=EIuEa2K8lNx4SyeMWeItZmr4kAd0KKkg&local=zh)

公开（公告）日：2006-01-01

申请号：TW093118990

申请日：2004-06-29

申请人：国立交通大学

**354、Fusion apparatus and methods**

摘要：Improved apparatus adapted to utilize available fuels and components to produce practical nuclear fusion in a comparatively confined space. In an exemplary embodiment, one or more glass fibers are used as a containment medium for the nuclear fuel (e.g., Deuterium or Lithium). The fibers are also optionally tapered and porous in order to permit introduction of gaseous fuel along a portion of their length. A high-intensity energy source (e.g., pulsed femto-second laser) is used to excite and contain the fuel to fusion temperature through, inter alia, pondermotive forces generated within the fiber(s). The effluent from the device can be used for any number of purposes, such as to drive a magneto-hydrodynamic generator in order to generate electricity.

公开（公告）号：[AU2004252873A1](https://www.incopat.com/detail/init2?formerQuery=hWvsrKaKkiWqCSvcn5xt6vNkPtwy7rjn&local=zh)

公开（公告）日：2005-01-06

申请号：AU2004252873

申请日：2004-06-12

申请人：LOWELL ROSEN

法律状态：法律状态公告日：20090312;?

状态效果：-;?

状态代码：MK5;?

法律状态：APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED描述信息：Docdb Publication Number:; AU 2004252873A1

**355、FUSION APPARATUS AND METHODS**

摘要：Improved apparatus adapted to utilize available fuels and components to produce practical nuclear fusion in a comparatively confined space. In an exemplary embodiment, one or more glass fibers are used as a containment medium for the nuclear fuel (e.g., Deuterium or Lithium). The fibers are als o optionally tapered and porous in order to permit introduction of gaseous fue l along a portion of their length. A high-intensity energy source (e.g., pulse d femto-second laser) is used to excite and contain the fuel to fusion temperature through, inter alia, pondermotive forces generated within the fiber(s). The effluent from the device can be used for any number of purpose s, such as to drive a magneto-hydrodynamic generator in order to generate electricity.

公开（公告）号：[CA2529163A1](https://www.incopat.com/detail/init2?formerQuery=w78bK7hUkorTqRjuMs9L8vR0OjOTHMZL&local=zh)

公开（公告）日：2005-01-06

申请号：CA2529163

申请日：2004-06-12

申请人：GAZDZINSKI ROBERT F; ROSEN LOWELL

法律状态：法律状态公告日：20051213;?

状态效果：+;?

状态代码：EEER;?

法律状态：EXAMINATION REQUEST描述信息：Docdb Publication Number:; CA 2529163A1法律状态公告日：20080612;?

状态效果：-;?

状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2529163A1

**356、FUSION APPARATUS AND METHODS**

摘要：Improved apparatus adapted to utilize available fuels and components to produce practical nuclear fusion in a comparatively confined space. In an exemplary embodiment, one or more glass fibers are used as a containment medium for the nuclear fuel (e.g., Deuterium or Lithium). The fibers are also optionally tapered and porous in order to permit introduction of gaseous fuel along a portion of their length. A high-intensity energy source (e.g., pulsed femto-second laser) is used to excite and contain the fuel to fusion temperature through, inter alia, pondermotive forces generated within the fiber(s). The effluent from the device can be used for any number of purposes, such as to drive a magneto-hydrodynamic generator in order to generate electricity.

公开（公告）号：[EP1642301A2](https://www.incopat.com/detail/init2?formerQuery=M2sWWgSx5uNhNJiSaxbPFPR0OjOTHMZL&local=zh)

公开（公告）日：2006-04-05

申请号：EP04754972

申请日：2004-06-12

申请人：Rosen Lowell; Gazdzinski Robert F

法律状态：法律状态公告日：20060920;?

状态代码：DAX;?

法律状态：EXTENSION OF THE EUROPEAN PATENT TO (DELETED)描述信息：Docdb Publication Number:; EP 1642301A2法律状态公告日：20061220;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 1642301A2Ipc:;G21B 1/00 20060101AFI20061114BHEP法律状态公告日：20061220;?

状态代码：RIC1;?

法律状态：CLASSIFICATION (CORRECTION)描述信息：Docdb Publication Number:; EP 1642301A2Ipc:;H05H 1/22 20060101ALI20061114BHEP法律状态公告日：20070530;?

状态效果：-;?

状态代码：18W;?

法律状态：WITHDRAWN描述信息：Docdb Publication Number:; EP 1642301A2Effective Date:;20070417

**357、FUSION APPARATUS AND METHODS**

摘要：Improved apparatus adapted to utilize available fuels and components to produce practical nuclear fusion in a comparatively confined space. In an exemplary embodiment, one or more glass fibers are used as a containment medium for the nuclear fuel (e.g., Deuterium or Lithium). The fibers are also optionally tapered and porous in order to permit introduction of gaseous fuel along a portion of their length. A high-intensity energy source (e.g., pulsed femto-second laser) is used to excite and contain the fuel to fusion temperature through, inter alia, pondermotive forces generated within the fiber(s). The effluent from the device can be used for any number of purposes, such as to drive a magneto-hydrodynamic generator in order to generate electricity.

公开（公告）号：[WO2005001845A2](https://www.incopat.com/detail/init2?formerQuery=N7X%2BMI4YxU7PD1kaYs4dPXtd8LfwwKeV&local=zh)

公开（公告）日：2005-01-06

申请号：WOUS04018553

申请日：2004-06-12

申请人：ROSEN LOWELL; GAZDZINSKI ROBERT F

法律状态：法律状态公告日：20050106;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Authority:;WOCorresponding Kind:;A2Legal Designated States:;AE;AG;AL;AM;AT;AU;AZ;BA;BB;BG;BR;BW;BY;BZ;CA;CH;CN;CO;CR;CU;CZ;DE;DK;DM;DZ;EC;EE;EG;ES;FI;GB;GD;GE;GH;GM;HR;HU;ID;IL;IN;IS;JP;KE;KG;KP;KR;KZ;LC;LK;LR;LS;LT;LU;LV;MA;MD;MG;MK;MN;MW;MX;MZ;NA;NI;NO;NZ;OM;PG;PH;PL;PT;RO;RU;SC;SD;SE;SG;SK;SL;SY;TJ;TM;TN;TR;TT;TZ;UA;UG;US;UZ;VC;VN;YU;ZA;ZM;ZW;法律状态公告日：20050106;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Authority:;WOCorresponding Kind:;A2Legal Designated States:;GM;KE;LS;MW;MZ;NA;SD;SL;SZ;TZ;UG;ZM;ZW;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HU;IE;IT;LU;MC;NL;PL;PT;RO;SE;SI;SK;TR;BF;BJ;CF;CG;CI;CM;GA;GN;GQ;GW;ML;MR;NE;SN;TD;TG;法律状态公告日：20050302;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2005001845A2法律状态公告日：20050929;?

状态代码：DPEN;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED FROM 20040101)描述信息：Docdb Publication Number:; WO 2005001845A2法律状态公告日：20051213;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Publication Number:;2529163Corresponding Authority:;CA法律状态公告日：20060111;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Publication Number:;2004754972Corresponding Authority:;EP法律状态公告日：20060112;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Publication Number:;2004252873Corresponding Authority:;AU法律状态公告日：20060202;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Publication Number:;2004252873Corresponding Authority:;AUCorresponding Publication Date:;20040612Corresponding Kind:;A法律状态公告日：20060405;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Publication Number:;2004754972Corresponding Authority:;EP法律状态公告日：20070417;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 2005001845A2Corresponding Publication Number:;2004754972Corresponding Authority:;EP

**358、一种具有高增益系数的透明钒酸盐玻璃及其制备方法**

摘要：本发明为一种新型的掺杂稀土离子 Nd3+的透明钒酸盐玻璃系列： V2O5－SiO2－ MO(CaO+BaO+SrO)－ X2O(Na2O+K2O+Cs2O)－ Nd2O3。与以往掺杂Nd3+的各类基 质相比该类玻璃具有最高的增益系数和良好的光学性能，是极 佳的激光束放大候选材料，有望使高能核聚变模拟实验的超强 激光系统实现其物理指标、降低系统成本、提高系统效率。

公开（公告）号：[CN1583621A](https://www.incopat.com/detail/init2?formerQuery=72FiLEY5B0Xa%2FOB4xKNu2g%3D%3D&local=zh)

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申请号：CN200410024709.1

申请日：2004-05-27

申请人：复旦大学

法律状态：法律状态公告日：20050223;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20060531;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20050622;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20100804;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):C03C 3/062;申请日:20040527;授权公告日:20060531;?

**359、一种新型透明钒酸盐玻璃及其制备方法**

摘要：本发明为一种新型的透明钒酸盐玻璃及其制备 方法。该玻璃以传统的钒酸盐玻璃 V2O5－SiO2为基础，再添加碱金 属氧化物 Na2O+K2O+Cs2O和碱土金属氧 化物CaO+BaO+SrO。该玻璃在纯度为99％以上的氧气环境下 制备。与不透明的传统钒酸盐玻璃相比，该类玻璃在可见光区 段具有相当高的透过性，是极佳的光纤激光器候选材料，可促 进高能核聚变模拟实验的超强激光系统实现其物理指标、降低 系统成本、提高系统效率。

公开（公告）号：[CN1569705A](https://www.incopat.com/detail/init2?formerQuery=72FiLEY5B0W1%2Bob27d2w%2BA%3D%3D&local=zh)

公开（公告）日：2005-01-26

申请号：CN200410018032.0

申请日：2004-04-29

申请人：复旦大学

法律状态：法律状态公告日：20050126;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20060315;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20050706;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20080625;?

法律状态：专利权的终止(未缴年费专利权终止);?

描述信息：专利权的终止(未缴年费专利权终止)授权公告日：2006.3.15;?

**360、The storage and delivery system for gases**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

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公开（公告）日：2009-06-17

申请号：JP2004131478

申请日：2004-04-27

申请人：ADVANCED TECHNOL MATERIALS INC

法律状态：法律状态公告日：20060222;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20060222法律状态公告日：20060317;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20060316法律状态公告日：20060616;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20060615法律状态公告日：20060621;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20060620法律状态公告日：20060913;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20060912法律状态公告日：20070302;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20070301法律状态公告日：20070628;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20070627法律状态公告日：20070720;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20070622法律状态公告日：20070725;?

状态代码：A911;?

法律状态：TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A911Effective Date:;20070724法律状态公告日：20071009;?

状态效果：-;?

状态代码：A912;?

法律状态：REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A912Effective Date:;20071005法律状态公告日：20081017;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20081016法律状态公告日：20081022;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20081021法律状态公告日：20081115;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20081114法律状态公告日：20081120;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20081119法律状态公告日：20090219;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01法律状态公告日：20090319;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20090311法律状态公告日：20090319;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;PAYMENT UNTIL: 20120319Fee Payment-year:;3法律状态公告日：20090319;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20120301;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;PAYMENT UNTIL: 20120319Fee Payment-year:;3法律状态公告日：20120306;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;PAYMENT UNTIL: 20130319Fee Payment-year:;4法律状态公告日：20130228;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;PAYMENT UNTIL: 20130319Fee Payment-year:;4法律状态公告日：20130305;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;PAYMENT UNTIL: 20140319Fee Payment-year:;5法律状态公告日：20140311;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150310;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150610;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313111法律状态公告日：20150715;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2004278799A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20151013;?

状态效果：-;?

状态代码：EXPY;?

法律状态：CANCELLATION BECAUSE OF COMPLETION OF TERM描述信息：Docdb Publication Number:; JP 2004278799A

**361、EQUIPMENT FOR THE MANUFACTURE OF MICROSCOPICAL PARTICLES AND NANOSCOPICAS BY MEANS OF A LASER OF CUTS; PROCEDURES OF OBTAINING OF THESE PARTICLES; PARTICLES OBTAINED BY MEANS OF THE PROCEDURES OF OBTAINING AND THE USE OF THESE PARTICLES**

摘要：Necessary equipment for the microscopic or nanoscópicas particle obtaining. They obtain a special type of massive or hollow particles, by means of a process for the manufacture of particles mentioned by means of laser. A consistent equipment of a laser of suitable power is used to produce fusion of the material with which they are desired to obtain particles. The eroded material takes shelter in a container to avoid its contamination with other substances and manipulation. Metallurgy, ceramic industry, glasses, refractory, nuclear fuel powder metallurgy, production, production of amorphous materials, medicine and pharmacology. Also in ferro-electric, nuclear and dielectric the processes in which they are needed with special magnetic properties, own of fine fine powders and extreme. They are alternatives that in the surrounding atmosphere to the process region exist all type of gases or liquids. As far as the materials to elaborate : metallic alloys, oxides, carbides, nitrides, glasses, ceramic, refractory, material of nuclear use, magnetic and amorphous. It can not be used harvesting cameras. The advance mechanisms can be modified, adding themselves other secondary movements, or incorporating electronic or electromechanical systems of control.

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公开（公告）日：2005-08-24

申请号：ARP040101421

申请日：2004-04-26

申请人：CONSEJO NACIONAL DE INVESTIGACIONES CIENTIFICAS YTECNICAS (CONICET)

**362、掺杂Yb3+的重金属氧化物玻璃及其制备方法**

摘要：本发明为一种掺杂 Yb3+的具有高增益系数的重金 属氧化物玻璃及其制备方法。它由 (K2O+Na2O+Li2O)－ Ga2O3－ A2O5掺入稀土离子Yb3+而组成， A为Nb和Ta之一种。与以往掺杂 Yb3+的各类基质相比，该类玻璃 具有很高的增益系数和良好的光学性能，是极佳的激光束放大 候选材料，可使高能核聚变模拟实验的超强激光系统实现其物 理指标、降低系统成本、提高系统效率。

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公开（公告）日：2005-01-12

申请号：CN200410017209.5

申请日：2004-03-25

申请人：复旦大学

法律状态：法律状态公告日：20050112;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20060531;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20050629;?

法律状态：实质审查的生效;?

描述信息：;?

法律状态公告日：20100804;?

法律状态：专利权的终止;?

描述信息：未缴年费专利权终止IPC(主分类):C03C 3/12;申请日:20040325;授权公告日:20060531;?

**363、TARGET AND IGNITION METHOD FOR NUCLEAR FUSION**

摘要：PROBLEM TO BE SOLVED : To provide a target and an ignition method for nuclear fusion which enable the efficient ignition for the nuclear fusion reaction of fuel.SOLUTION : The target 1 for nuclear fusion comprises a main fuel layer 11 placed so as to surround the first domain when viewed from the central part C; a main fuel section 10 which has an ablator layer 12 placed on the outer periphery of the layer 1; and a section 20 for the fuel to be ignited which has a layer 21 of a fuel to be ignited placed for the second domain other than the first domain when viewed from the central part C and an ablator layer 22 placed on the outer periphery of the layer 21. The target has an opening 31, a corn member 30 which separates the fuel sections 10 and 20 is formed and the layer 21 of the fuel to be ignited is so constituted that it can be guided to the central part C through the opening 31 when it is irradiated with laser light.

公开（公告）号：[JP2005241462A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXaCEGuMPWW8RmGuxfaWZrjp&local=zh)

公开（公告）日：2005-09-08

申请号：JP2004052164

申请日：2004-02-26

申请人：MURAKAMI MASAKATSU; HAMAMATSU PHOTONICS KK

法律状态：法律状态公告日：20070210;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20070209法律状态公告日：20071213;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20071213法律状态公告日：20071213;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 4081029B2法律状态公告日：20080109;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20080108法律状态公告日：20080214;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20080207法律状态公告日：20080215;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;PAYMENT UNTIL: 20110215Fee Payment-year:;3法律状态公告日：20080215;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20110118;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;PAYMENT UNTIL: 20120215Fee Payment-year:;4法律状态公告日：20120119;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;PAYMENT UNTIL: 20120215Fee Payment-year:;4法律状态公告日：20120124;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;PAYMENT UNTIL: 20130215Fee Payment-year:;5法律状态公告日：20130122;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;PAYMENT UNTIL: 20140215Fee Payment-year:;6法律状态公告日：20140121;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150120;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20160119;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20170124;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4081029B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250

**364、NUCLEAR FUSION REACTOR AND METHOD**

摘要：A nuclear fusion reactor (10) comprising a spherical reaction chamber (20) with a mirrored (30) interior surface (22A) filled with a nuclear fusible and laser active gaseous medium (G) such as deuterium. Using rapid gaseous expansion caused by a timed and focused pulsed laser source (32) and/or timed oscillations from a piezoelectric transducer (42), a spherical acoustic wave pattern (W) centered within the reaction chamber (20) is created at or near a desired frequency. The acoustic wave pattern (W) produces an intensely focused central region with a centered spherical gaseous wave of enhanced density, pressure, and temperature. Adiabatic acoustic compressions over the central region cause ionization and radiation to occur. This radiation and subsequent population inversion within the spherical mirrored (30) chamber (20) activate a radial laser pulse (34A) which focuses on the core of the high density plasma at the center (C) of the reaction chamber (20). This radial laser pulse (34A) acting on the enhanced pressure and density of the central wave produces nuclear ignition of the plasma and fusion. The kinetic and radiant energy from fusion further energizes and drives the acoustic process which allows for a self-sustaining recurring ignition temperature plasma requiring the addition of fuel only.

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公开（公告）日：2004-08-05

申请号：WOUS04000938

申请日：2004-01-14

申请人：ENGINGER ARTHUR L

法律状态：法律状态公告日：20040805;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 2004066310A2Corresponding Kind:;A2Legal Designated States:;AE;AG;AL;AM;AT;AU;AZ;BA;BB;BG;BR;BW;BY;BZ;CA;CH;CN;CO;CR;CU;CZ;DE;DK;DM;DZ;EC;EE;EG;ES;FI;GB;GD;GE;GH;GM;HR;HU;ID;IL;IN;IS;JP;KE;KG;KP;KR;KZ;LC;LK;LR;LS;LT;LU;LV;MA;MD;MG;MK;MN;MW;MX;MZ;NA;NI;NO;NZ;OM;PG;PH;PL;PT;RO;RU;SC;SD;SE;SG;SK;SL;SY;TJ;TM;TN;TR;TT;TZ;UA;UG;US;UZ;VC;VN;YU;ZA;ZM;ZW;法律状态公告日：20040805;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 2004066310A3Corresponding Kind:;A2Legal Designated States:;AE;AG;AL;AM;AT;AU;AZ;BA;BB;BG;BR;BW;BY;BZ;CA;CH;CN;CO;CR;CU;CZ;DE;DK;DM;DZ;EC;EE;EG;ES;FI;GB;GD;GE;GH;GM;HR;HU;ID;IL;IN;IS;JP;KE;KG;KP;KR;KZ;LC;LK;LR;LS;LT;LU;LV;MA;MD;MG;MK;MN;MW;MX;MZ;NA;NI;NO;NZ;OM;PG;PH;PL;PT;RO;RU;SC;SD;SE;SG;SK;SL;SY;TJ;TM;TN;TR;TT;TZ;UA;UG;US;UZ;VC;VN;YU;ZA;ZM;ZW;法律状态公告日：20040805;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 2004066310A2Corresponding Kind:;A2Legal Designated States:;BW;GH;GM;KE;LS;MW;MZ;SD;SL;SZ;TZ;UG;ZM;ZW;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HU;IE;IT;LU;MC;NL;PT;RO;SE;SI;SK;TR;BF;BJ;CF;CG;CI;CM;GA;GN;GQ;GW;ML;MR;NE;SN;TD;TG;法律状态公告日：20040805;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 2004066310A3Corresponding Kind:;A2Legal Designated States:;BW;GH;GM;KE;LS;MW;MZ;SD;SL;SZ;TZ;UG;ZM;ZW;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HU;IE;IT;LU;MC;NL;PT;RO;SE;SI;SK;TR;BF;BJ;CF;CG;CI;CM;GA;GN;GQ;GW;ML;MR;NE;SN;TD;TG;法律状态公告日：20041117;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2004066310A2法律状态公告日：20041117;?

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法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 2004066310A3法律状态公告日：20060301;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APP. NOT ENT. EUROP. PHASE描述信息：Docdb Publication Number:; WO 2004066310A3

**365、METHOD FOR GENERATING HIGH-TEMPERATURE HIGH-DENSITY PLASMA BY CUSP CROSS-SECTION PINCH**

摘要：A means for generating a high-temperature, high-density plasma having a long duration and exhibiting excellent uniformity and stability available as the nuclear fusion reaction plasma such as a high-temperature, high-density plasma source, various high-luminance light sources and lasers of wavelength region from ultraviolet to X-ray or a powerful neutron source. Two sets or more of flat sheet Z pinch generator produced by elongating a coaxial gun or a plasma focus unit having an anode and a cathode arranged coaxially are disposed oppositely around the axis of a plasma column being generated. Two sets or more of sheet Z pinch plasma generated by discharging a large current are combined in the vicinity of the axis to generate a cusp cross-section Z pinch plasma column, thus generating a high-temperature, high-density plasma for use in various applications.

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申请号：WOJP03014580

申请日：2003-11-17

申请人：MIYAMOTO, Tetsu

法律状态：法律状态公告日：20060518;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2005048662A1Designated State Authority:;DE法律状态公告日：20061227;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APP. NOT ENT. EUROP. PHASE描述信息：Docdb Publication Number:; WO 2005048662A1法律状态公告日：20070109;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 2005048662A1Designated State Authority:;JP法律状态公告日：20070109;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 2005048662A1Corresponding Authority:;JP

**366、Laser immunoreactive surfactin composition and to a method for regulating**

摘要：The present invention provides a fusion polypeptide which can bind to a cell surface binding moiety (e.g., a carbohydrate) and server as a ligand for a cell surface polypeptide, as well as a vector comprising a nucleic acid encoding for such a fusion polypeptide, and a host cell comprising such nucleic acid. The present invention also provides a composition comprising an antigen bearing target and such a fusion polypeptide, as well as a composition comprising a virus or a cell and such a fusion polypeptide. The present invention further relates to a method of modulating an immune response in an animal using such compositions.

公开（公告）号：[JP2006517512A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYOzJ9jQFjs%2F2GuxfaWZrjp&local=zh)

公开（公告）日：2006-07-27

申请号：JP2004531131

申请日：2003-08-20

申请人：Trix Geneva LLC Thief500543878

法律状态：法律状态公告日：20060818;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20060817法律状态公告日：20060818;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20060817法律状态公告日：20060829;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20060817法律状态公告日：20100203;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20100202法律状态公告日：20100429;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20100428法律状态公告日：20100512;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20100511法律状态公告日：20100730;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20100729法律状态公告日：20110608;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20110607法律状态公告日：20110906;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20110905法律状态公告日：20110913;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20110912法律状态公告日：20111007;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20111006法律状态公告日：20111027;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 4892705B2法律状态公告日：20111102;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20111101法律状态公告日：20111104;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01法律状态公告日：20111129;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20111128法律状态公告日：20111208;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20111129法律状态公告日：20111214;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20111128法律状态公告日：20120106;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20120112;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;PAYMENT UNTIL: 20150106Fee Payment-year:;3法律状态公告日：20150113;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20160112;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20170110;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20180109;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 4892705B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R250

**367、High density storage of excited positronium using photonic bandgap traps**

摘要：A device is provided that can capture and store electrically neutral excited species of antimatter or exotic matter (a mixture of antimatter and ordinary matter), in particular, excited positronium (Ps\*). The antimatter trap comprises a three-dimensional or two-dimensional photonic bandgap (PBG) structure containing at least one cavity therein. The species are stored in the cavity or in an array of cavities. The PBG structure blocks premature annihilation of the excited species by preventing decays to the ground state and by blocking the pickoff process. A Bose-Einstein Condensate form of Ps\* can be used to increase the storage density. The long lifetime and high storage density achievable in this device offer utility in several fields, including medicine, materials testing, rocket motors, high power/high energy density storage, gamma-ray lasers, and as an ignition device for initiating nuclear fusion reactions in power plant reactors or hybrid rocket propulsion systems.

公开（公告）号：[US6813330B1](https://www.incopat.com/detail/init2?formerQuery=mcJtX9FdtElMbIEtLGYOT%2FR0OjOTHMZL&local=zh)

公开（公告）日：2004-11-02

申请号：US10630077

申请日：2003-07-28

申请人：Raytheon Company

法律状态：法律状态公告日：20030728;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 6813330B1New Owner:;RAYTHEON COMPANY, MASSACHUSETTSFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BARKER, DELMAR L.;SHAH, NITESH N.;SCHMITT, HARRY A.;REEL/FRAME:014354/0926;SIGNING DATES FROM 20030716 TO 20030723法律状态公告日：20080423;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6813330B1Fee Payment-year:;4法律状态公告日：20120411;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6813330B1Fee Payment-year:;8法律状态公告日：20160420;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6813330B1Fee Payment-year:;12

**368、NUCLEAR FUSION IGNITION METHOD**

摘要：PROBLEM TO BE SOLVED : To effectively achieve a nuclear fusion ignition on a high density plasma, in an inertia confinement nuclear fusion.SOLUTION : A laser beam, an electron beam, an ion beam or the like is projected on a spherical target containing a hydrogen isotope such as deuterated polyethylene to implode the target and create a high density plasma. An ion beam of an ion isotope having a mass number the same as the mass number of the hydrogen isotope in the plasma is projected on the high density plasma to raise the ion temperature of hydrogen isotope ions in the high density plasma. A nuclear fusion reaction of the hydrogen isotopes with each other is ignited by raising the ion temperature to a temperature of one hundred million degrees or higher. Energy not less than energy inputted can be outputted by the nuclear fusion reaction through further propagation of the nuclear fusion reaction.

公开（公告）号：[JP2005024473A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXai%2Bm1SrcRFSmGuxfaWZrjp&local=zh)

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申请号：JP2003205858

申请日：2003-06-30

申请人：INAI MOTOHIKO

法律状态：法律状态公告日：20060704;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2005024473AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20060606法律状态公告日：20071126;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2005024473AFree Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20071126法律状态公告日：20071204;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2005024473AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20071204法律状态公告日：20080311;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2005024473AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20080311

**369、METHOD AND SYSTEM FOR PROVIDING A THIN FILM WITH A CONTROLLED CRYSTAL ORIENTATION USING PULSED LASER INDUCED MELTING AND NUCLEATION-INITIATED CRYSTALLIZATION**

摘要：Method and system for generating a metal thin film with a uniform crystalline orientation and a controlled crystalline microstructure are provided. For example, a metal layer is irradiated with a pulsed laser to completely melt the film throughout its entire thickness. The metal layer can then resolidify to form grains with a substantially uniform orientation. The resolidified metal layer can be irradiated with a sequential lateral solidification technique to modify the crystalline microstructure (e.g., create larger grains, single-crystal regions, grain boundary controlled microstructures, etc.) The metal layer can be irradiated by patterning a beam using a mask which includes a first region capable of attenuating the pulsed laser and a second region allowing complete irradiation of sections of the thin film being impinged by the masked laser beam. An inverse dot-patterned mask can be used, the microstructure that may have substantially the same as the geometric pattern as that of the dots of the mask.

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申请号：WOUS03009861

申请日：2003-04-01

申请人：UNIV COLUMBIA; IM JAMES S; CHOI JAE BEOM

法律状态：法律状态公告日：20031016;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 03084688A2Corresponding Authority:;WOCorresponding Kind:;A2Legal Designated States:;AE;AG;AL;AM;AT;AU;AZ;BA;BB;BG;BR;BY;BZ;CA;CH;CN;CO;CR;CU;CZ;DE;DK;DM;DZ;EC;EE;ES;FI;GB;GD;GE;GH;GM;HR;HU;ID;IL;IN;IS;JP;KE;KG;KP;KR;KZ;LC;LK;LR;LS;LT;LU;LV;MA;MD;MG;MK;MN;MW;MX;MZ;NI;NO;NZ;OM;PH;PL;PT;RO;RU;SC;SD;SE;SG;SK;SL;TJ;TM;TN;TR;TT;TZ;UA;UG;US;UZ;VC;VN;YU;ZA;ZM;ZW;法律状态公告日：20031016;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 03084688A2Corresponding Authority:;WOCorresponding Kind:;A2Legal Designated States:;GH;GM;KE;LS;MW;MZ;SD;SL;SZ;TZ;UG;ZM;ZW;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;AT;BE;BG;CH;CY;CZ;DE;DK;EE;ES;FI;FR;GB;GR;HU;IE;IT;LU;MC;NL;PT;RO;SE;SI;SK;TR;BF;BJ;CF;CG;CI;CM;GA;GN;GQ;GW;ML;MR;NE;SN;TD;TG;法律状态公告日：20031210;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 03084688A2法律状态公告日：20040929;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 03084688A2Corresponding Publication Number:;10953312Corresponding Authority:;US法律状态公告日：20050608;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 03084688A2法律状态公告日：20060112;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 03084688A2Corresponding Publication Number:;10953312Corresponding Authority:;US法律状态公告日：20060627;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 03084688A2Designated State Authority:;JP法律状态公告日：20060627;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 03084688A2

**370、Nuclear fusion reactor and method**

摘要：A nuclear fusion reactor comprising a spherical reaction chamber with a mirrored interior surface filled with a nuclear fusible and laser active gaseous medium such as deuterium. Using rapid gaseous expansion caused by a focused pulsed laser source and/or timed oscillations from piezoelectric transducer, a harmonic spherical acoustic wave pattern centered within the reaction chamber is created. This wave pattern is created near a desired frequency and centered in the sphere. The wave pattern contains a central gaseous ball of high-density, pressure, and temperature that causes ionization and radiation to occur. This radiation causes the mirrored chamber to activate a spherical laser effect focused on the high pressure plasma at the center of the reaction chamber. This spherical laser pulse acting on high pressure high-density of the central standing wave produces ignition of the gas and fusion. The tremendous energy from fusion drives the acoustic process which ideally allows for a self sustaining ignition temperature plasma requiring the addition of fuel only.

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公开（公告）日：2004-07-22

申请号：US10342476

申请日：2003-01-16

申请人：ENFINGER ARTHUR L

**371、METHOD AND APPARATUS FOR MAKING CRYOGENIC CLUSTER/SLUSH GAS TARGET**

摘要：PROBLEM TO BE SOLVED : To provide a method for making a cryogenic cluster/slush gas target enabling efficient generation of a femto second electron induced by a plasma cathode by driving a femto second laser beam into a target by a bench-top laser system and efficient generation of a femto second neutron via a D+D nuclear fusion reaction induced by driving the above laser beam.SOLUTION : The apparatus for making the cryogenic cluster/slush gas target comprises an upper structure 10 having a supercriticality creating chamber 10, a pressure reduction chamber for making the slush gas, a heat insulation means 16 provided between the upper structure 10 and the pressure reduction chamber 20 and a laser beam radiation port 21.

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公开（公告）日：2003-11-28

申请号：JP2002143821

申请日：2002-05-17

申请人：NATL INST RADIOLOGICAL SCIENCE; MAEKAWA SEISAKUSHO KK; UNIV TOKYO

法律状态：法律状态公告日：20040426;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20040423法律状态公告日：20060310;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20060310法律状态公告日：20060529;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20060526法律状态公告日：20060726;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20060725法律状态公告日：20060815;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20060814法律状态公告日：20060815;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A712Effective Date:;20060814法律状态公告日：20060815;?

状态代码：RD02;?

法律状态：NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7422Effective Date:;20060814法律状态公告日：20060909;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20060814法律状态公告日：20061004;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2003337200A 法律状态公告日：20061016;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20061013法律状态公告日：20061109;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20061102法律状态公告日：20061117;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20091027;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20101117Fee Payment-year:;4法律状态公告日：20091112;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20101117Fee Payment-year:;4法律状态公告日：20091125;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20101117Fee Payment-year:;4法律状态公告日：20101102;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20111117Fee Payment-year:;5法律状态公告日：20111206;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20121117Fee Payment-year:;6法律状态公告日：20120420;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313117法律状态公告日：20120501;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20121117Fee Payment-year:;6法律状态公告日：20120501;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20120511;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;PAYMENT UNTIL: 20121117Fee Payment-year:;6法律状态公告日：20160622;?

状态代码：S533;?

法律状态：WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF NAME描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313533法律状态公告日：20160907;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2003337200A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350

**372、Nuclear fusion reactor produces progressive reaction in conical filament-like reactor fuel using laser pulses**

摘要：A nuclear fusion reactor produces a progressive reaction in the conical filament-like reactor fuel using laser pulses. Preferred Features : The laser pulse has a power of more than 100 Terawatts. The filament is vertically guided into the reactor vessel in c controlled manner by accelerating one end of the filament using a molecule or ions deflected against the flow direction. The charged reaction products run against a spherically symmetrical potential.

公开（公告）号：[DE10208515A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4927kkXO7lF2CMGr4kAd0KKkg&local=zh)

公开（公告）日：2003-10-16

申请号：DE10208515

申请日：2002-02-28

申请人：Hora, Heinrich, Prof. Dr. Dr.

法律状态：法律状态公告日：20090528;?

状态效果：-;?

状态代码：8141;?

法律状态：DISPOSAL/NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; DE 10208515A1

**373、Interstellar transport vehicle engine**

摘要：This Patent Application is a 10-year culmination of my efforts to create an interstellar transport vehicle engine, and have finally arrived at providing a new means of transportation for distances outside our known solar system. This vehicle creates matter on its own providing a foothold in space by ejecting antimatter for propulsion. However, I have gone farther than that by creating an engine that annihilates the antimatter with another generated matter for the safety of our human environment and to maximize matter-antimatter particle reactions for greater propulsion in space. With the Catalasan Nuclear Fusion Reactor coupled with two Electro-Nucleo Genesoids, this engine can travel to the far reaches of interstellar space. With all due respect, please note that this application contains dependent connections to two separate applications called the Catalasan Nuclear Fusion Reactor, a rotating centrifugal laser nuclear fusion reactor, and Electro-Nucleo Genesoids, unlimited energy by matter-antimatter production-separtation. It is highly recommended to review these two patent applications before reading this Patent Application in order to fully understand and grasp the content given here, for a fair and honest evaluation.

公开（公告）号：[US20030152183A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rF7rKWCsCPcl4qqxKR9kPS0&local=zh)

公开（公告）日：2003-08-14

申请号：US10074934

申请日：2002-02-14

申请人：CATALASAN PETER PAUL

**374、Catalasan nuclear fusion reactor a rotating centrifugal-laser nuclear fusion reactor**

摘要：Generations of Physicists have attempted to build Thermonuclear Fusion Reactors in hope of harnessing the power of the ubiquities Hydrogen and Hydrogen to Helium Reaction. The failure, I believe, involves overcomplicated design structures such as plasma, needing total electromagnetic confinement! Being an educated physicist myself from the University of California at Riverside and with all due respect to scientists, as Einstein once said, “Keep it simple stupid, ” is a guiding phenomenon in all of physics. Thus, I have chosen my design as a very practical Rotating Centrifugal-Laser Nuclear Fusion Reactor, a design without plasma and involve using a high-speed centrifugal-laser Hydrogen containment fusion reactor.

公开（公告）号：[US20030152185A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rF7rKWCsCPcl%2FzBKltBUygi&local=zh)

公开（公告）日：2003-08-14

申请号：US10074935

申请日：2002-02-14

申请人：CATALASAN PETER PAUL M

**375、METHOD FOR JUDGING PRECEDING VEHICLE**

摘要：PROBLEM TO BE SOLVED : To avoid losing preceding vehicles owing to the fact that a white line can not be detected and to perform the accurate selection of the preceding vehicles using the effect of the detection and judgment of a white line by fusion.SOLUTION : A preceding vehicle on own vehicle lane is selected from forward objects by collating the position of own vehicle 3 on a travel lane obtained by processing image from a camera 2 with the position of the object detected by a scanning laser radar 1. If the reliability of the white line detected by the image processing is low or the white line cannot be detected, the cause of lowered reliability or of the lost white line detection is presumed. A preceding vehicle is selected from the forward objects detected by the scanning laser radar 1 after judging the direction in which own vehicle lane exists according to the cause.

公开（公告）号：[JP2003223700A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYpZ%2FRr6HF%2BW2GuxfaWZrjp&local=zh)

公开（公告）日：2003-08-08

申请号：JP2002020557

申请日：2002-01-29

申请人：NISSAN MOTOR

法律状态：法律状态公告日：20050315;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20050315法律状态公告日：20050330;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20050329法律状态公告日：20050511;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20050510法律状态公告日：20050615;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20050614法律状态公告日：20050805;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20050804法律状态公告日：20050831;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2003223700A 法律状态公告日：20050907;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20050906法律状态公告日：20051006;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20050919法律状态公告日：20051007;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20081021;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;PAYMENT UNTIL: 20091007Fee Payment-year:;4法律状态公告日：20090402;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;PAYMENT UNTIL: 20091007Fee Payment-year:;4法律状态公告日：20090407;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;PAYMENT UNTIL: 20101007Fee Payment-year:;5法律状态公告日：20101005;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;PAYMENT UNTIL: 20111007Fee Payment-year:;6法律状态公告日：20110405;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2003223700A Free Text Description:;PAYMENT UNTIL: 20121007Fee Payment-year:;7

**376、对似胰岛素生长因子Ｉ受体专一之抗体**

摘要：本发明系关於专一地与似胰岛素生长因子I受体(IGF-IR)，最好是人类IGF-IR结合的抗体及其抗原-结合部份。本发明亦关於人类抗-IGF-IR抗体，包括嵌合型、双专一的、衍生的、单链抗体，或部份的融合蛋白质。本发明亦关於，衍生自抗-IGF-IR抗体之经过分离的重和轻链免疫球蛋白分子，以及编码这类分子的核酸分子。本发明亦关於制造抗-IGF-IR抗体的方法，包括这些抗体的医药组合物，以及使用该抗体及其组合物来诊断和治疗的方法。本发明亦提供使用编码重及/或轻链免疫球蛋白分子之核酸分子，其包括人类抗-IGF-IR抗体的基因治疗方法。本发明亦关於基因治疗方法和包括本发明之核酸分子之基因转殖的动物。 The present invention relates to antibodies and antigen-binding portions thereof that specifically bind to insulin-like growth factor I receptor (IGF-IR), which is preferably human IGF-IR. The invention also relates to human anti-IGF-IR antibodies, including chimeric, bispecific, derivatized, single chain antibodies or portions of fusion proteins. The invention also relates to isolated heavy and light chain immunoglobulin molecules derived from anti-IGF-IR antibodies and nucleic acid molecules encoding such molecules. The present invention also relates to methods of making anti-IGF-IR antibodies, pharmaceutical compositions comprising these antibodies and methods of using the antibodies and compositions thereof for diagnosis and treatment. The invention also provides gene therapy methods using nucleic acid molecules encoding the heavy and/or light immunoglobulin molecules that comprise the human anti-IGF-IR antibodies. The invention also relates to gene therapy methods and transgenic animals comprising nucleic acid molecules of the present invention. [创作特点] 本发明提供经过分离的抗体或其抗原-结合部份，其与IGF-IR结合，较佳的是与灵长类和人类的IGF-IR结合，且更佳的是其为人类抗体。本发明提供抗-IGF-IR抗体，其抑制IGF-I或IGF-II与IGF-IR的结合作用，并亦提供激活IGF-IR的抗-IGF-IR抗体。; 本发明提供包括抗体和在药学上可接受之载剂的医药组合物。该医药组合物尚包括其他的组份，像是抗-肿瘤制剂或显影制剂。; 本发明亦提供诊断和治疗的方法。诊断方法包括使用抗-IGF-IR抗体，诊断表现IGF-IR之组织的存在或位置。治疗方法包括对需要其之个体投与该抗体。最好是连同其他治疗剂一起投药。; 本发明提供经过分离的细胞株，像是融合瘤，其产制抗-IGF-IR抗体。; 本发明亦提供编码抗-IGF-IR抗体之重和/或轻链，或其抗原-结合部份的核酸分子。本发明提供包括该核酸分子的载体和宿主细胞，以及重组产制由该核酸分子编码之多肽的方法。; 亦提供表现抗-IGF-IR抗体之重和/或轻链，或其抗原-结合部份的非-人类基因转殖之动物。本发明亦提供以有效含量之编码抗-IGF-IR抗体之重和/或轻链，或其抗原-结合部份的核酸分子，治疗需要其之个体的方法。; 发明详细说明; 定义和普通技术; 除非在本文中另行定义，关於在本发明中使用的科学和技术名词应具有熟谙此艺者普遍了解的意义。此外，除非视情况另有需求，单数名词应包括复数，且复数名词应包括单数。一般而言，关於在本文中描述的细胞和组织培养技术、分子生物学、免疫学、微生物学、遗传学和蛋白质与核酸化学，以及杂交作用，均为已熟知的那些，并在此项技艺中经常使用。除非另行指示，通常根据此项技艺中已熟知的传统方法进行本发明之方法和技术，并如同在本说明书中提及和讨论的各种普通和更专门之参考文献中描述的。参见，例如Sambrook等人，Molecular Cloning : A Laboratory Manual, 第2版, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.(1989)，和Ausubel等人, Current Protocols in Molecular Biology, Greene Publishing Associates(1992)，以及Harlow和Lane Antibodies : A Laboratory Manual Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y.(1990)，以引用的方式并入本文中。根据制造者的说明书进行酵素反应和纯化技术，如同在此项技艺中普遍完成的，或如同在本文中描述的。关於所使用的术语，以及在本文中描述的实验室程序和分析化学、合成有机化学的技术，以及医学和药物化学，均为已熟知的那些，并在此项技艺中经常使用。关於化学合成、化学分析、药学制备、调配和递送，和患者的处理，均使用标准技术。; 除非另行指示，应了解下列的名词将具有下列的意义："多肽"一词，包括天然或人造的蛋白质、蛋白质片段和蛋白质序列的多肽类似物。多肽可以是单体或聚合的。; "经过分离的蛋白质"或"经过分离的多肽"一词，是由於其衍生起源或来源(1)未与在其天然状态下伴随其之天然连结的组份连结，(2)不含其他得自相同物种的蛋白质，(3)由得自不同物种之细胞表现，或(4)并非天然存在的蛋白质或多肽。因此，以化学方式合成，或在与其天然起源之细胞不同的细胞系统中合成的多肽，将是与其天然连结之组份"分离的"。亦可藉着分离，使用此项技艺中已熟知的蛋白质纯化技术，使蛋白质成为实质上不含天然连结之组份的。; 当试样的至少大约60至75%，显示为单一种的多肽时，该蛋白质或多肽是"实质上纯的"、"实质上均一的"或"实质上经过纯化的"。多肽或蛋白质可以是单体或多聚体的。实质上纯的多肽或蛋白质通常将包括大约50%、60%、70%、80%或90%重量/重量的蛋白质试样，较常见的是大约95%，而最好是超过99%纯的。可藉着此项技艺中已熟知的各种方法，指示蛋白质纯度或均一性，像是蛋白质试样的聚丙烯醯胺凝胶电泳，接着以此项技艺中已熟知的染料将凝胶染色，使单一多肽谱带呈像。为了某种目的，可藉着使用HPLC或纯化技艺中已熟知的其他方法，提供较高的解析度。; 当在本文中使用"多肽片段"一词时，意指具有胺基-终端及/或羧基-终端之删除，但剩下的胺基酸序列仍与在天然存在之序列中相对应的位置相同的多肽。片段通常是至少5、6、8或10个胺基酸长，较佳的是至少14个胺基酸长，更佳的是至少20个胺基酸长，通常是至少50个胺基酸长，再更佳的是至少70、80、90、100、150或200个胺基酸长。; 当在本文中使用"多肽类似物"一词时，意指包括至少25个胺基酸之断片的多肽，其对胺基酸序列的一部份具有相当大同一性，并具有至少一种下列的特性：(1)在适当的结合条件下，与IGF-IR专一地结合，(2)阻断IGF-I或IGR-II与IGF-IR结合的能力，或(3)在活体外或在活体内降低IGF-IR细胞之表面表现或酪胺酸磷酸化作用的能力。通常，相对於天然存在的序列，多肽类似物包括保留性胺基酸置换(或插入或删除)。类似物通常是至少20个胺基酸长，较佳的是至少50、60、70、80、90、100、150或200个胺基酸长或更长，且通常可以像全长的天然存在之多肽一样长。; 较佳的胺基酸取代是下列的那些：(1)降低对蛋白水解的感受性，(2)降低对氧化作用的感受性，(3)为了形成蛋白质复合物，以及(4)赋与或修改这类类似物其他的物理化学或功能特性。类似物可包括与天然存在之肽序列不同的序列的各种突变蛋白。例如，可在天然存在的序列中(最好是在多肽中在功能部位(们)之外形成分子间接触的部份)，进行单一或多重的胺基酸取代(最好是保留性胺基酸置换)。保留性胺基酸置换实质上不应改变亲代序列的结构特徵(例如，置换的胺基酸不应有破坏在亲代序列中出现之螺旋的倾向，或瓦解亲代序列特有的其他类型之二级结构)。在Proteins, Structures and Molecular Principles(Creighton编辑, W.H. Freeman and Company, New York (1984))；Introduction to Protein Structure(C. Branden和J. Tooze编辑, Garland Publishing, New York, N.Y. (1991))；以及Thornton等人, Nature 354 : 105 (1991)中描述了此项技艺认可之多肽二级和三级结构的实例，分别以引用的方式并入本文中。; 经常在药学工业中使用非-肽类似物，作为具有类似那些模板肽之特性的药物。将这些类型的非-肽化合物称为"肽模仿物"或"肽模仿物"。Fauchere, J. Adv. Drug Res. 15 : 29(1986); Veber和Freidinger TINS 392页(1985)；以及Evans等人J. Med. Chem. 30 : 1229 (1987)，以引用的方式并入本文中。经常是利用电脑化分子塑型的帮助，来发展这类化合物。可使用在结构上类似在治疗上有效之肽的肽模仿物，产生相等的治疗或预防效果。一般而言，肽模仿物在结构上类似典型的多肽(也就是具有想要之生化特性或药学活性的多肽)，像是人类抗体，但有一或多个肽键结，可视需要藉着此项技艺中已熟知的方法，被选自包括：-CH2NH-、-CH2S-、-CH2-CH2-、-CH=CH-(顺和反)、-COCH2-、-CH(OH)CH2-和-CH2SO-的键结置换。亦可使用以相同类型的D-胺基酸系统性取代一致序列的一或多种胺基酸(例如以D-离胺酸代替L-离胺酸)，产制较稳定的肽。此外，亦可藉着此项技艺中已知的方法，产制受限制的肽，包括一致序列或实质上相同的一致序列变化(Rizo和Gierasch Ann. Rev. Biochem. 61 : 387(1992)，以引用的方式并入本文中)；例如藉着加入能够形成分子内二硫桥的内部半胱胺酸残基，其使肽环化。; "免疫球蛋白"是四聚的分子。在天然存在的免疫球蛋白中，每个四聚体由两对相同的多肽链所组成，每对具有一个"轻"链(大约25 kDa)和一个"重"链(大约50-70 kDa)。每个链的胺基-终端部份包括大约100至110或更多个胺基酸的可变区，主要负责抗原的认知。每个链的羧基-终端部份限定为恒定区，主要负责效应物功能。人类轻链被分类为κ和λ轻链。重链被分类为μ、Δ、γ、α或ε，并分别定义抗体之同型物为IgM、IgD、IgG、IgA和IgE。在轻和重链之中，藉着大约12或更多个胺基酸的"J"区，连接可变和恒定区，而重链亦包括大约10或更多个胺基酸的"D"区。通常参见Fundamental Immunology第7章(Paul, W.编辑，第2版Raven Press, N.Y.(1989))(为了所有的目的，全部以引用的方式并入本文中)。每个轻/重链对的可变区形成抗体结合位置，使得整个免疫球蛋白具有两个结合位置。; 免疫球蛋白链显示相对上较保留之架构区(FR)的相同共同结构，藉着三个高变区连接，亦称为互补性决定区或CDRs。得自每一对两个链的CDRs，与架构区排成一直线，而能够与特定的抗原决定位结合。从N-终端到C-终端，轻和重链两者均包括功能部位FR1、CDR1、FR2、CDR2、FR3、CDR3和FR4。每个功能部位的胺基酸分派，系根据Kabat Sequences of Proteins of Immunological Interest(National Institutes of Health, Bethesda, Md.(1987和1991))，或Chothia &amp; amp; Lesk J. Mol. Biol. 196 : 901-917(1987); Chothia等人, Nature 342 : 878-883 (1989)的定义。; "抗体"意指完整的免疫球蛋白或其抗原-结合部份，其与完整抗体竞争专一结合作用。可藉着重组DNA技术，或藉着完整抗体的酵素或化学切开作用，产制抗原-结合部份。抗原-结合部份特别包括Fab、Fab' 、F(ab' )2、Fv、dAb和互补性决定区(CDR)片段、单链抗体(scFv)、嵌合型抗体、完全体(diabodies)，以及含有至少一部份免疫球蛋白的多肽，该免疫球蛋白足以赋与该多肽专一的抗原结合。; 当在本文中使用时，称为例如2.12.1、2.13.2、2.14.3、4.9.2、4.17.3和6.1.1的抗体，为衍生自相同名称之融合瘤的抗体。例如抗体2.12.1系衍生自融合瘤2.12.1。; Fab片段是单价片段，由VL、VH、CL和CH I功能部位所组成；F(ab' )2片段为二价的片段，包括两个Fab片段，在绞链区藉着二硫桥连接；Fd片段由VH和CH1功能部位所组成；Fv片段则由抗体单臂的VL和VH功能部位所组成；而dAb片段(Ward等人, Nature 341 : 544-546, 1989)则由VH功能部位所组成。; 单链抗体(scFv)是其中经由能够将其制成单一蛋白质链的合成交联剂，使VL和VH区配对，而形成单价分子的抗体(Bird等人, Science 242 : 423-426, 1988，和Huston等人, Proc. Natl. Acad. Sci. USA 85 : 5879-5883, 1988)。完全体是二价的、双重专一性的抗体，其中在单一多肽链上表现VH和VL功能部位，但使用的交联剂太短，以致於不容许在相同链上的两个功能部位之间发生配对，藉此迫使该功能部位与另一个链的互补功能部位配对，并产生两个抗原结合位置(参见，例如Holliger, P.等人, Proc. Natl. Acad. Sci. USA 90 : 6444-6448, 1993，和Poljak, R.J.等人, Structure2 : 1121-1123, 1994)。可将一或多个CDRs共价或非-共价地并入分子内，使其成为免疫黏附素(immunoadhesin)。免疫黏附素可并入CDR(s)，成为较大多肽链的一部份，可将CDR(s)与其他多肽链共价连接，或可非共价地并入CDR(s)。CDRs容许免疫黏附素专一地与感兴趣的特定抗原结合。; 抗体可具有一或多个结合位置。如果有一个以上的结合位置，结合位置可以是彼此相同的，或可以是不同的。例如，天然存在的免疫球蛋白具有两个相同的结合位置，单链抗体或Fab片段具有一个结合位置，而"双重专一的"或"双重功能的"抗体具有两个不同的结合位置。; "经过分离的抗体"是(1)并未与天然存在之组份连接，包括在自然状态下伴随着它的其他天然连接之抗体，(2)不含得自相同物种的其他蛋白质，(3)由得自不同物种的细胞表现，或(4)在自然界中不存在的抗体。经过分离之抗体的实例，包括已经使用IGF-IR(已经分离的抗体)，以亲和力纯化的抗-IGF-IR抗体，已经藉着融合瘤或其他细胞株，在活体外合成的抗-IGF-IR抗体，以及衍生自基因转殖老鼠的人类抗-IGF-IR抗体。; "人类抗体"一词，包括所有具有一或多个衍生自人类免疫球蛋白序列之可变和恒定区的抗体。在较佳的具体实施例中，所有的可变和恒定功能部位均衍生自人类的免疫球蛋白序列(完全的人类抗体)。可藉着各种方法，像是在下文中描述的，来制备这些抗体。; 人类化抗体是衍生自非-人类物种的抗体，其中已经使在重和轻链之架构和恒定功能部位中的某些胺基酸突变，而得以避免或废止在人类中的免疫反应。或者，可藉着将得自人类抗体的恒定功能部位与非-人类物种的可变功能部位融合，来产制人类化的抗体。可在美国专利第6, 054, 297号、5, 886, 152号和5, 877, 293号中，找到如何制造人类化抗体的实例。; "嵌合型抗体"一词意指含有一或多个得自一个抗体的区域，以及一或多个得自一或多个其他抗体的区域的抗体。在较佳的具体实施例中，一或多个CDRs衍生自人类抗-IGF-IR抗体。在一个更佳的具体实施例中，所有的CDRs均衍生自人类抗-IGF-IR抗体。在另一个较佳的具体实施例中，混合得自一个以上的人类抗-IGF-IR抗体之CDRs，并与嵌合型抗体相配。例如，嵌合型抗体可包括得自第一个人类抗-IGF-IR抗体之轻链的CDR1，可使其与得自第二个人类抗-IGF-IR抗体之轻链的CDR2和CDR3混合，而得自重链的CDRs则可衍生自第三个抗-IGF-IR抗体。此外，架构区可衍生自相同的抗-IGF-IR抗体其中之一、一或多个不同的抗体，像是人类抗体，或衍生自人类化的抗体。; "中和抗体"或"抑制性抗体"，为抑制IGF-IR与IGF-I结合的抗体，此时过量的抗-IGF-IR抗体，降低了与IGF-IR结合之IGF-I含量至少大约20%。在较佳的具体实施例中，抗体降低与IGF-IR结合之IGF-I的含量至少40%，更佳的是60%，再更佳的是80%，或再更佳的是85%。可藉着熟谙此艺者已知的任何方法来测量结合作用的降低，例如，以在活体外的竞争性结合测定来测量之。在下文的实例Ⅳ中提供了测量在IGF-I与IGF-IR之结合作用上的降低的实例。; "激活抗体"是在加至表现IGF-IR的细胞、组织或生物中时，激活IGF-IR至少大约20%的抗体。在较佳的具体实施例中，抗体激活IGF-IR活性至少40%，更佳的是60%，再更佳的是80%，或再更佳的是85%。在更佳的具体实施例中，在IGF-I或IGF-II的存在下加入激活抗体。在另一个较佳的具体实施例中，藉着定出IGF-IR之酪胺酸自体磷酸化作用的含量，来测量激活抗体的活性。; 可由熟谙此艺者，依据本说明书的教导，迅速地制备抗体之片段或类似物。片段或类似物的胺基-和羧基终端最好出现在接近有功能之功能部位的分界处。可藉着将核苷酸及/或胺基酸序列数据与公告或专利的序列资料库相比较，确认结构和功能上的功能部位。最好是使用电脑化的比较方法，来确认序列主题，或预测蛋白质构形功能部位，其出现在具有已知结构及/或功能的其他蛋白质中。确认折叠成已知之三维结构的蛋白质序列的方法是已知的。Bowie等人, Science 253 : 164 (1991)。; 当在本文中使用"表面等离子体激光共振"一词时，意指容许藉着检测在生物感应器矩阵内，在蛋白质浓度上的改变，而分析即时生物专一之交互作用的光学现象，例如使用BIAcore系统(Pharmacia Biosensor AB, Uppsala, Sweden and Piscataway, N.J.)。关於进一步的说明，参见Jonsson, U.等人(1993)Ann. Biol. Clin. 51 : 19-26; Jonsson, U.等人(1991)Biotechniques 11 : 620-627; Johnsson, B.等人(1995)J. Mol. Recognit. 8 : 125-131；以及Johnsson, B.等人(1991)Anal. Biochem. 198 : 268-277。; "Koff"一词意指抗体从抗体/抗原复合物中解离的分开率常数。; "Kd"一词意指特定抗体-抗原交互作用的解离常数。; "抗原决定位"一词意指任何能够与免疫球蛋白或T-细胞受体专一结合的蛋白质决定位。抗原决定位的决定位，通常由分子之具有化学活性的表面基团所组成，像是胺基酸或糖侧链，且通常具有独特的三维结构特徵，以及独特的电荷特徵。当解离常数1 μM时，较佳的是100 nM，而最佳的是10 nM，则说抗体专一地与抗原结合。; 当在本文中使用时，二十个传统的胺基酸及其缩写遵循传统的用法。参见Immunology-A Synthesis(第2版, E.S. Golub和D.R. Gren编辑, Sinauer Associates, Sunderland, Mass.(1991))，以引用的方式并入本文中。二十个传统胺基酸的立体异构物(例如D-胺基酸)、非天然的胺基酸，像是α-, α-二经取代之胺基酸、N-烷基胺基酸、乳酸和其他非传统的胺基酸，亦可能是本发明之多肽的适当组份。非传统胺基酸的实例，包括：4-羟基脯胺酸、γ-羧基谷胺酸、ε-N, N, N-三甲基离胺酸、ε-N-乙醯基离胺酸、O-磷酸丝胺酸、N-乙醯基丝胺酸、N-甲醯基甲硫胺酸、3-甲基组胺酸、5-羟基离胺酸、s-N-甲基精胺酸，以及其他类似的胺基酸和亚胺基酸(例如4-羟基脯胺酸)。在本文中使用的多肽符号学中，根据标准的用法和习惯，左手的方向是胺基终端的方向，而右手的方向是羧基-终端的方向。; 当在本文中提及"多核苷酸"一词时，意指长度至少10个硷基的核苷酸之聚合形式，核糖核苷酸或脱氧核苷酸，或两种类型之核苷酸的修改形式。该名词包括单和双股形式的DNA。; 当在本文中使用"经过分离的多核苷酸"一词时，应意指基因组、cDNA或合成来源，或其某些组合的多核苷酸，由於其来源，该"经过分离的多核苷酸"(1)未与所有或一部份的天然在其中发现该"经过分离之多核苷酸"的多核苷酸连接，(2)可视需要与在自然界中并未与其连接之多核苷酸连接，或(3)在自然界中并未以较大序列的一部份存在。; 在本文中提及的"寡核苷酸"一词，包括藉着天然存在和非天然存在的寡核苷酸键结，连接在一起的天然存在和经过修改的核苷酸。寡核苷酸是多核苷酸的亚组，通常包括200个硷基或更少的长度。寡核苷酸的长度最好是10至60个硷基，而最佳的是12、13、14、15、16、17、18、19或20至40个硷基长。寡核苷酸通常是单股的，例如就探针而言，虽然寡核苷酸也可以是双股的，例如用来建构基因突变种。本发明之寡核苷酸可以是有意义或反义的寡核苷酸。; 在本文中提及的"天然存在的核苷酸"一词，包括脱氧核糖核苷酸和核糖核苷酸。在本文中提及的"经过修改的核苷酸"一词，包括带有经过修改或取代之糖基的核苷酸，及其类似物。在本文中提及的"寡核苷酸键结"一词，包括诸如硫代磷酸酯、二硫代磷酸酯、硒代磷酸酯(phosphoroselenoate)、二硒代磷酸酯(phosphorodiselenoate)、缩苯胺硫代磷酸酯(phosphoroanilothioate)、苯胺酸磷酸酯(phosphoraniladate)、磷醯胺酸之类的寡核苷酸键结，及其类似物。参见，例如LaPlanche等人Nucl. Acids Res. 14 : 9081(1986); Stec等人J. Am. Chem. Soc. 106 : 6077(1984); Stein等人Nucl. Acids Res. 16 : 3209 (1988); Zon等人Anti-Cancer Drug Design 6 : 539 (1991); Zon等人Oligonucleotides and Analogues : A Practical Approach第87-108页(F. Eckstein编辑, Oxford University Press, Oxford England (1991))；Stec等人美国专利第5, 151, 510号；Uhlmann和Peyman Chemical Reviews 90 : 543 (1990)，将其揭示内容以引用的方式并入本文中。若需要，寡核苷酸可包括检测用的标记。; "以可操作之方式连接的"序列，包括与感兴趣之基因相邻的表现控制序列，和以反向作用，或在远处控制感兴趣之基因的表现控制序列。当在本文中使用"表现控制序列"一词时，意指多核苷酸序列，其为完成表现，以及加工处理与其连接之密码序列所必需的。表现控制序列包括适当的转录开始、终止、启动基因和促进子序列；有效的RNA加工处理信号，像是接合和聚腺苷酸化作用信号；使细胞质mRNA稳定的序列；促进转译效力的序列(也就是Kozak一致序列)；促进蛋白质稳定性的序列；以及在想要时，促进蛋白质分泌的序列。这类控制序列的性质，依据宿主生物而有所不同；在原核生物中，这类控制序列通常包括启动基因、核糖体结合位置和转录终止序列；在真核生物中，这类控制序列通常包括启动基因和转录终止序列。"控制序列"一词企图最少包括其出现对於表现和加工处理而言是必要的所有组份，且亦可包括额外的组份，其存在是有利的，例如前导序列和融合夥伴序列。; 当在本文中使用"载体"一词时，意指能够运送已经与其连接之其他核酸的核酸分子。一种类型的载体为"质体"，意指环状双股的DNA环，可将额外的DNA断片连接到其中。其他类型的载体为病毒载体，其中可将额外的DNA断片连接到病毒基因组内。某些载体能够在导入其之宿主细胞内自动复制(例如，具有细菌复制起点的细菌载体，以及附加体的哺乳动物载体)。其他的载体(例如非-附加体的哺乳动物载体)，当导入宿主细胞内时，可以被整合到宿主细胞的基因组内，并藉此与宿主基因组一起复制。此外，某些载体能够指挥以可操作方式与其连接之基因的表现。在本文中将这类载体称为"重组表现载体"(或简称为"表现载体")。一般而言，用於重组DNA技术中的表现载体，通常是以质体之形式。在本说明书中，"质体"和"载体"可交替使用，因为质体是最常用的载体形式。然而，本发明亦企图包括其他形式的表现载体，像是病毒载体(例如复制缺陷的逆转录病毒、腺病毒和与腺-有关的病毒)，其提供相等的功能。; 当在本文中使用"重组的宿主细胞"(或简称为"宿主细胞")时，企图意指已经在其中导入重组表现载体的细胞。请了解这类名词不仅企图意指特定的个体细胞，还包括这类细胞的子代。因为某些修改可能发生在後续的世代中，归因於突变或环境的影响，所以这类子代事实上可能并非与亲代相同，但在本文中使用时，仍包括在"宿主细胞"一词的范围内。; 在本文中提及的"选择性杂交"一词，意指可检测和专一的结合。根据本发明之多核苷酸、寡核苷酸及其片段，在将与非专一之核酸可检测的结合减至最少可察觉量的杂交和冲洗条件下，选择性地与核酸股杂交。可使用"高严格度"或"高度严格的"条件，达到选择性的杂交条件，如同此项技艺中已知并在本文中讨论的。"高严格度"或"高度严格的"条件是将多核苷酸与其他的多核苷酸一起，可将其中一个多核苷酸固定在诸如膜之类的固体表面上，在6X SSPE或SSC，50%甲醯胺，5X登哈特氏(Denhardt' s)试剂，0.5% SDS，100微克/毫升变性的、弄断的鲑精DNA的杂交缓冲溶液中，在42℃的杂交温度下培养12-16小时，接着在55℃下使用1X SSC，0.5% SDS之冲洗缓冲溶液冲洗两次的方法。亦参见Sambrook等人，在前，第9.50-9.55页。; "序列同一性百分比"一词，在核酸序列的前後文中，意指当为了最大的一致性而排成一直线时，在两个序列中相同的残基。序列同一性比较的长度，可以是在至少大约9个核苷酸的股中，通常是至少大约18个核苷酸，更常见的是至少大约24个核苷酸，代表性的是至少28个核苷酸，更具代表性的是至少大约32个核苷酸，而最好是至少大约36、48或更多个核苷酸。在此项技艺中已知有许多不同的演算法，可用来测量核苷酸序列的同一性。例如，可使用FASTA、Gap或Bestfit比较多核苷酸序列，其为在Wisconsin套装软体10.0版，Genetics Computer Group (GCG), Madison Wisconsin中的程式。FASTA包括，例如程式FASTA2和FASTA3，提供在问题和搜寻序列之间，最佳部份重叠之区域的排列和序列同一性百分比(Pearson, Methods Enzymol. 183 : 63-98 (1990); Pearson, Methods Mol. Biol. 132 : 185-219 (2000); Pearson, Methods Enzymol. 266 : 227-258 (1996); Pearson, J. Mol. Biol. 276 : 71-84 (1998)；以引用的方式并入本文中)。除非另行指定，使用特定程式或演算法的预设参数。例如，可使用FASTA及其预设参数(字之尺寸为6，以及计分矩阵的NOPAM因子)，或使用Gap及其预设参数，如同在GCG 6.1版中提供的，以引用的方式并入本文中，定出在核酸序列之间的序列同一性百分比。; 提及核酸序列时，除非另行指定，包括其互补物。因此，提及具有特定序列的核酸分子时，应了解包括其互补股，具有其互补之序列。; 在分子生物的技艺中，研究者交替地使用"序列同一性百分比"、"序列类似性百分比"和"序列同种性百分比"一词。在本申请案中，仅就核酸序列而言，这些名词应具有相同的意义。; 当提及核酸或其片段时，"相当大的类似性"或"相当大的序列类似性"一词表示当将适当的核苷酸插入或删除与其他核酸最适切地排成一直线时，按照上文的讨论，藉着任何已熟知的序列同一性之演算法，像是FASTA、BLAST或Gap测量，在至少大约85%，较佳的是至少大约90%，而更佳的是至少大约95%、96%、97%、98%或99%的核苷酸硷基中，有核苷酸序列的同一性。; 当应用在多肽上时，"相当大的同一性"意指当最适切地排列时，像是藉着程式GAP或BESTFIT，使用预射间隙重，两个肽序列共享至少75%或80%的序列同一性，较佳的是至少90%或95%序列同一性，再更佳的是至少98%或99%序列同一性。不相同的残基位置，最好是差异仅在於保留性胺基酸置换。"保留性胺基酸置换"是其中胺基酸残基，被另一个具有带有类似化学特性(例如电荷或忌水性)之侧链(R基团)的胺基酸残基所取代。一般而言，保留性胺基酸置换实质上将不会改变蛋白质的功能特性。在其中二或多个胺基酸序列由於保留性置换而彼此不同的案例中，可能向上调整序列同一性百分比或类似性的程度，以便修正取代作用的保留性质。进行该调整的方法为熟谙此艺者已熟知的。参见，例如Pearson, Methods Mol. Biol. 24 : 307-31 (1994)，以引用的方式并入本文中。具有带类似化学性质之侧链的胺基酸组别的实例，包括1)脂肪族侧链：甘胺酸、丙胺酸、缬胺酸、亮胺酸和异亮胺酸；2)脂肪族-羟基侧链：丝胺酸和苏胺酸；3)含有醯胺之侧链：天冬醯胺和谷胺醯胺；4)芳香族侧链：苯丙胺酸、酪胺酸和色胺酸；5)硷性侧链：离胺酸、精胺酸和组胺酸；以及6)含硫之侧链为半胱胺酸和甲硫胺酸。较佳的保留性胺基酸置换组为：缬胺酸-亮胺酸-异亮胺酸；苯丙胺酸-酪胺酸；离胺酸-精胺酸；丙胺酸-缬胺酸；谷胺酸-天冬胺酸和天冬醯胺-谷胺醯胺。; 或者，保留性置换为任何在在Gonnet等人, Science 256 : 1443-45 (1992)中揭示的PAM250对数-可能性矩阵中，具有正值的改变，以引用的方式并入本文中。"适度保留性"置换是任何在PAM250对数-可能性矩阵中具有非负值的改变。; 对多肽而言，序列类似性亦称为序列同一性，通常是使用序列分析软体来测量。蛋白质分析软体使用指派给各种取代、删除和其他修改，包括保留性胺基酸置换的类似性测量，将类似的序列配对。例如，GCG含有诸如"Gap"和"Bestfit"之类的程式，可与预设参数一起使用，定出在密切相关的多肽之间，像是得自生物之不同物种的同种多肽，或是在野外型蛋白质与其突变蛋白之间的序列同种性或序列同一性。参见，例如GCG 6.1版。亦可使用利用预设或建议之参数的FASTA，在GCG 6.1版中的一个程式，来比较多肽序列。FASTA(例如FASTA2和FASTA3)提供在问题和搜寻序列之间，最佳部份重叠之区域的排列和序列同一性百分比(Pearson (1990); Pearson (2000))。当比较本发明之序列与含有得自不同生物之大量序列的资料库时，其他较佳的演算法为电脑程式BLAST，尤其是使用预设参数的blastp或tblastn。参见，例如Altschul等人, J. Mol. Biol. 215 : 403-410 (1990); Altschul等人, Nucleic Acids Res. 25 : 3389-402 (1997)；以引用的方式并入本文中。; 比较同种性之多肽序列的长度，通常将是至少大约16个胺基酸残基，经常是至少大约20个残基，更常见的是至少大约24个残基，代表性的是至少大约28个残基，而更佳的是大约35个残基以上。当搜寻含有得自大量不同生物之序列的资料库时，最好是比较胺基酸序列。; 当在本文中使用时，"标示"或"经过标示的"一词意指在抗体中并入其他分子。在一个具体实施例中，该标示为可检测的标记，例如并入放射性标示之胺基酸，或与生物素基化部份的多肽附接，其可藉着已标记之抗生物素蛋白检测(例如，含有萤光标记或酵素活性的链霉菌抗生物素蛋白，其可藉着光学或比色法来检测)。在另一个具体实施例中，标示或标记可以是治疗性的，例如药物共轭物或毒素。各种标示多肽和糖蛋白的方法，是此项技艺中已知的，并可使用之。多肽之标示的实例，包括但不限於下列的：放射性同位素或放射性核素(例如 3 H、 14 C、 15 N、 35 S、 90 Y、 99 Tc、 111 In、 125 I、 131 I)、萤光标示(例如FITC、若丹明、镧系元素磷光体(lanthanide phosphors)、酵素标示(例如辣根过氧化酶、β-半乳糖苷酶、虫萤光素酶、硷性磷酸酶)、化学发光标记、生物素基基团、可由二级报告者(例如亮胺酸拉链对序列、二级抗体的结合位置、金属结合功能部位、抗原决定位标签)认出的预定多肽抗原决定位、诸如钆螯合物之类的磁性制剂、毒素，像是百日咳毒素、紫杉醇(taxol)、细胞松弛素B、短杆菌素D、溴化乙锭、吐根硷、丝裂菌素、依托泊苷、替尼泊苷(tenoposide)、长春新硷、长春花硷、秋水仙素、阿霉素(doxorubicin)、道诺红菌素、二羟基邻氨基苯甲酸(anthracin)二酮、米托蒽醌(mitoxantrone)、光神霉素、放线菌素D、1-脱氢睾酮、糖皮质激素、普鲁卡因、丁卡因(tetracaine)、利多卡因(lidocaine)、普萘洛尔(propranolol)和嘌呤霉素，及其类似物或同系物。在一些具体实施例中，藉着各种长度的间隔臂附接标示，降低可能的位阻现象。; 在本文中使用的"制剂"一词，代表化学化合物，化学化合物的混合物，生物学的大分子，或由生物学材料制成的萃取物。当在本文中使用"药学制剂或药物"一词时，意指当适当地投与患者时，能够引起想要之治疗效果的化学化合物或组合物。其他在本文中使用的化学名词，根据在此项技艺中的习惯用法，例如The McGraw-Hill Dictionary of Chemical Terms(Parker, S.编辑, McGraw-Hill, San Francisco (1985)，合并於此以作为参考)。; 当在本文中使用"抗赘生物之制剂"一词时，意指具有在人类中抑制赘生物发育或进行之功能特性的制剂，特别是恶性(癌性的)病变，像是癌、肉瘤、淋巴瘤或白血病。转移的抑制作用通常是抗赘生物之制剂的特性。; 患者一词包括人类和兽医个体。; 人类抗-IGF-IR抗体及其特徵; 人类抗体避免某些与具有老鼠或大鼠可变及/或恒定区之抗体有关的问题。这类老鼠或大鼠衍生之序列的存在，可导致抗体的迅速清除，或可导致患者产生对抗该抗体的免疫反应。因此，在一个具体实施例中，本发明提供人类化的抗-IGF-IR抗体。在较佳的具体实施例中，本发明藉着将人类免疫球蛋白基因导入囓齿类中，使得该囓齿类产制完整的人类抗体，而提供完整的人类抗-IGF-IR抗体。更佳的是完整的人类抗-人类IGF-IR抗体。预期完整的人类抗-IGF-IR抗体将对老鼠或老鼠-衍生之单株抗体(Mabs)固有的免疫原性和过敏反应减至最少，并因此增加了所投与之抗体的效力和安全性。预期使用完整的人类抗体，在慢性和再发性的人类疾病，像是炎症反应和癌症之治疗上，提供了相当大的利益，该疾病可能需要重覆的抗体投药。在另一个具体实施例中，本发明提供不与互补物的结合抗-IGF-IR抗体。; 在较佳的具体实施例中，抗-IGF-IR抗体为2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1。在另一个较佳的具体实施例中，抗-IGF-IR抗体包括轻链，其包括选自序列识别2、6、10、14、18或22号之胺基酸序列，或一或多个得自这些胺基酸序列的CDRs。在另一个较佳的具体实施例中，抗-IGF-IR抗体包括重链，其包括序列识别4、8、12、16、20或24号之胺基酸序列，或一或多个得自这些胺基酸序列的CDRs。; 抗-IGF-IR抗体的组别和亚组; 抗体可以是IgG、IgM、IgE、IgA或IgD分子。在较佳的具体实施例中，抗体为IgG，并为IgG1、IgG2、IgG3或IgG4亚型。在更佳的具体实施例中，抗-IGF-IR抗体为亚组IgG2。在另一个较佳的具体实施例中，抗-IGF-IR抗体是与抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1相同的组别和亚组，其为IgG2。; 可藉着此项技艺中已知的任何方法，来决定抗-IGF-IR抗体的组别和亚组。一般而言，可使用对特定组别和亚组之抗体专一的抗体，来决定抗体的组别和亚组。这类抗体是市售的。可藉着ELISA、西方墨点法和其他的技术，来决定组别和亚组。或者，可藉着定序抗体之重及/或轻链的全部或一部份恒定功能部位，将其胺基酸序列与各种组别和亚组的免疫球蛋白之已知的胺基酸序列相比较，并决定该抗体的组别和亚组，来决定其组别和亚组。; 物种和分子选择性; 在本发明的其他观点中，抗-IGF-IR抗体证实物种和分子选择性。在一个具体实施例中，抗-IGF-IR抗体与人类、猕猴或恒河猴的IGF-IR结合。在较佳的具体实施例中，抗IGF-IR抗体不与老鼠、大鼠、天竺鼠、狗或兔子的IGF-IR结合。在其他较佳的具体实施例中，抗-IGF-IR抗体不与诸如小猴之类的新大陆猴物种结合。依据说明书的教导，可使用此项技艺中已熟知的方法，证实抗-IGF-IR抗体的物种选择性。例如可使用西方墨点法、FACS、ELISA或RIA证实物种选择性。在较佳的具体实施例中，可使用西方墨点法证实物种选择性。; 在另一个具体实施例中，抗-IGF-IR抗体对IGF-IR具有选择性，至少比其对於胰岛素受体的选择性更高50倍。在较佳的具体实施例中，抗-IGF-IR抗体的选择性比其对胰岛素受体的选择性更高100倍以上。在更佳的具体实施例中，抗-IGF-IR抗体对任何IGF-IR以外的其他蛋白质，不显示任何可察觉的专一结合作用。可使用此项技艺中已熟知的方法，依据说明书的教导，证实抗-IGF-IR抗体对IGF-IR的选择性。例如，可使用西方墨点法、FACS、ELISA或RIA证选择性。在较佳的具体实施例中，可使用西方墨点法证实分子选择性。; 抗-IGF-IR对IGF-IR的结合亲和力; 在本发明的另一项观点中，抗-IGF-IR抗体以高亲和力与IGF-IR结合。在一个具体实施例中，抗-IGF-IR抗体以1×10 -8 M或更低的Kd与IGF-IR结合。在较佳的具体实施例中，抗体以1×10 -9 M或更低的Kd与IGF-IR结合。在更佳的具体实施例中，抗体以5x10 -10 M或更低的Kd与IGF-IR结合。在再更佳的具体实施例中，抗体以实质上像选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1一样的Kd，与IGF-IR结合。在另一个较佳的具体实施例中，抗体以实质上像包括一或多个得自选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之CDRs的抗体一样的Kd，与IGF-IR结合。在另一个更佳的具体实施例中，抗体以实质上像包括一或多个选自序列识别2、4、6、8、10、12、14、16、18、20、22或24号之胺基酸序列的抗体一样的Kd，与IGF-IR结合。在另一个较佳的具体实施例中，抗体以实质上像包括一或多个得自抗体(其包括一个选自序列识别2、4、6、8、10、12、14、16、18、20、22或24号之胺基酸序列)之CDRs的抗体一样的Kd，与IGF-IR结合。; 在本发明的其他观点中，抗-IGF-IR抗体具有低解离率。在一个具体实施例中，抗-IGF-IR抗体具有1×10 -4 s -1 或更低的Koff。在较佳的具体实施例中，Koff为5x10 -5 s -1 或更低。在另一个较佳的具体实施例中，Koff实质上像选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1一样。在另一个较佳的具体实施例中，抗体以实质上像包括一或多个得自选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之CDRs的抗体一样的Koff，与IGF-IR结合。在另一个更佳的具体实施例中，抗体以实质上像包括一或多个选自序列识别2、4、6、8、10、12、14、16、18、20、22或24号之胺基酸序列的抗体一样的Koff，与IGF-IR结合。在另一个较佳的具体实施例中，抗体以实质上像包括一或多个得自抗体(其包括一个选自序列识别2、4、6、8、10、12、14、16、18、20、22号之胺基酸序列)之CDRs的抗体一样的Koff，与IGF-IR结合。; 可藉着任何此项技艺中已知的方法，定出抗-IGF-IR抗体对IGF-IR的结合亲和力和解离率。在一个具体实施例中，可藉着竞争性ELISAs、RIAs或表面等离子体激光共振，像是BIAcore，来测量结合亲和力。亦可藉着表面等离子体激光共振来测量解离率。在较佳的具体实施例中，藉着表面等离子体激光共振来测量结合亲和力和解离率。在更佳的具体实施例中，使用BIAcore测量结合亲和力和解离率。决定结合亲和力和解离率的实例，在下文中描述在实例II中。; 抗-IGF-IR抗体的半衰期; 根据本发明的另一个目标，抗-IGF-IR抗体在活体外或在活体内具有至少1天的半衰期。在较佳的具体实施例中，抗体或其部份具有至少3天的半衰期。在更佳的具体实施例中，抗体或其部份具有4天或更长的半衰期。在另一个具体实施例中，抗体或其部份具有8天或更长的半衰期。在其他的具体实施例中，抗体或其抗原-结合部份系衍生或经过修改，使得其具有较长的半衰期，如同在下文中讨论的。在另一个较佳的具体实施例中，抗体可含有点突变，以便增加血清半衰期，像是2000年2月24日公告的WO 00/09560中描述的。; 可藉着熟谙此艺者已知的任何方法来测量抗体半衰期。例如，可藉着西方墨点法、ELISA或RIA，在一段适当的期间内，测量抗体半衰期。可在任何适当的动物中，例如猴子，像是猕猴、灵长类或人类中，测量抗体的半衰期。; 确认由抗-IGF-IR抗体认出的IGF-IR抗原决定位; 本发明亦提供与人类抗-IGF-IR抗体相同的抗原或抗原决定位结合的抗-IGF-IR抗体。此外，本发明亦提供与人类抗-IGF-IR抗体交叉-竞争的抗-IGF-IR抗体。在较佳的具体实施例中，人类抗-IGF-IR抗体为2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1。在另一个较佳的具体实施例中，人类抗-IGF-IR包括一或多个得自选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之抗体的CDRs。在另一个较佳的具体实施例中，人类抗-IGF-IR包括一个选自序列识别2、4、6、8、10、12、14、16、18、20、22或24号的胺基酸序列。在另一个较佳的具体实施例中，人类抗-IGF-IR包括一或多个得自抗体(其包括一个选自序列识别2、4、6、8、10、12、14、16、18、20、22或24号之胺基酸序列)的CDRs。在更佳的具体实施例中，抗-IGF-IR抗体为另一个人类抗体。; 可使用此项技艺中已知的方法，决定抗-IGF-IR抗体是否与相同的抗原结合。例如，可藉着使用抗-IGF-IR抗体来捕捉已知与抗-IGF-IR抗体结合的抗原，像是IGF-IR，从抗体中洗脱出抗原，然後决定受试抗体是否将与该洗脱出的抗原结合，来决定受试的抗-IGF-IR抗体是否与相同的抗原结合。亦可藉着使抗-IGF-IR抗体与IGF-IR在饱和的条件下结合，然後测量受试抗体与IGF-IR结合的能力，来决定抗体是否与像抗-IGF-IR抗体一样的抗原决定位结合。如果受试抗体能够在与抗-IGF-IR抗体相同的时间内与IGF-IR结合，则此时受试抗体是与抗-IGF-IR抗体不同的抗原决定位结合。然而，如果受试抗体不能在同时与IGF-IR结合，则此时受试抗体是与人类抗-IGF-IR抗体相同的抗原决定位结合。可使用ELISA、RIA或表面等离子体激光共振进行该实验。在较佳的具体实施例中，使用表面等离子体激光共振来进行该实验。在更佳的具体实施例中，使用BIAcore。亦可决定抗-IGF-IR抗体是否与抗-IGF-IR抗体产生交叉-竞争。在较佳的具体实施例中，可藉着使用与用来测量抗-IGF-IR抗体是否能够与其他抗-IGF-IR抗体相同之抗原决定位结合相同的方法，来决定抗-IGF-IR抗体是否与其他抗体交叉-竞争。; 重和轻链的用法; 本发明亦提供抗-IGF-IR抗体，其包括由人类κ基因编码的可变序列。在较佳的具体实施例中，该可变序列是由V κ A27、A30或O12基因家族编码的。在较佳的具体实施例中，该可变序列是由人类V κ A30基因家族编码的。在更佳的具体实施例中，轻链包括与生殖种系V κ A27、A30或O12有不超过10个的胺基酸取代，较佳的是不超过6个的胺基酸取代，而更佳的是不超过3个的胺基酸取代。在较佳的具体实施例中，胺基酸取代为保留性置换。; 序列识别2、6、10、14、18和22号提供六个抗-IGF-IR κ轻链之可变区的胺基酸序列。序列识别38、40和42号提供从其中衍生这六个抗-IGF-IR κ轻链之三个生殖种系κ轻链的胺基酸序列。图1A-1C显示这六个抗-IGF-IR抗体之轻链可变区的核苷酸序列，与从其中衍生它们的生殖种系序列彼此排成一直线。依据本说明书的教导，熟谙此艺者将能够决定这六个抗-IGF-IR κ轻链和生殖种系κ轻链的编码胺基酸序列，并决定在生殖种系序列与抗体序列之间的差异。; 在较佳的具体实施例中，相对於生殖种系的胺基酸序列，抗-IGF-IR抗体的VL含有相同的胺基酸取代，像是任一或多个抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1的VL。例如，抗-IGF-IR抗体的VL可含有一或多个与出现在抗体2.13.2中的那些相同的胺基酸取代，与出现在抗体2.14.3中的相同的其他胺基酸取代，以及与抗体4.9.2相同的其他胺基酸取代。以此方式，可混合并配对抗体结合的不同特徵，以便改变，例如抗体对IGF-IR的亲和力，或其与抗原的解离率。在另一个具体实施例中，可在与在任一或多个抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之VL中找到的那些相同的位置处进行胺基酸取代，但宁可进行保留性胺基酸置换，也不愿使用相同的胺基酸。例如，如果与生殖种系相比较，在抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1其中之一上的胺基酸取代是谷胺酸，可保留性地取代天冬胺酸。同样地，如果胺基酸取代为丝胺酸，可保留性地取代苏胺酸。; 在另一个较佳的具体实施例中，轻链包括与2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之VL的胺基酸序列相同的胺基酸序列。在另一个更佳的具体实施例中，轻链包括与2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之轻链的CDR区域相同的胺基酸序列。在另一个较佳的具体实施例中，轻链包括得自至少一个2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之轻链的CDR区域的胺基酸序列。在另一个较佳的具体实施例中，轻链包括得自不同轻链之CDRs的胺基酸序列。在更佳的具体实施例中，该得自不同轻链之CDRs，系获自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1。在另一个较佳的具体实施例中，轻链包括选自序列识别2、6、10、14、18或22号之胺基酸序列。在其他的具体实施例中，轻链包括由选自序列识别1、5、9、13、17或21号之核酸序列，或编码从那裏有1-10个胺基酸插入、删除或取代之胺基酸序列的核酸序列编码的胺基酸序列。该胺基酸取代最好是保留性胺基酸置换。在另一个具体实施例中，抗体或其部份包括λ轻链。; 本发明亦提供抗-IGF-IR抗体或其部份，其包括人类重链或衍生自人类重链的序列。在一个具体实施例中，重链胺基酸序列系衍生自人类VHDP-35、DP-47、DP-70、DP-71或VIV-4/4.35基因家族。在较佳的具体实施例中，重链胺基酸序列系衍生自人类VHDP-47基因家族。在更佳的具体实施例中，重链包括与生殖种系VHDP-35、DP-47、DP-70、DP-71或VIV-4/4.35有不超过8个的胺基酸改变，较佳的是不超过6个的胺基酸改变，而更佳的是不超过3个的胺基酸改变。; 序列识别4、8、12、16、20和24号提供六个抗-IGF-IR重链之可变区的胺基酸序列。序列识别30、32、34、36和44号分别提供生殖种系重链DP-35、DP-47、DP-70、DP-71或VIV-4之胺基酸序列，而序列识别29、31、33、35和43号则分别提供其核苷酸序列。图2A-2D显示这六个抗-IGF-IR抗体之可变区的核苷酸序列，与其相对应之生殖种系序列彼此排成一直线。依据本说明书的教导，熟谙此艺者将能够决定这六个抗-IGF-IR重链和生殖种系重链的编码胺基酸序列，并决定在生殖种系序列与抗体序列之间的差异。; 在较佳的具体实施例中，相对於生殖种系的胺基酸序列，抗-IGF-IR抗体的VH含有相同的胺基酸取代，像是任一或多个抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1的VH。与上文讨论的类似，抗-IGF-IR抗体的VH可含有一或多个与出现在抗体2.13.2中的那些相同的胺基酸取代，与出现在抗体2.14.3中的相同的其他胺基酸取代，以及与抗体4.9.2相同的其他胺基酸取代。以此方式，可混合并配对抗体结合的不同特徵，以便改变，例如抗体对IGF-IR的亲和力，或其与抗原的解离率。在另一个具体实施例中，可在与在任一或多个抗体2.12.1、2.13.2、2.14.3、3.1.1、4.17.3、4.9.2或6.1.1之VH中找到的那些相同的位置处进行胺基酸取代，但宁可进行保留性胺基酸置换，也不愿使用相同的胺基酸。; 在另一个较佳的具体实施例中，重链包括与2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之VH的胺基酸序列相同的胺基酸序列。在另一个更佳的具体实施例中，重链包括与2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之重链的CDR区域相同的胺基酸序列。在另一个较佳的具体实施例中，重链包括得自至少一个2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之重链的CDR区域的胺基酸序列。在另一个较佳的具体实施例中，重链包括得自不同重链之CDRs的胺基酸序列。在更佳的具体实施例中，该得自不同重链之CDRs，系获自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1。在另一个较佳的具体实施例中，重链包括选自序列识别4、8、12、16、20或24号之胺基酸序列。在其他的具体实施例中，重链包括由选自序列识别3、7、11、15、19或23号之核酸序列，或编码从那裏有1-10个胺基酸插入、删除或取代之胺基酸序列的核酸序列编码的胺基酸序列。在其他的具体实施例中，该胺基酸取代最好是保留性胺基酸置换。; 藉着抗-IGF-IR抗体抑制IGF-IR; IGF-I与IGF-IR结合的抑制作用; 在其他的具体实施例中，本发明提供抗-IGF-IR抗体，其抑制IGF-I与IGF-IR的结合作用，或抑制IGF-II与IGF-IR的结合作用。在较佳的具体实施例中，抗-IGF-IR抗体是人类抗体。在另一个具体实施例中，抗体或其部份以不超过100 nM的IC50抑制在IGF-IR与IGF-I之间的结合作用。在较佳的具体实施例中，IC50不超过10 nM。在更佳的具体实施例中，IC50不超过5 nM。可藉着此项技艺中已知的任何方法来测量IC50。通常，可藉着ELISA或RIA测量IC50。在较佳的具体实施例中，藉着RIA来测量IC50。; 在其他的具体实施例中，本发明提供抗-IGF-IR抗体，其在IGF-I的存在下，防止IGF-IR的激活。在较佳的具体实施例中，抗-IGF-IR抗体抑制了IGF-IR-诱导之酪胺酸磷酸化作用，其在受体被占据时发生。在另一个较佳的具体实施例中，抗-IGF-IR抗体抑制了下游细胞事件的发生。例如，抗-IGF-IR可抑制Shc和胰岛素受体受质(IRS)1和2的酪胺酸磷酸化作用，当以IGF-I处理细胞时，其全部正常被磷酸化(Kim等人, J. Biol. Chem. 273 : 34543-34550, 1998)。藉着经由西方墨点法或免疫沉淀法，定出IGF-IR、Shc、IRS-1或IRS-2之自体磷酸化作用的程度，来决定抗-IGF-IR抗体是否能在IGF-I的存在下，防止IGF-IR的激活作用。在较佳的具体实施例中，将藉着西方墨点法定出IGF-IR之自体磷酸化作用的程度。参见，例如实例VII。; 在本发明的另一项观点中，引起IGF-IR向下调节的抗体系得自以抗体处理的细胞。在一个具体实施例中，将IGF-IR内化到细胞的细胞质内。在抗-IGF-IR抗体与IGF-IR结合之後，内化该抗体，如同由共焦显微镜所示的。不希望与任何理论结合，咸相信将抗体-IGF-IR复合物内化到溶酶体内，并降解之。可藉着此项技艺中已知的方法，包括免疫沉淀法、共焦显微镜或西方墨点法，来测量IGF-IR的向下调节。参见，例如实例Ⅶ。在较佳的具体实施例中，抗体系选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2或6.1.1，或包括其重链、轻链或抗原-结合区。; 藉着抗-IGF-IR抗体激活IGF-IR; 本发明的其他观点系关於激活抗-IGF-IR抗体。激活抗体与抑制抗体不同，因为它扩大或取代IGF-I对IGF-IR的影响。在一个具体实施例中，激活抗体能够与IGF-IR结合，并在缺乏IGF-I之下使其激活。这类型的激活抗体基本上是IGF-I的模仿物。在另一个具体实施例中，激活抗体扩大IGF-I对IGF-IR的影响。这类型的抗体本身并不能激活IGF-IR，但却在IGF-I的存在下增加IGF-IR的激活作用。可藉着在活体外，在低量IGF-I的存在或缺乏下，以该抗体处理细胞，轻易地区别模仿的抗-IGF-IR抗体和扩大的抗IGF-IR抗体。如果该抗体能够在缺乏IGF-I之下引起IGF-IR的激活作用，例如其增加IGF-IR酪胺酸磷酸化作用，此时该抗体为模仿的抗体。如果抗体在缺乏IGF-I之下，不能引起IGF-IR激活作用，但能扩大IGF-IR激活作用的量，则此时该抗体为扩大的抗体。在较佳的具体实施例中，该激活抗体为4.17.3。在另一个较佳的具体实施例中，该抗体包括得自4.17.3的一或多个CDRs。在另一个较佳的具体实施例中，该抗体系衍生自生殖种系序列O12(轻链)及/或 D71(重链)的任一个或两者。; 藉着抗-IGF-IR抗体，在活体内抑制IGF-IR酪胺酸磷酸化作用、IGF-IR含量和肿瘤细胞生长; 本发明的另一个具体实施例提供抗IGF-IR抗体，其在活体内抑制IGF-IR酪胺酸磷酸化作用和受体含量。在一个具体实施例中，对动物投与抗-IGF-IR抗体，在表现IGF-IR的肿瘤中，引起IGF-IR磷酸酪胺酸信号的降低。在较佳的具体实施例中，抗-IGF-IR抗体引起磷酸酪胺酸信号降低至少20%。在更佳的具体实施例中，抗-IGF-IR抗体引起磷酸酪胺酸信号减少至少60%，更佳的是50%。在再更佳的具体实施例中，抗体在磷酸酪胺酸信号上引起的减少为至少40%，较佳的是30%，更佳的是20%。在较佳的具体实施例中，在测量酪胺酸磷酸化作用的程度之前大约24小时投与抗体。可藉着此项技艺中已知的任何方法来测量酪胺酸磷酸化作用的程度，像是在後文中描述的那些。参见，例如实例Ⅲ和图5。在较佳的具体实施例中，抗体选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2或6.1.1，或包括其重链、轻链或抗原-结合部份。; 在其他的具体实施例中，对动物投与抗-IGF-IR抗体，在表现IGF-IR的肿瘤中，引起IGF-IR含量的降低。在较佳的具体实施例中，与未处理的动物相比较，抗-IGF-IR抗体引起受体含量降低至少20%。在更佳的具体实施例中，抗-IGF-IR抗体引起受体含量减少至少60%，更佳的是在未处理动物中之受体含量的50%。在再更佳的具体实施例中，抗体引起受体含量降低至少40%，更佳的是30%。在较佳的具体实施例中，在测量IGF-IR含量之前大约24小时投与抗体。可藉着此项技艺中已知的任何方法测量IGF-IR含量，像是在後文中描述的那些。参见，例如实例Ⅷ和图6。在较佳的具体实施例中，抗体选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2或6.1.1，或包括其重链、轻链或抗原-结合部份。; 在其他的具体实施例中，抗-IGF-IR抗体在活体内抑制肿瘤细胞的生长。肿瘤细胞可衍生自任何的细胞类型，包括但不限於表皮、上皮、内皮、白血病、肉瘤、多发性骨髓瘤或中胚层细胞。肿瘤细胞的实例包括A549(非-小细胞肺癌)细胞、MCF-7细胞、Colo 205细胞、3T3/IGF-IR细胞和A431细胞。在较佳的具体实施例中，与在未处理动物中的肿瘤生长相比较，抗体抑制了肿瘤细胞的生长。在更佳的具体实施例中，抗体抑制肿瘤细胞生长达50%。在再更佳的具体实施例中，抗体抑制肿瘤细胞生长达60%、65%、70%或75%。在一个具体实施例中，在以抗体开始处理动物之後至少7天，再测量肿瘤细胞生长的抑制作用。在更佳的具体实施例中，在以抗体开始处理动物之後至少14天，再测量肿瘤细胞生长的抑制作用。在另一个较佳的具体实施例中，与抗-IGF-IR抗体一起将其他的抗赘生物制剂投与动物。在较佳的具体实施例中，该抗赘生物制剂能够进一步抑制肿瘤细胞的生长。在更佳的具体实施例中，该抗赘生物制剂为亚德里亚霉素、紫杉醇、他莫昔芬、5-氟脱氧尿嘧啶(5-FU)或CP-358, 774。在较佳的具体实施例中，抗赘生物制剂与抗-IGF-IR抗体的共同-投药，在22-24天的期间之後，抑制肿瘤细胞生长至少50%，更佳的是60%、65%、70%或75%，更佳的是80%、85%或90%。参见，例如图7和实例Ⅸ。在较佳的具体实施例中，抗体选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2或6.1.1，或包括其重链、轻链或抗原-结合部份。; 藉着抗-IGF-IR抗体诱导细胞凋零; 本发明的其他观点提供诱导细胞死亡的抗-IGF-IR抗体。在一个具体实施例中，抗体引起细胞凋零。抗体可在活体内或在活体外引起细胞凋零。一般而言，肿瘤细胞对细胞凋零比正常细胞更敏感，使得抗-IGF-IR抗体的投药优先於正常细胞，引起肿瘤细胞的细胞凋零。在另一个具体实施例中，抗-IGF-IR抗体的投药降低了酵素akt的含量，其涉及磷脂醯肌醇(PI)激酶的路径。该PI路径转而再涉及细胞增殖，并阻止细胞凋零。因此，抑制akt可能引起细胞凋零。在更佳的具体实施例中，在活体内投与抗体引起表现IGF-IR之细胞的细胞凋零。在较佳的具体实施例中，抗体选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、或6.1.1，或包括其重链、轻链或抗原结合-部份。; 产制抗体和产生-抗体之细胞株的方法; 免疫作用; 在本发明的一个具体实施例中，藉着以IGF-IR抗原免疫包括一些或全部人类免疫球蛋白位点之非人类动物，来产制人类抗体。在较佳的具体实施例中，非-人类动物是XENOMOUSE TM ，牠是经过设计的老鼠品系，包括大片段的人类免疫球蛋白位点，并在老鼠抗体产制上是有缺陷的。参见，例如Green等人, Nature Genetics 7 : 13-21 (1994)，和美国专利第5, 916, 771号、5, 939, 598号、5, 985, 615号、5, 998, 209号、6, 075, 181号、6, 091, 001号、6, 114, 598号和6, 130, 364号。亦参见1991年7月25日公告的WO 91/10741，1994年2月3日公告的WO 94/02602，1996年10月31日公告的WO 96/34096和WO 96/33735，1998年4月23日公告的WO 98/16654，1998年6月11日公告的WO 98/24893，1998年11月12日公告的WO 98/50433，1999年9月10日公告的WO 99/45031，1999年10月21日公告的WO 99/53049，2000年2月24日公告的WO 00/09560和2000年6月29日公告的WO 00/037504。XENOMOUSE TM 产生完整人类抗体的类成人节目，并产生抗原-专一的人类Mabs。经由导入人类重链位点和κ轻链位点的百万硷基(megabase)大小、生殖种系组态之YAC片段，第二代的XENOMOUSE TM 含有大约80%的人类抗体节目。参见Mendez等人Nature Genetics 15 : 146-156 (1997)，Green和Jakobovits J. Exp. Med. 188 : 483-495 (1998)，将其揭示内容以引用的方式并入本文中。; 本发明亦提供从非-人类、非-老鼠动物中，藉着免疫包括人类免疫球蛋白位点的非-人类基因转殖动物，来制造抗-IGF-IR抗体的方法。可使用刚才描述的方法，来产制这类动物。可按照在美国专利第5, 994, 619号中的描述，修改在这些专利中揭示的方法。在较佳的具体实施例中，非-人类动物可能是大鼠、绵羊、猪、山羊、牛或马。; 在其他的具体实施例中，包括人类免疫球蛋白基因位点的非-人类动物是具有人类免疫球蛋白之"迷你位点(minilocus)"的动物。以迷你位点的方式，可经由纳入得自Ig位点之个别基因，模仿外源的Ig位点。因此，在插入动物内的构筑体中，形成一或多个VH基因、一或多个DH基因、一或多个JH基因、mu恒定区和第二个恒定区(最好是γ恒定区)。特别在美国专利第5, 545, 807号、5, 545, 806号、5, 625, 825号、5, 625, 126号、5, 633, 425号、5, 661, 016号、5, 770, 429号、5, 789, 650号、5, 814, 318号、5, 591, 669号、5, 612, 205号、5, 721, 367号、5, 789, 215号和5, 643, 763号中描述了该方法，以引用的方式并入本文中。; 迷你位点法的优点是迅速，用该方法可产制包括Ig位点之部份的构筑体，并将其导入动物内。然而，迷你位点法潜在的缺点是可能没有充份的免疫球蛋白歧异性，支持完整的B-细胞发育，使得可能有较低的抗体产制。; 为了产制人类抗-IGF-IR抗体，以IGF-IR抗原免疫包括一些或全部人类免疫球蛋白位点的非-人类动物，并从该动物中分离抗体或产制抗体的细胞。IGF-IR抗原可以是经过分离及/或纯化的IGF-IR，且最好是人类的IGF-IR。在另一个具体实施例中，IGF-IR抗原是IGF-IR的片段，最好是IGF-IR的细胞外功能部位。在另一个具体实施例中，IGF- IR抗原是包括至少一个IGF-IR之抗原决定位的片段。在另一个具体实施例中，IGF-IR抗原是在其细胞表面表现IGF-IR的细胞，最好是在其细胞表面过度表现IGF-IR的细胞。; 可藉着此项技艺中已知的任何方法，来进行动物的免疫作用。参见，例如Harlow和Lane, Antibodies : A Laboratory Manual, New York : Cold Spring Harbor Press, 1990。免疫非-人类动物，像是老鼠、大鼠、绵羊、山羊、猪、牛和马的方法，为此项技艺中已熟知的。参见，例如Harlow和Lane，以及美国专利第5, 994, 619号。在较佳的具体实施例中，将IGF-IR抗体与佐剂一起投与，以便刺激免疫反应。这类佐剂包括完全和不完全的福瑞德氏(Freund' s)佐剂、RIBI(胞壁醯基二肽)或ISCOM(免疫刺激复合物)。这类佐剂可藉着在局部存放处与其螯合，而保护多肽免於迅速地消散，或其可含有刺激宿主对巨噬细胞和免疫系统之其他组份分泌驱化性因子的物质。如果投与多肽，免疫程序最好将涉及延续数周的二或多次之多肽投药。; 实例I提供以在磷酸-缓冲之生理盐水中的全长人类IGF-IR，免疫XENOMOUSE TM 的草案。; 抗体和产制抗体之细胞株的产制; 在以IGF-IR抗原免疫动物之後，可从该动物获得抗体及/或产制-抗体的细胞。藉着采血或牺牲动物，从动物中获得含有抗-IGF-IR抗体的血清。可使用该血清，因为它获自该动物，故可从血清中获得免疫球蛋白片断，或可从血清中纯化出抗-IGF-IR抗体。以此方式获得的血清或免疫球蛋白是多株的，这是不利的，因为限制了可获得之抗体的含量，且多株抗体具有异质阵列的性质。; 在其他的具体实施例中，可从经过免疫的动物来制备产制抗体的永存不死融合瘤。在免疫作用之後，牺牲动物，并将B细胞与永存不死的骨髓瘤细胞融合，如同此项技艺中已熟知的。参见，例如Harlow和Lane，在前。在较佳的具体实施例中，骨髓瘤细胞不分泌免疫球蛋白多肽(非-分泌性细胞株)。在融合并以抗生素选择之後，使用IGF-IR、其部份，或表现IGF-IR的细胞来筛选融合瘤。在较佳的具体实施例中，使用酵素-连结免疫吸附测定(ELISA)或放射性免疫测定(RIA)来进行最初的筛选，最好是ELISA。在WO 00/37504中提供了ELISA筛选的实例，以引用的方式并入本文中。; 在其他的具体实施例中，可从罹患自体免疫障碍和表现抗-IGF-IR抗体的人，来制备产制-抗体的细胞。可藉着分离白血球，并使其接受萤光-激活之细胞分类(FACS)，或以涂覆有IGF-IR或其部份的培养盘挑捡，来分离表现抗-IGF-IR抗体的细胞。可将这些细胞与人类非-分泌性骨髓瘤细胞融合，产制表现人类抗-IGF-IR抗体的人类融合瘤。一般而言，这是较差的具体实施例，因为该抗-IGF-IR抗体可能对IGF-IR具有不良的亲和力。; 选择、选殖，并就想要的特徵，包括强壮的融合瘤生长、高抗体产生和想要的抗体特徵，进一步筛选产制抗-IGF-IR抗体的融合瘤，如同在下文中进一步讨论的。可在活体内，在同基因的动物中，在诸如裸鼠之类缺乏免疫系统的动物中，或在活体外以细胞培养来培养并扩展融合瘤。选择、选殖和扩展融合瘤的方法为熟谙此艺者已熟知的。; 免疫的动物最好是表现人类免疫球蛋白基因的非-人类动物，并将脾脏的B细胞与衍生自与该非-人类动物相同之物种的骨髓瘤融合。更佳的是，免疫的动物是XENOMOUSE TM ，且骨髓瘤细胞株是非-分泌性老鼠骨髓瘤，像是NSO-bcl2之骨髓瘤细胞株。参见，例如实例I。; 一方面本发明提供产制人类抗-IGF-IR抗体的融合瘤。在较佳的具体实施例中，融合瘤为老鼠融合瘤，如同上述。在另一个较佳的具体实施例中，在非-人类、非-老鼠的物种中，像是大鼠、绵羊、猪、山羊、牛或马，产制融合瘤。在其他的具体实施例中，融合瘤是人类融合瘤，其中将人类非-分泌性骨髓瘤与表现抗-IGF-IR抗体的人类细胞融合。; 制造抗体的核酸、载体、宿主细胞和重组方法; 核酸; 提供编码本发明之抗-IGF-IR抗体的核酸分子。在一个具体实施例中，核酸分子编码抗-IGF-IR免疫球蛋白的重和/或轻链。在较佳的具体实施例中，单一核酸分子编码抗-IGF-IR免疫球蛋白的重链，而另一个核酸分子编码抗-IGF-IR免疫球蛋白的轻链。在更佳的具体实施例中，编码的免疫球蛋白是人类免疫球蛋白，最好是人类IgG。编码的轻链可以是λ链或κ链，最好是κ链。; 核酸分子编码的轻链可变区，可衍生自A30、A27或O12 V κ基因。在较佳的具体实施例中，轻链可衍生自A30 V κ基因。在另一个较佳的具体实施例中，核酸分子编码的轻链，包括衍生自J κ 1、J κ 2或J κ 4的接合区。在更佳的具体实施例中，核酸分子编码的轻链，含有对生殖种系A30 V κ基因而言，不超过10个的胺基酸改变，更佳的是不超过6个的胺基酸改变，再更佳的是不超过3个的胺基酸改变。; 本发明提供核酸分子，其编码与生殖种系序列相比较，含有至少三个胺基酸改变的轻链(VL)可变区，其中该胺基酸改变，与在抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之一的VL中，与生殖种系序列不同的胺基酸改变相同。本发明亦提供核酸分子，其包括编码2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之轻链可变区之胺基酸序列的核酸序列。本发明亦提供核酸分子，其包括编码2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1中任一个轻链的一或多个CDRs之胺基酸序列的核酸序列。在较佳的具体实施例中，核酸分子包括编码2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1中任一个轻链的全部CDRs之胺基酸序列的核酸序列。在另一个具体实施例中，核酸分子包括编码序列识别2、6、10、14、18或22号之一之胺基酸序列的核酸序列，或包括序列识别1、5、9、13、17或21号之一的核酸序列。在另一个较佳的具体实施例中，核酸分子包括编码序列识别2、6、10、14、18或22号中任一个的一或多个CDRs之胺基酸序列的核酸序列，或包括序列识别1、5、9、13、17或21号任一个的一或多个CDRs之核酸序列。在更佳的具体实施例中，核酸分子包括编码序列识别2、6、10、14、18或22号中任一个的全部CDRs之胺基酸序列的核酸序列，或包括序列识别1、5、9、13、17或21号中任一个的全部CDRs之核酸序列。; 本发明亦提供编码VL之胺基酸序列的核酸分子，其具有与上述之VL，特别是包括序列识别2、6、10、14、18或22号之一的胺基酸序列的VL，至少70%、75%、80%、85%、90%、95%、96%、97%、98%或99%相同的胺基酸序列。本发明亦提供核酸序列，其与序列识别1、5、9、13、17或21号之一的核酸序列，至少70%、75%、80%、85%、90%、95%、96%、97%、98%或99%相同。在其他的具体实施例中，本发明提供编码VL的核酸分子，其在高度严格的条件下与编码上述之VL的核酸分子杂交，特别是包括编码序列识别2、6、10、14、18或22号之胺基酸序列的核酸序列的核酸分子。本发明亦提供编码VL之核酸序列，其在高度严格的条件下与包括序列识别1、5、9、13、17或21号之一的核酸序列的核酸分子杂交。; 本发明亦提供编码重链(VH)可变区的核酸分子，该VH系衍生自DP-35、DP-47、DP-71或VIV-4/4.35 VH基因，最好是DP-35 VH基因。在另一个较佳的具体实施例中，核酸分子编码VH，包括衍生自JH6或JH5的接合区，更佳的是JH6。在另一个较佳的具体实施例中，D断片系衍生自3-3、6-19或4-17。在更佳的具体实施例中，核酸分子编码的VH，含有对生殖种系DP-47基因而言，不超过10个的胺基酸改变，更佳的是不超过6个的胺基酸改变，再更佳的是不超过3个的胺基酸改变。在最佳的具体实施例中，核酸分子编码的VH，含有与生殖种系序列相比较，至少1个的胺基酸改变，其中该胺基酸改变与在抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之一的重链中，与生殖种系序列不同的胺基酸改变相同。在再更佳的具体实施例中，VH含有与生殖种系序列相比较，至少3个的胺基酸改变，其中该改变与在抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之一的VH中，与生殖种系序列不同的那些改变相同。; 在一个具体实施例中，核酸分子包括编码2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之胺基酸序列的核酸序列。在另一个具体实施例中，核酸分子包括编码2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之重链的一或多个CDRs之胺基酸序列的核酸序列。在较佳的具体实施例中，核酸分子包括编码2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之重链的全部CDRs之胺基酸序列的核酸序列。在另一个较佳的具体实施例中，核酸分子包括编码序列识别4、8、12、16、20或24号之一之胺基酸序列的核酸序列，或包括序列识别3、7、11、15、19或23号之一的核酸序列。在另一个较佳的具体实施例中，核酸分子包括编码序列识别4、8、12、16、20或24号中任一个的一或多个CDRs之胺基酸序列的核酸序列，或包括序列识别3、7、11、15、19或23号任一个的一或多个CDRs之核酸序列。在较佳的具体实施例中，核酸分子包括编码序列识别4、8、12、16、20或24号中任一个的全部CDRs之胺基酸序列的核酸序列，或包括序列识别3、7、11、15、19或23号中任一个的全部CDRs之核酸序列。; 在其他的具体实施例中，核酸分子编码VH之胺基酸序列，其与编码上述之VH的胺基酸序列之一，特别是包括序列识别4、8、12、16、20或24号之一的胺基酸序列的VH，至少70%、75%、80%、85%、90%、95%、96%、97%、98%或99%相同。本发明亦提供核酸序列，其与序列识别3、7、11、15、19或23号之一的核酸序列，至少70%、75%、80%、85%、90%、95%、96%、97%、98%或99%相同。在其他的具体实施例中，编码VH的核酸分子，是在高度严格的条件下与编码上述VH之核酸分子杂交的，特别是包括编码序列识别4、8、12、16、20或24号之一的胺基酸序列之VH。本发明亦提供编码VH之核酸序列，其在高度严格的条件下与包括序列识别3、7、11、15、19或23号之一的核酸序列的核酸分子杂交。; 可从任何产制抗-IGF-IR抗体的来源，获得编码任一个抗-IGF-IR抗体的完整重和轻链或两者，或其可变区的核酸分子。分离编码抗体之mRNA的方法是此项技艺中已熟知的。参见，例如Sambrook等人。可使用mRNA产制在聚合酶连锁反应(PCR)中，或抗体基因之cDNA选殖中使用的cDNA。在本发明的一个具体实施例中，可从表现抗-IGF-IR抗体的融合瘤中获得核酸分子，如同上述，最好是使表现人类免疫球蛋白基因的基因转殖动物细胞，像是XENOMOUSE TM ，非-人类老鼠之基因转殖动物，或非-人类非-老鼠之基因转殖动物成为其融合夥伴之一的融合瘤。在其他的具体实施例中，融合瘤系衍生自非-人类、非-基因转殖的动物，其可供，例如人类化抗体使用。; 可藉着将编码重链可变功能部位或其抗原-结合功能部位的核酸分子与重链的恒定功能部位融合，来建构编码抗-IGF-IR抗体之完整重链的核酸分子。同样的，可藉着将编码轻链可变功能部位或其抗原-结合功能部位的核酸分子与轻链的恒定功能部位融合，来建构编码抗-IGF-IR抗体之轻链的核酸分子。可藉着将编码VH和VL的核酸分子分别插入业已编码重链恒定和轻链恒定区的表现载体内，使得VH断片在该载体内以可操作之方式与重链恒定区(CH)断片(们)连接，且VL断片在该载体内以可操作之方式与轻链恒定区(CL)断片连接，而将其转变为全长的抗体基因。或者，可藉着连接，例如使用标准分子生物技术，连接编码VH链的核酸分子与编码CH链的核酸分子，将编码VH或VL链的核酸分子转变为全长抗体基因。可使用编码VL和CL链的核酸分子完成相同的事。人类重和轻链恒定区基因的序列是此项技艺中已知的。参见，例如Kabat等人, Sequences of Proteins of Immunological Interest, 第5版, NIH Publ.第91-3242期，1991。然後从已经将其导入的细胞中，表现编码全长重及/或轻链的核酸分子，并分离抗-IGF-IR抗体。; 在较佳的具体实施例中，编码重链可变区的核酸编码序列识别4、8、12、16、20或24号之胺基酸序列，而编码轻链可变区的核酸分子则编码序列识别2、6、10、14、18或22号之胺基酸序列。序列识别28号叙述抗-IGF-IR抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之重链恒定区的胺基酸序列，而序列识别27号则叙述编码其之核酸序列。序列识别26号叙述抗-IGF-IR抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之轻链恒定区的胺基酸序列，而序列识别25号则叙述编码其之核酸序列。因此，在较佳的具体实施例中，编码重链恒定区之核酸分子编码序列识别28号，而编码轻链恒定区之核酸分子则编码序列识别26号。在更佳的具体实施例中，编码重链恒定功能部位的核酸分子具有序列识别27号之核酸序列，而编码轻链恒定功能部位的核酸分子则具有序列识别25号之核酸序列。; 在其他的具体实施例中，可从表现人类免疫球蛋白基因，并已经利用IGF-IR抗原免疫的非-人类、非-老鼠动物中，分离编码抗-IGF-IR抗体之重链或其抗原-结合功能部位，或抗-IGF-IR抗体之轻链或其抗原-结合功能部位的核酸分子。在另一个具体实施例中，可从衍生自非-基因转殖动物，或得自产制抗-IGF-IR抗体之人类患者的产制抗-IGF-IR抗体之细胞中，分离核酸分子。可藉着标准技术，从产制抗-IGF-IR抗体的细胞中分离mRNA，使用PCR和库建构技术选殖及/或扩大，并使用标准草案筛选，获得编码抗-IGF-IR重和轻链的核酸分子。; 可使用核酸分子重组表现大量的抗-IGF-IR抗体，如同下述。亦可使用核酸分子来产制嵌合型抗体、单链抗体、免疫黏附素、完全体、突变抗体和抗体衍生物，如同下文进一步描述的。如果核酸分子衍生自非-人类、非-基因转殖的动物，则可使用该核酸分子进行抗体的人类化作用，亦如同下述。; 在其他的具体实施例中，可使用本发明之核酸分子作为特定抗体序列的探针或PCR引子。例如，可在诊断方法中使用核酸分子探针，或可使用核酸分子PCR引子，扩大将使用的DNA区域，特别是用来分离可用於产制抗-IGF-IR抗体之可变功能部位的核酸序列。在较佳的具体实施例中，核酸分子是寡核苷酸。在更佳的具体实施例中，寡核苷酸系得自感兴趣之抗体的重和轻链高变区。在再更佳的具体实施例中，寡核苷酸编码全部或部份的一或多个CDRs。; 载体; 本发明提供包括本发明之核酸分子(其编码重链或其抗原-结合部份)的载体。本发明亦提供包括本发明之核酸分子(其编码轻链或其抗原-结合部份)的载体。本发明亦提供包括编码融合蛋白质、经过修改之抗体、抗体片段及其探针之核酸分子的载体。; 欲表现本发明之抗体或抗体部份，将按照上述获得的编码部份或全长轻和重链之DNAs插入表现载体内，使得该基因以可操作之方式与转录和转译控制序列连接。表现载体包括质体、逆转录病毒、黏接质体、YACs、EBV衍生之附加体及其类似物。将抗体基因连接到载体内，使得在载体内的转录和转译控制序列得以提供其调节抗体基因之转录和转译想要的功能。选择可与所使用之表现宿主细胞相容的表现载体和表现控制序列。可将抗体轻链基因和抗体重链基因插入分开的载体内。在较佳的具体实施例中，将两个基因插入相同的表现载体内。藉着标准方法(例如在抗体基因片段和载体上的互补限制位置之连接，或是如果没有出现限制位置，则是钝端连接作用)，将抗体基因插入表现载体内。; 便利的载体是编码具有完整功能之人类CH或CL免疫球蛋白序列的载体，并带有适当设计的限制位置，而得以按照上述轻易地插入和表现任何VH或VL序列。在这类载体中，黏接通常发生在插入之J区域中黏接捐赠者位置和在人类C区域之前的黏接接受者位置之间，且亦发生在出现在人类CH表现序列内的黏接区。聚腺苷酸化作用和转录终止，发生在位在密码区下游的天然染色体位置处。重组表现载体亦可编码信号肽，其有助於从宿主细胞中分泌抗体链。可将抗体链基因选殖到载体内，使信号肽得以在架构中与抗体链基因的胺基终端连接。信号肽可以是免疫球蛋白信号肽，或异种的信号肽(也就是得自非-免疫球蛋白蛋白质的信号肽)。; 除了抗体链基因之外，本发明之重组表现载体亦可携带控制抗体链基因在宿主细胞中表现的调节序列。熟谙此艺者应了解表现载体的设计，包括调节序列的选择，可依据诸如待转化之宿主细胞的选择、想要的蛋白质表现程度等等的因素而定。对哺乳动物宿主细胞表现而言，较佳的调节序列包括在哺乳动物细胞中指挥高量蛋白质表现的病毒元件，像是衍生自逆转录病毒LTRs、细胞巨大病毒(CMV)(像是CMV启动基因/促进子)、猿病毒40(SV40)(像是SV40启动基因/促进子)、腺病毒(例如腺病毒主要晚期启动基因(AdMLP))、多瘤病毒的启动基因及/或促进子，以及有力的哺乳动物启动基因，像是天然免疫球蛋白和肌动蛋白启动基因。关於病毒调节元件及其序列的进一步说明，参见，例如Stinski的美国专利第5, 168, 062号，Bell等人的美国专利第4, 510, 245号，以及Schaffner等人的美国专利第4, 968, 615号。; 除了抗体链基因和调节序列之外，本发明之重组表现载体亦可携带额外的序列，像是调节载体在宿主细胞中复制的序列(例如复制起点)和可选择标记基因。可选择标记基因有助於选择已经於其中导入载体的宿主细胞(参见，例如Axel等人的美国专利第4, 399, 216号、4, 634, 665号和5, 179, 017号)。例如，可选择标记基因通常赋与已经在其中导入该载体之宿主细胞对药物，像是G418、潮霉素或胺甲碟呤的抵抗力。较佳的可选择标记基因包括二氢叶酸还原酶(DHFR)基因(可用於dhfr-宿主细胞，以胺甲碟呤选择/扩大)，以及neo基因(可供G418选择)。; 非-融合瘤宿主细胞和重组产制蛋白质的方法; 可使用编码抗-IGF-IR抗体之重链或其抗原-结合部份，及/或轻链或其抗原-结合部份的核酸分子，以及包括这些核酸分子的载体，转化适当的哺乳动物细胞。可藉着任何已知的关於将多核苷酸导入宿主细胞的方法来转化。将异种多核苷酸导入哺乳动物细胞内的方法是此项技艺中已熟知的，并包括葡聚糖-调节的转移感染、磷酸钙沉淀、海美溴铵(polybrene)-调节的转移感染、原生质体融合、电穿透作用、将多核苷酸(们)包胶在微脂粒内、生物性(biolistic)注射，以及直接将DNA显微注射至核内。此外，亦可藉着病毒载体将核酸分子导入哺乳动物细胞内。转化细胞的方法为此项技艺中已熟知的。参见，例如美国专利第4, 399, 216号、4, 912, 040号、4, 740, 461号和4, 959, 455号(将这些专利以引用的方式并入本文中)。; 可用来作为进行表现之宿主的哺乳动物细胞株是此项技艺中已熟知的，并包括许多获自American Type Culture Collection (ATCC)的永存不死之细胞株。这些包括，特别是中国仓鼠卵巢(CHO)细胞、NSO细胞、SP2细胞、HeLa细胞、幼仓鼠肾脏(BHK)细胞、猴子肾脏细胞(COS)、人类肝细胞癌细胞(例如Hep G2)、A549细胞、3T3细胞和许多其他的细胞株。哺乳动物宿主细胞包括人类、老鼠、大鼠、狗、猴子、猪、山羊、牛、马和仓鼠细胞。经由决定那一种细胞株具有高表现程度，来选择特优的细胞株。其他可使用的细胞株是昆虫细胞株，像是Sf9细胞、两栖类细胞、细菌细胞、植物细胞和真菌细胞。当重组表现载体编码重链或其抗原-结合部份时，将轻链及/或其抗原-结合部份导入哺乳动物宿主细胞内，藉着培养该宿主细胞一段足以容许该抗体在宿主细胞中表现的期间，而产生该抗体，或更佳的是将抗体分泌至宿主细胞在其中生长的培养基内。可使用标准蛋白质纯化方法，从培养基中回收抗体。; 此外，亦可使用许多已知的技术，促进从产制细胞株中表现本发明之抗体(或其其他部份)的作用。例如，谷胺醯胺合成酶基因表现系统(GS系统)，是在某些条件下促进表现的常用方法。在关於欧洲专利第0 216 846号、0 256 055号和0 323 997号，和欧洲专利申请案第89303964.4号中，全部或部份地讨论了GS系统。; 可能藉着不同的细胞株或在具有彼此不同之糖基化作用的基因转殖动物中表现抗体。然而，不管抗体的糖基化作用，所有由在本文中提供之核酸分子编码，或包括在本文中提供之胺基酸序列的抗体，均为本发明的一部份。; 基因转殖的动物; 本发明亦提供包括一或多个本发明之核酸分子的基因转殖之非-人类动物，其可用来产制本发明之抗体。可在山羊、牛、马、猪、大鼠、老鼠、兔子、仓鼠或其他动物中产制抗体，并从其组织或体液，像是乳汁、血液或尿液中回收。参见，例如美国专利第5, 827, 690号、5, 756, 687号、5, 750, 172号和5, 741, 957号。如同上述，可藉着以IGF-IR或其一部份免疫，产制包括人类免疫球蛋白位点的非-人类之基因转殖动物。; 在其他的具体实施例中，藉着将一或多个本发明之核酸分子，藉着标准基因转殖技术，导入动物内，来产制非-人类的基因转殖动物。参见Hogan，在前。用来制造基因转殖动物的基因转殖细胞可以是胚胎干细胞或体细胞。基因转殖的非-人类生物可以是嵌合型、非嵌合型的异种接合子，以及非嵌合型的同种接合子。参见，例如Hogan等人, Manipulating the Mouse Embryo : A Laboratory Manual第2版，Cold Spring Harbor Press (1999); Jackson等人, Mose Genetics and Transgenics : A Practical Approach, Oxford University Press (2000)；以及Pinkert, Transgenic Animal Technology : A Laboratory Handbook, Academic Press (1999)。在其他的具体实施例中，基因转殖的非-人类生物可具有已瞄准的破裂和置换，其编码感兴趣的重链及/或轻链。在较佳的具体实施例中，基因转殖动物包括并表现编码专一地与IGF-IR，最好是人类IGF-IR结合之重和轻链的核酸分子。在另一个具体实施例中，基因转殖动物包括编码经过修改之抗体，像是单链抗体、嵌合型抗体或人类化抗体的核酸分子。可在任何基因转殖的动物中制造抗-IGF-IR抗体。在较佳的具体实施例中，非-人类动物为老鼠、大鼠、绵羊、猪、山羊、牛或马。非-人类的基因转殖动物在血液、乳汁、尿液、唾液、泪水、黏液和其他体液中表现该编码多肽。; 噬菌体展示库; 本发明提供产制抗-IGF-IR抗体或其抗原-结合部份的方法，包括在噬菌体上合成人类抗体库，以IGF-IR或其一部份筛选该库，分离与IGF-IR结合的噬菌体，并从该噬菌体中分离抗体的步骤。一种制备抗体库的方法，包括以IGF-IR或其抗原性部份免疫包括人类免疫球蛋白位点之非-人类宿主动物，产生免疫反应，从宿主动物中萃取负责产制抗体的细胞；从已萃取出的细胞中分离RNA，逆向转录该RNA而产生cDNA，使用引子扩大cDNA，并将该cDNA插入噬菌体展示载体内，而得以在噬菌体上表现抗体的步骤。以此方式可获得本发明的重组抗-IGF-IR抗体。; 除了在本文中揭示的抗-IGF-IR抗体之外，可藉着筛选使用由衍生自人类淋巴细胞的mRNA制备之人类VL和VH cDNAs来制备的重组综合抗体库，最好是scFv噬菌体展示库，分离本发明的重组抗-IGF-IR人类抗体。制备和筛选这类库的方法学，是此项技艺中已知的。有产制噬菌体展示库的市售套组(例如Pharmacia重组噬菌体抗体系统，目录第27-9400-01号；以及Stratagene SurfZAP TM 噬菌体展示套组，目录第240612号)。亦有其他的方法和试剂，可用来产制和筛选抗体展示库(参见，例如Ladner等人美国专利第5, 223, 409号；Kang等人PCT出版物第WO 92/18619号；Dower等人PCT出版物第WO 91/17271号；Winter等人PCT出版物第WO 92/20791号；Markland等人PCT出版物第WO 92/15679号；Breitling等人PCT出版物第WO 93/01288号；McCafferty等人PCT出版物第WO 92/01047号；Garrard等人PCT出版物第WO 92/09690号；Fuchs等人(1991)Bio/Technology 9 : 1370-1372; Hay等人(1992)Hum. Antibod, Hybridomas 3 : 81-85; Huse等人(1989)Science 246 : 1275-1281; McCafferty等人, Nature (1990)348 : 552-554; Griffiths等人(1993)EMBO J 12 : 725-734; Hawkins等人(1992)J. Mol. Biol. 226 : 889-896; Clackson等人(1991)Nature 352 : 624-628; Gram等人(1992)Proc. Natl. Acad. Sci. USA 89 : 3576-3580; Garrad等人(1991)Bio/Technology 9 : 1373-1377; Hoogenboom等人(1991)Nuc Acid Res 19 : 4133-4137；以及Barbas等人(1991)Proc. Natl. Acad. Sci. USA 88 : 7978-7982。; 在较佳的具体实施例中，欲分离具有想要特徵的人类抗-IGF-IR抗体，首先使用如同在本文中描述之人类抗-IGF-IR抗体，来选择对IGF-IR具有类似之结合活性的人类重和轻链序列，使用在Hoogenboom等人，PCT出版物第WO 93/06213号中描述的抗原决定位印刷法。在该方法中使用的抗体库，最好是按照在McCafferty等人，PCT出版物第WO 92/01047号，McCafferty等人, Nature(1990)348 : 552-554；和Griffiths等人(1993)EMBO J 12 : 725-734中的描述，制备和筛选的scFv库。最好是使用人类IGF-IR作为抗原来筛选的scFv抗体库。; 一旦选出最初的人类VL和VH断片，便进行"混合和配对"实验，其中就与IGF-IR的结合来筛选最初选出之VL和VH断片的不同配对，选出较佳的VL/VH对组合。此外，欲进一步改善抗体的品质，可利用类似在活体内之体细胞突变法的方法，其在自然的免疫反应期间，负责抗体之亲和力成熟，使较佳的VL/VH对(们)之VL和VH断片随机突变，最好是在VH及/或VL的CDR3区域内。可藉着扩大VH和VL区，使用分别与VH CDR3或VL CDR3互补的PCR引子，完成在活体外的亲和力成熟，已经利用四种核苷酸硷基的随机混合物，在某些位置"钉住"这些引子，使得所得的PCR产物编码已经将随机突变导入VH及/或VL CDR3区的VH和VL断片。可就与IGF-IR的结合作用，再度筛选这些随机突变的VH和VL断片。; 在从重组的免疫球蛋白展示库中筛选和分离本发明之抗-IGF-IR抗体之後，可从展示包装(例如从噬菌体基因组)中回收编码所选出之抗体的核酸，并藉着标准重组DNA技术，继代选殖到其他的表现载体内。若需要，可进一步操纵核酸，产生本发明的其他抗体形式，如同下述。欲表现藉着筛选综合库而分离出的重组人类抗体，将编码该抗体的DNA选殖到重组表现载体内，并将其导入哺乳动物宿主细胞内，如同上述。; 类别转变; 本发明的其他方面是提供藉以将一类抗-IGF-IR抗体转变为另一类的机制。在本发明的一项观点中，使用此项技艺中已熟知的方法分离编码VL或VH之核酸分子，使其不含任何编码CL或CH的核酸序列。然後以可操作之方式，将编码VL或VH之核酸分子与编码得自不同类别之免疫球蛋白分子的CL或CH之核酸序列连接。这可按照上述，使用包括CL或CH链的载体或核酸分子完成。例如，可将起源於IgM的抗-IGF-IR抗体转变为IgG的类别。此外，可使用类别转变将一个IgG亚类转变为另一个亚类，例如从IgG1至IgG2。产制包括想要同型物之本发明抗体的较佳方法，包括下列步骤：分离编码抗-IGF-IR抗体之重链的核酸，以及编码抗-IGF-IR抗体之轻链的核酸，获得重链的可变区，将重链可变区与想要同型物之重链的恒定功能部位连接，在细胞中表现轻链和已连接之重链，并收集带有想要同型物的抗-IGF-IR抗体。; 抗体衍生物; 可使用熟谙此艺者已知的技术和方法，使用上述的核酸分子来产制抗体衍生物。; 人类化抗体; 如同在上文中有关於人类抗体产制的讨论，产制具有降低之免疫原性的抗体是有益的。这可使用人类化的技术，以及使用适当库的展示技术，而达到某种程度。应了解可使用此项技艺中已熟知的技术，将老鼠抗体或得自其他物种的抗体人类化或灵长类化。参见，例如Winter和Harris Immunol Today 14 : 43-46 (1993)，以及Wright等人Crit. Reviews in Immunol. 12125-168 (1992)。可藉着重组DNA技术设计感兴趣的抗体，以相对应的人类序列取代CH1、CH2、CH3、绞链功能部位及/或架构功能部位(参见WO 92/02190和美国专利第5, 530, 101号、5, 585, 089号、5, 693, 761号、5, 693, 792号、5, 714, 350号和5, 777, 085号)。在较佳的具体实施例中，可藉着以相对应的人类序列取代CH1、CH2、CH3、绞链功能部位及/或架构功能部位，同时维持所有的重链、轻链或重和轻链两者的CDRs，将抗-IGF-IR抗体人类化。; 突变抗体; 在其他的具体实施例中，可使用核酸分子、载体和宿主细胞，制造突变的抗-IGF-IR抗体。抗体可以在重及/或轻链的可变功能部位发生突变，改变该抗体的结合特性。例如，可在一或多个CDR区进行突变，以便增加或减少该抗体对IGF-IR的Kd、增加或减少Koff，或改变该抗体的结合专一性。指定-位置之突变生成作用的技术，是此项技艺中已熟知的。参见，例如Sambrook等人和Ausubel等人，在前。在较佳的具体实施例中，在与生殖种系相比较，已知在抗-IGF-IR抗体之可变区已经改变的胺基酸残基处进行突变。在更佳的具体实施例中，在与生殖种系相比较，已知在抗-IGF-IR抗体2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之一的可变区或CDR区域已经改变的胺基酸残基处进行一或多个突变。在另一个具体实施例中，在与生殖种系相比较，已知在其胺基酸序列出现在序列识别2、4、6、8、10、12、14、16、18、20、22或24号中，或其核酸序列出现在序列识别1、3、5、7、9、11、13、15、17、19、21或23号的可变区或CDR区域已经改变的胺基酸残基处进行一或多个突变。在另一个具体实施例中，使核酸分子在一或多个架构区中发生突变。可在架构区或在恒定功能部位进行突变，以便增加抗-IGF-IR抗体的半衰期。参见，例如2000年2月24日公告的WO 00/09560，以引用的方式并入本文中。在一个具体实施例中，可能有一、三或五个点突变，且不超过10个点突变。亦可在架构区或恒定功能部位进行突变，以便改变抗体的免疫原性，提供与其他分子共价或非-共价结合的位置，或改变诸如补体结合之类的特性。在单一突变的抗体中，可分别在架构区、恒定功能部位和可变区进行突变。或者，在单一突变的抗体中，可仅在架构区、可变区或恒定功能部位之一中进行突变。; 在一个具体实施例中，与在突变之前的抗-IGF-IR抗体相比较，在突变的抗-IGF-IR抗体之VH或VL区中，有不超过10个的胺基酸改变。在更佳的具体实施例中，在突变的抗-IGF-IR抗体之VH或VL区中，有不超过5个的胺基酸改变，更佳的是不超过3个的胺基酸改变。在另一个具体实施例中，在恒定功能部位中有不超过15个的胺基酸改变，较佳的是不超过10个的胺基酸改变，更佳的是不超过5个的胺基酸改变。; 经过修改的抗体; 在其他的具体实施例中，可制造融合抗体或免疫黏附素，其包括与其他多肽连接的全部或部份的抗-IGF-IR抗体。在较佳的具体实施例中，仅有抗-IGF-IR抗体的可变区与多肽连接。在另一个较佳的具体实施例中，抗-IGF-IR抗体的VH功能部位与第一个多肽连接，而抗-IGF-IR抗体的VL功能部位与第二个多肽连接，其以其中VH和VL功能部位可彼此产生交互作用，形成抗体结合位置的方式，与第一个多肽连结。在另一个较佳的具体实施例中，藉着交联剂将VH功能部位与VL功能部位分开，使VH和VL功能部位得以与另一个产生交互作用(参见下文的单链抗体)。然後将VH-交联剂-VL抗体与感兴趣的多肽连接。可使用该融合抗体，指挥多肽至表现IGF-IR的细胞或组织。多肽可以是治疗剂，像是毒素、生长因子或其他的调节蛋白质，或可以是诊断制剂，像是可轻易显色的酵素，像是辣根过氧化酶。此外，可创造其中二(或多个)单链抗体彼此连接的融合抗体。如果想要在单一多肽链上创造二价或多价的抗体时，或如果想要创造双重专一性抗体时，这将是有用的。; 欲创造单链抗体(scFv)，将编码VH-和VL-的DNA片段以可操作之方式与编码有弹性之交联剂，例如编码胺基酸序列(Gly4-Ser)3(序列识别60号)的其他片段连接，而得以以连续的单链蛋白质之形式表现VH和VL序列，其中藉着有弹性的交联剂连接VL和VH区(参见，例如Bird等人(1988)Science 242 : 423-426; Huston等人(1988)Proc. Natl. Acad. Sci. USA 85 : 5879-5883; McCafferty等人Nature (1990)348 : 552-554)。单链抗体可以是单价的(如果仅使用一个VH和VL)，二价的(如果使用两个VH和VL)，或多价的(如果使用两个以上的VH和VL)。; 在其他的具体实施例中，可使用编码抗-IGF-IR之核酸分子制备其他经过修改的抗体。例如，可使用标准分子生物学技术，依据说明书的教导，制备"κ体"(Ill等人, Protein Eng 10 : 949-57 (1997))、"迷你体(minibodies)"(Martin等人, EMBO J 13 : 5303-9 (1994))、"完全体"(Holliger等人, PNAS USA 90 : 6444-6448 (1993))，或"杰纽辛(Janusin)"(Traunecker等人, EMBO J 10 : 3655-3659 (1991)，和Traunecker等人"Janusin : new molecular design for bispecific reagents" Int J Cancer Suppl 7 : 51-52 (1992))。; 在其他方面，可产制嵌合型和双重专一的抗体。可制造嵌合型抗体，其包括得自不同抗体的CDRs和架构区。在较佳的具体实施例中，嵌合型抗体的CDRs包括抗-IGF-IR抗体之轻或重链可变区的全部CDRs，而架构区则衍生自一或多个不同的抗体。在更佳的具体实施例中，嵌合型抗体的CDRs包括抗-IGF-IR抗体之轻和重链可变区的全部CDRs。架构区可得自另一个物种，且在较佳的具体实施例中，可以是人类化的。或者，架构区可得自其他的人类抗体。; 可产制双重专一的抗体，其经由一个结合功能部位专一地与IGF-IR结合，并经由第二个结合部位与第二个分子结合。可经由重组分子生物学技术，产制双重专一的抗体，或可以物理方式将其共轭在一起。此外，亦可产制含有一个以上VH和VL的单链抗体，其专一地与IGF-IR和其他分子结合。可使用已知的技术，来产制这类双重专一的抗体，例如关於(i)和(ii)，参见，例如Fanger等人Immunol Methods 4 : 72-81 (1994)，以及Wright和Harris，在前，而关於(iii)，参见，例如Traunecker等人Int. J. Cancer(附录)7 : 51-52 (1992)。在较佳的具体实施例中，双重专一的抗体与IGF-IR结合，并与在癌症或肿瘤细胞中以高程度表现的其他分子结合。在更佳的具体实施例中，其他分子为erbB2受体、VEGF、CD20或EGF-R。; 在一个具体实施例中，使用得自一个选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2、4.17.3或6.1.1之抗体的一或多个可变区或一或多个CDR区，制备上述经过修改的抗体。在另一个具体实施例中，使用其胺基酸序列出现在序列识别2、4、6、8、10、12、14、16、18、20、22或24号中，或其核酸序列出现在序列识别1、3、5、7、9、11、13、15、17、19、21或23号中的一或多个可变区或一或多个CDR区，制备经过修改的抗体。; 经过衍生和标示的抗体; 本发明之抗体或抗体部份可经过衍生或与其他分子(例如其他的肽或蛋白质)连接。一般而言，衍生抗体或其部份，使得该IGF-IR结合作用不受该衍生作用或标示的不利影响。因此，本发明之抗体和抗体部份企图包括在本文中描述之人类抗-IGF-IR抗体的完整和经过修改之形式。例如，本发明之抗体或抗体部份可在功能上与一或多个其他分子实体连接(藉着化学偶联、遗传融合、非共价结合或其他)，像是其他抗体(例如双重专一的抗体或完全体)、检测剂、细胞毒性制剂、药学制剂，及/或可调节抗体或抗体部份与其他分子之结合的蛋白质或肽(像是链霉菌抗生物素蛋白核区或聚组胺酸标签)。; 藉着将二或多个抗体(相同类型或不同类型的，例如产生双重专一的抗体)交联，产生一型经过衍生的抗体。适当的交联剂包括属於异种双功能的那些，具有两个不同反应性的基团，由适当的间隔基分开(例如间-顺丁烯二醯亚胺苯甲醯基-N-羟基琥珀醯亚胺酯)或同种双功能的(例如二琥珀醯亚胺基辛二酸酯)。这类交联剂可购自Pierce Chemical Company, Rockford, Ill。; 其他类型的经过衍生之抗体是经过标示的抗体。可用来衍生本发明之抗体或抗体部份的有用检测剂，包括萤光化合物，包括萤光素、萤光素异硫代氰酸酯、若丹明、5-二甲胺基-1-萘磺醯氯、藻红蛋白、镧系元素磷光体及其类似物。亦可利用可用来检测之酵素标示抗体，像是辣根过氧化酶、β-半乳糖苷酶、虫萤光素酶、硷性磷酸酶、葡萄糖氧化酶及其类似物。当利用可检测酵素标示抗体时，可藉着加入酵素可用来产生可辨别之反应产物的额外试剂来检测。例如，当出现的制剂为辣根过氧化酶时，加入过氧化氢和二胺基联苯胺，导致有颜色的反应产物，其为可检测的。亦可利用生物素标示抗体，并经由抗生物素蛋白或链霉菌抗生物素蛋白的间接测量来检测之。可利用磁性制剂来标示抗体，像是钆。亦可利用可由二级抗体认出的预定之多肽抗原决定位(例如亮胺酸拉链对序列、二级抗体的结合位置、金属结合功能部位、抗原决定位标签)来标示抗体。在一些具体实施例中，藉着各种长度的间隔臂附接标示，降低可能的空间位阻。; 亦可利用放射性标示的胺基酸标示抗-IGF-IR抗体。可为了诊断和治疗目的而使用放射性标示。例如，可使用放射性标示，藉着x-射线或其他诊断技术，检测表现IGF-IR的肿瘤。此外，可在治疗上使用放射性标示，作为对癌性细胞或肿瘤的毒素。多肽之标示的实例，包括但不限於下列的放射性同位素或放射性核素-- 3 H、 14 C、 15 N、 35 S、 90 Y、 99 Tc、 111 In、 125 I、 131 I。; 亦可利用化学基团，像是聚乙二醇(PEG)、甲基或乙基，或碳水化合物基团来衍生抗-IGF-IR抗体。可使用这些基团来改良抗体的生物学特徵，例如增加血清半衰期，或增加组织结合作用。; 医药组合物和套组; 本发明亦关於用来治疗哺乳动物之过度增殖性障碍的医药组合物，其包括在治疗上有效含量的本发明组合物和在药学上可接受的载剂。在一个具体实施例中，该医药组合物可用来治疗诸如脑、肺脏、鳞状细胞、膀胱、胃、胰脏、乳房、头、颈、肾的、肾脏、卵巢、前列腺、结直肠、食道、妇科学的或甲状腺癌之类的癌症。在其他的具体实施例中，该医药组合物系关於非-癌性过度增殖性障碍，像是但不限於在血管造形术之後的再狭窄和牛皮癣。在另一个具体实施例中，本发明系关於用来治疗需要IGF-IR之激活作用的哺乳动物的医药组合物，其中该医药组合物包括在治疗上有效含量的本发明之激活抗体，以及在药学上可接受的载剂。可使用包括激活抗体的医药组合物来治疗缺乏足够IGF-I或IGF-II的动物，或用来治疗骨质疏松症、虚弱，或其中哺乳动物分泌太少的活性生长荷尔蒙，或不能对生长荷尔蒙起反应的障碍。; 可将本发明之抗-IGF-IR抗体并入适合投与个体的医药组合物内。通常，医药组合物包括本发明之抗体和在药学上可接受的载剂。当在本文中使用"在药学上可接受的载剂"时，包括任何或所有的溶剂、分散介质、涂料、抗细菌剂和抗真菌剂、等张和吸收延迟剂，及其类似物，其为在生理学上可相容的。在药学上可接受之载剂的实例包括一或多个水、生理盐水、磷酸缓冲之生理盐水、右旋糖、甘油、乙醇及其类似物，及其组合。在许多案例中，最好在组合物中包括等张剂，例如糖、聚醇，像是甘露糖醇、山梨糖醇或氯化钠。在药学上可接受的物质，像是湿润剂，或少量的辅助物质，像是湿润或乳化剂、防腐剂或缓冲溶液，其提高抗体或抗体部份的储存期限或效力。; 本发明之组合物可以是各种形式的。这些包括例如液态、半-固态和固态剂量形式，像是液态溶液(例如注射用和输液用的溶液)、分散体或悬浮液、锭剂、药丸、散剂、微脂粒和栓剂。较佳的形式依据想要的投药模式和治疗应用而定。通常较佳的组合物是以注射用或输液用溶液的形式，像是类似以其他抗体被动免疫人类所使用的那些组合物。较佳的投药模式为非经肠(例如静脉内、皮下、腹腔内、肌肉内)。在较佳的具体实施例中，藉着静脉内输液或注射投与抗体。在另一个较佳的具体实施例中，藉着肌肉内或皮下注射投与抗体。; 治疗性组合物通常必须是无菌的，并在制造和储存条件下是稳定的。可以溶液、微乳剂、分散体、微脂粒或其他适用於高药物浓度之有秩序结构的形式调配组合物。可藉着以所需之含量，将抗-IGF-IR抗体并入按照需要带有一种上文列举之成份或其组合的适当溶剂中，接着过滤灭菌，来制备无菌注射用溶液。通常，藉着将活性化合物并入无菌的媒剂中，其可含有基本的分散介质，以及在上文列举的那些之中，所需的其他成份，来制备分散体。在用来制备无菌注射用溶液之无菌散剂的案例中，较佳的制备方法是真空脱水和冷冻乾燥，从其先前经过无菌-过滤的溶液中，产生活性成份的散剂，加上任何额外的想要成份。可藉着例如使用诸如卵磷脂之类的涂料，在分散体的案例中藉着维持所需的颗粒尺寸，并藉着使用表面活性剂，来维持适当的溶液流动性。可藉着在组合物中含有延迟吸收的制剂，例如单硬脂酸盐类和明胶，而导致注射用组合物的延长吸收。; 可藉着此项技艺中已知的各种方法，投与本发明之抗体，虽然对许多治疗应用而言，较佳的投药途径/模式为腹腔内、皮下、肌肉内、静脉内或输液。熟谙此艺者应了解投药的途径及/或模式将依据想要的结果而改变。在一个具体实施例中，可以单一剂量的方式投与本发明之抗体，或以多次剂量的方式投与。; 在某些具体实施例中，可利用保护活性化合物对抗迅速释放的载剂来制备该化合物，像是控制释放的调配物，包括植入物、经皮贴片和微量包胶的递送系统。可使用生物可降解的、生物可相容的聚合物，像是乙烯乙酸乙烯酯、聚酐类、聚乙醇酸、胶原蛋白、聚原酸酯和聚乳酸。许多制备这类调配物的方法已取得专利，或通常为熟谙此艺者已知的。参见，例如Sustained and Controlled Release Drug Delivery Systems, J.R. Robinson编辑, Marcel Dekker, Inc., New York, 1978。; 在某些具体实施例中，可口服投与本发明之抗-IGF-IR，例如，利用惰性稀释剂或可吸收食用之载剂。亦可将化合物(如果想要，和其他成份)包封在硬或软壳的明胶胶囊中、压制成锭剂，或直接并入个体的饮食中。关於口服的治疗性投药，可将化合物与赋形剂合并，并以可摄食之锭剂、口含片、糖锭、胶囊、酏剂、悬浮液、糖浆、糯米纸囊剂，及其类似物的形式使用。欲藉着非经肠投药以外的其他方法投与本发明之化合物，可能必须以保护其免於失活的材料涂覆该化合物，或与该化合物共同-投与。; 亦可将补充的活性化合物并入组合物中。在某些具体实施例中，将本发明之抗-IGF-IR与一或多种额外的治疗剂共同调配，并/或共同投与，像是化学治疗剂、抗赘生物剂或抗-肿瘤制剂。例如，可将抗-IGF-IR抗体与一或多种额外的治疗剂共同调配并/或共同投与。这些制剂包括但不限於与其他标靶结合的抗体(例如与一或多个生长因子或细胞激素，其细胞表面受体或IGF-I结合的抗体)、IGF-I结合蛋白质、抗赘生物剂、化学治疗剂、抗-肿瘤剂、对抗IGF-IR或IGF-I的反义寡核苷酸、阻断IGF-IR激活的肽类似物、可溶性IGF-IR，及/或一或多个抑制IGF-I产制或活性的化学制剂，其为此项技艺中已知的，例如奥曲肽。关於包括激活抗体的医药组合物，可将抗-IGF-IR抗体与增加细胞增殖或预防细胞凋零的因子一起调配。这类因子包括生长因子，像是IGF-I，及/或激活IGF-IR的IGF-I之类似物。这类组合治疗可能需要较低剂量的抗-IGF-IR抗体，以及共同投与之制剂，因此避免了可能的毒性或与各种单一治疗有关的并发症。在一个具体实施例中，抗体和一或多个额外的治疗剂。; 本发明之医药组合物可含有"在治疗上有效之含量"或"在预防上有效之含量"的本发明之抗体或抗体部份。"在治疗上有效之含量"意指在所需的剂量和期间内，达到想要之治疗结果的有效含量。可根据诸如疾病状态、个体的年龄、性别和体重，以及抗体或抗体部份在个体中诱发想要之反应的能力，来改变抗体或抗体部份在治疗上的有效含量。在治疗上有效之含量亦是在治疗上有利之影响胜过抗体或抗体部份之任何毒性或有害影响的含量。"在预防上有效之含量"意指在所需的剂量和期间内，达到想要之预防结果的有效含量。通常，因为在疾病之前或其较早的阶段，对个体使用预防剂量，故在预防上有效之含量将低於在治疗上有效之含量。; 可调整剂量摄生法，以便提供最适切的想要反应(例如治疗或预防的反应)。例如，可投与单一团块，可在一段时间内投与数个分开的剂量，或可按照紧急治疗状况的指示，按比例降低或增加剂量。可为了单一或多次给药，调配包括抗体或包括组合治疗(包括抗体和一或多个额外之治疗剂)的医药组合物。为了易於投药和剂量的均等，以剂量单位形式调配非经肠组合物是特别有利的。当在本文中使用剂量单位时，意指物理上的个别单位，适合待处理之哺乳动物个体的单一剂量；每个单位含有预定含量的活性成份，经过计算其可产生想要的治疗效果，连同所需的药学载剂。藉着并直接依据(a)活性成份的独特特徵和待达成的特殊治疗或预防性效果，以及(b)在个体中为了敏感性的处理，在混合这类活性化合物之技艺中的固有限制，来指示本发明之剂量单位形式的说明书。特别有用的调配物是在20 mM柠檬酸钠，pH 5.5, 140 mM NaCl和0.2毫克/毫升多乙氧基醚80之缓冲溶液中的5毫克/毫升抗-IGF-IR抗体。; 在治疗上或在预防上有效含量之本发明抗体或抗体部份的代表性、非-限制范围是0.1-100毫克/公斤，较佳的是0.5-50毫克/公斤，更佳的是1-20毫克/公斤，而再更佳的是1-10毫克/公斤。应注意的是剂量值可随着待缓和之病况的类型和严重性而改变。更了解为了任何特定的目标，应该在一段时间内根据个别的需要，以及投与或监督该组合物之投药者的专业判断，调整特定的剂量摄生法，且在本文中陈述的剂量范围仅是代表性的，并非企图限制提出申请之组合物的范围或实行。在一个具体实施例中，连同一或多个额外的治疗剂一起投与在治疗上或在预防上有效之含量的抗体或其抗原-结合部份。; 另一方面，本发明系关於以低於每个月300毫克之剂量投与抗-IGF-IR抗体，来治疗癌症。; 本发明的其他观点提供包括抗-IGF-IR抗体，以及包括这些抗体之医药组合物的套组。除了抗体或医药组合物之外，套组可包括诊断或治疗剂。套组亦包括在诊断或治疗方法中使用的设备。在较佳的具体实施例中，套组包括抗体或其医药组合物，以及可在上文描述之方法中使用的诊断剂。在另一个较佳的具体实施例中，套组包括抗体或其医药组合物，以及一或多个治疗剂，像是额外的抗赘生物剂、抗-肿瘤剂或化学治疗剂，可在下文描述的方法中使用它们。; 本发明亦关於在哺乳动物中抑制异常细胞生长的医药组合物，包括将某一含量的本发明化合物与某一含量的化学治疗剂混合，其中该化合物、盐、媒合物或前药，以及化学治疗剂之含量一起可有效地抑制异常细胞的生长。许多化学治疗剂是目前此项技艺中已知的。在一个具体实施例中，化学治疗剂系选自包括有丝分裂抑制剂、烷基化制剂、抗-代谢物、嵌入抗生素、生长因子抑制剂、细胞周期抑制剂、酵素、拓朴异构酶抑制剂、抗-存活制剂、生物学反应修改剂、抗-荷尔蒙，例如抗-雄激素和抗-血管生成制剂。; 抗-血管生成制剂，像是MMP-2(基质-金属蛋白酶2)抑制剂、MMP-9(基质-金属蛋白酶9)抑制剂和COX-II(环氧化酶II)抑制剂，可连同本发明化合物一起使用。有用的COX-II抑制剂之实例包括CELEBREX TM (奥雷寇克司(alecoxib))、凡德寇克司(valdecoxib)和洛福寇克司(rofecoxib)。有用的基质金属蛋白酶抑制剂之实例，描述在WO 96/33172(1996年10月24日公告)、WO 96/27583(1996年3月7日公告)、欧洲专利申请案第97304971.1号(1997年7月8日建档)、欧洲专利申请案第99308617.2号(1999年月10日29建档)、WO 98/07697(1998年2月26日公告)、WO 98/03516(1998年1月29日公告)、WO 98/34918(1998年8月13日公告)、WO 98/34915(1998年8月13日公告)、WO 98/33768(1998年8月6日公告)、WO 98/30566(1998年7月16日公告)、欧洲专利申请案第606, 046号(1994年7月13日建档)、欧洲专利申请案第931, 788号(1999年7月28日建档)、WO 90/05719(1990年5月31日公告)、WO 99/52910(1999年10月21日公告)、WO 99/52889(1999年10月21日公告)、WO 99/29667(1999年6月17日公告)、PCT国际申请案第PCT/IB98/01113(1998年7月21日建档)、欧洲专利申请案第99302232.1号(1999年3月25日建档)、英国专利申请案第9912961.1号(1999年6月3日建档)、美国专利第5, 863, 949号(1999年1月26日颁予)、美国专利第5, 861, 510号(1999年1月19日颁予)，和欧洲专利公告780, 386号(1997年6月25日公告)中，将其全部以引用的方式并入本文中。较佳的MMP抑制剂是未证实关节痛的那些。更佳的是相对於其他基质-金属蛋白酶(也就是MMP-1、MMP-3、MMP-4、MMP-5、MMP-6、MMP-7、MMP-8、MMP-10、MMP-11、MMP-12和MMP-13)，选择性抑制MMP-2及/或MMP-9的那些。在本发明中有用的MMP抑制剂之某些特定实例，为AG-3340、RO 32-3555、RS 13-0830和下列提及的化合物：3-[[4-(4-氟-苯氧基)-苯磺醯基]-(1-羟基胺甲醯基-环戊基)-胺基]-丙酸；3-外-3-[4-(4-氟-苯氧基)-苯磺醯胺基]-8--二环[3.2.1]辛烷-3-羧酸羟基醯胺；(2R, 3R)1-[4-(2-氯-4-氟-苄氧基)-苯磺醯基]-3-羟基-3-甲基-六氢吡啶-2-羧酸羟基醯胺；4-[4-(4-氟-苯氧基)-苯磺醯胺基]-四氢哌喃-4-羧酸羟基醯胺；3-[[4-(4-氟-苯氧基)-苯磺醯基]-(1-羟基胺甲醯基-环丁基)-胺基]-丙酸；4-[4-(4-氯-苯氧基)-苯磺醯胺基]-四氢-哌喃-4-羧酸羟基醯胺；(R)3-[4-(4-氯-苯氧基)-苯磺醯胺基]-四氢-哌喃-3-羧酸羟基醯胺；(2R, 3R)1-[4-(4-氟-2-甲基-苄氧基)-苯磺醯基]-3-羟基-3-甲基-六氢吡啶-2-羧酸羟基醯胺；3-[[4-(4-氟-苯氧基)-苯磺醯基]-(1-羟基胺甲醯基-1-甲基-乙基)-胺基]-丙酸；3-[[4-(4-氟-苯氧基)-苯磺醯基]-(4-羟基胺甲醯基-四氢-哌喃-4-基)-胺基]-丙酸；3-外-3-[4-(4-氯-苯氧基)-苯磺醯胺基]-8--二环[3.2.1]辛烷-3-羧酸羟基醯胺；3-内-3-[4-(4-氟-苯氧基)-苯磺醯胺基]-8--二环[3.2.1]辛烷-3-羧酸羟基醯胺；和(R)3-[4-(4-氟-苯氧基)-苯磺醯胺基]-四氢-呋喃-3-羧酸羟基醯胺；以及该化合物在药学上可接受的盐类和媒合物。; 本发明之化合物亦可与信号转导抑制剂一起使用，像是可抑制EGF-R(表皮生长因子受体)反应之制剂，像是EGF-R抗体、EGF抗体和属於EGF-R抑制剂之分子；VEGF(血管内皮生长因子)抑制剂，像是VEGF受体和可抑制VEGF的分子；以及erbB2受体受体抑制剂，像是与erbB2受体结合的有机分子或抗体，例如HERCEPTIN TM (Genentech, Inc.)。在例如WO 95/19970(1995年7月27日公告)、WO 98/14451(1998年4月9日)、WO 98/02434(1998年1月22日)，和美国专利第5, 747, 498号(1998年5月5日颁予)中描述了EGFR-抑制剂，而这类物质均可使用在本发明中，如同在本文中的描述。EGFR-抑制剂包括但不限於单株抗体C225和抗-EGFR 22Mab (ImClone Systems Incorporated)、ABX-EGF (Abgenix/Cell Genesys)、EMD-7200 (Merck KgaA)、EMD-5590 (Merck KgaA)、MDX-447/H-477(Medarex Inc.和Merck KgaA)，以及化合物ZD-1834、ZD-1838和ZD-1839 (AstraZeneca)、PKI-166 (Novartis)、PKI-166/CGP-75166 (Novartis)、PTK787 (Novartis)、CP701 (Cephalon)、乐服诺迈(leflunomide)(Pharmacia/Sugen)、CI-1033 (Warner Lambert Parke Devis)、CI-1033/PD 183, 805 (Warner Lambert Parke Davis)、CL-387, 785 (Wyeth-Ayerst)、BBR-1611 (Boehringer Mannheim GmbH/Roche)、Naamidine A (Bristol Myers Squibb)、RC-3940-II (Pharmacia)、BIBX-1382 (Boehringer Ingelheim)、OLX-103 (Merck &amp; amp; Co.)、VRCTC-310 (Ventech Research)、EGF融合毒素(Seragen Inc.)、DAB-389 (Seragen/Lilgand)、ZM-252808 (Imperial Cancer Research Fund)、RG-50864 (INSERM)、LEM-A12 (Parker Hughes Cancer Center)、WHI-P97 (Parker Hughes Cancer Center)、GW-282974 (Glaxo)、KT-8391 (Kyowa Hakko)和EGF-R疫苗(York Medical/Centro de Immunologia Molecular (CIM))。可在本发明中使用这些和其他的EGF-R-抑制剂。; VEGF抑制剂，例如SU-5416和SU-6668(Sugen Inc.)、SH-268 (Schering)和NX-1838 (NeXstar)，亦可与本发明之化合物混合。在例如WO 99/24440(1999年5月20日公告)、PCT国际申请案PCT/IB99/00797(1999年5月3日建档)、WO 95/21613(1995年8月17日)、WO 99/61422(1999年12月2日)、美国专利第5, 834, 504号(1998年11月10日颁予)、WO 98/50356(1998年11月12日公告)、美国专利第5, 883, 113号(1999年3月16日颁予)、美国专利第5, 886, 020号(1999年3月23日颁予)、美国专利第5, 792, 783号(1998年8月11日颁予)、WO 99/10349(1999年3月4日公告)、WO 97/32856(1997年9月12日公告)、WO 97/22596(1997年6月26日公告)、WO 98/54093(1998年12月3日公告)、WO 98/02438(1998年1月22日公告)、WO 99/16755(1999年4月8日公告)，和WO 98/02437(1998年1月22日公告)中描述VEGF抑制剂，将其全部以引用的方式并入本文中。一些可用於本发明之特定VEGF抑制剂的其他实例，是IM862 (Cytran Inc.); Genentech Inc.的抗-VEGF单株抗体；以及血管酵素(angiozyme)，一种得自Ribozyme和Chiron的合成核糖酶。可在本发明中使用这些及其他VEGF抑制剂，如同在本文中的描述。; ErbB2受体抑制剂，像是GW-282974 (Glaxo Wellcome plc)，以及单株抗体AR-209 (Aronex Pharmaceuticals Inc.)和2B-1(Chiron)，亦可与本发明之化合物混合，例如在WO 98/02434(1998年1月22日公告)、WO 99/35146(1999年7月15日公告)、WO 99/35132(1999年7月15日公告)、WO 98/02437(1998年1月22日公告)、WO 97/13760(1997年4月17日公告)、WO 95/19970(1995年7月27日公告)、美国专利第5, 587, 458号(1996年12月24日颁予)和美国专利第5, 877, 305号(1999年3月2日颁予)中指示的那些，将其全部以引用的方式并入本文中。亦在1999年1月27日建档之美国临时申请案第60/117, 341号和1999年1月27日建档之美国临时申请案第60/117, 346号中描述了可用於本发明中的erbB2受体抑制剂，两者均全部以引用的方式并入本文中。根据本发明，在上述之PCT申请案、美国专利和美国临时申请案中描述的erbB2受体抑制剂化合物和物质，以及其他抑制erbB2受体的化合物和物质，均可与本发明之化合物一起使用。; 抗-存活制剂包括抗-IGF-IR抗体和抗-整合素(integrin)制剂，像是抗-整合素抗体。; 诊断方法的用途; 可在活体外或在活体内，使用抗-IGF-IR抗体来检测在生物试样中的IGF-IR。抗-IGF-IR抗体可用於传统的免疫测定，包括但不限於ELISA、RIA、FACS、组织免疫组织化学法、西方墨点法或免疫沉淀法。可使用本发明之抗-IGF-IR抗体来检测得自人类的IGF-IR。在另一个具体实施例中，可使用抗-IGF-IR抗体来检测得自旧世界灵长类的IGF-IR，像是猕猴和恒河猴、黑猩猩和猿类。本发明提供在生物试样中检测抗-IGF-IR的方法，包括使该生物试样与本发明之抗-IGF-IR抗体接触，并检测与抗-IGF-IR结合的结合抗体，来检测在该生物试样中的IGF-IR。在一个具体实施例中，直接利用可检测标记标示抗-IGF-IR抗体。在另一个具体实施例中，该抗-IGF-IR抗体(第一个抗体)是未标示的，而标示可与该抗-IGF-IR抗体结合的二级抗体或其他分子。如同熟谙此艺者已熟知的，选择能够专一地与特定物种或种类的第一个抗体专一地结合的二级抗体。例如，如果抗-IGF-IR抗体是人类的IgG，此时二级抗体可以是抗-人类-IgG。其他可与抗体结合的分子，包括但不限於蛋白质A和蛋白质G，两者皆是市售的，例如得自Pierce Chemical Co.。; 已经在前揭示了抗体或二级抗体的适当标示，并包括各种酵素、辅基、萤光物质、发光物质、磁性制剂和放射性物质。适当之酵素的实例包括辣根过氧化酶、硷性磷酸酶、β-半乳糖苷酶或乙醯胆硷酯酶；适当之辅基复合物的实例包括链霉菌抗生物素蛋白/生物素和抗生物素蛋白/生物素；适当之萤光物质的实例包括繖形酮、萤光素、萤光素异硫代氰酸酯、若丹明、二氯三胺萤光素、丹磺醯氯或藻红蛋白；发光物质的实例包括鲁米诺；磁性制剂的实例包括钆；且适当之放射性物质的实例包括 125 I、 131 I、 35 S或 3 H。; 在另一种选择的具体实施例中，可在生物试样中藉着竞争免疫测定，利用以可检测物质标示的IGF-IR标准物和未标示的抗-IGF-IR抗体，来测定IGF-IR。在该测定中，混合生物试样、已标示之IGF-IR标准物和抗-IGF-IR抗体，并定出已标示之IGF-IR标准物与未标示之抗体结合的量。在该生物试样中IGF-IR的含量，与已标示之IGF-IR标准物与抗-IGF-IR抗体结合的量成反比。; 为了许多目的，可使用上文揭示的免疫测定。在一个具体实施例中，可在细胞培养中使用抗-IGF-IR抗体检测在细胞中的IGF-IR。在较佳的具体实施例中，可在以各种化合物处理细胞之後，使用抗IGF-IR抗体检测在细胞表面上IGF-IR的酪胺酸磷酸化作用、酪胺酸自体磷酸化作用，及/或IGF-IR的含量。可使用该方法测试可用来激活或抑制IGF-IR的化合物。在该方法中，以受试化合物处理一种细胞试样一段时间，同时保持其他试样仍是未处理的。如果欲测量酪胺酸自体磷酸化作用，则将细胞溶解，并使用上述的免疫测定，或按照在实例III中的描述，其使用ELISA，来测量IGF-IR的酪胺酸磷酸化作用。如果欲测量IGF-IR的总量，则将细胞溶解，并使用上述的免疫测定之一，来测量总IGF-IR含量。; 为了定出IGF-IR酪胺酸磷酸化作用，或为了测量总IGF-IR含量，较佳的免疫测定为ELISA或西方墨点法。如果仅测量细胞表面的IGF-IR含量，则不溶解细胞，并使用上述的免疫测定之一来测量细胞表面的IGF-IR含量。定出细胞表面之IGF-IR含量的较佳免疫测定包括以可检测标记标示细胞表面的蛋白质，像是生物素或 125 I，利用抗-IGF-IR抗体使IGF-IR免疫沉淀，然後检测已标示的IGF-IR。为了定出IGF-IR的局部化，例如细胞表面的含量，其他较佳的免疫测定为藉着使用免疫组织化学法。诸如ELISA、RIA、西方墨点法、免疫组织化学法、嵌入膜之蛋白质的细胞表面标示，以及免疫沉淀法之类的方法，为此项技艺中已熟知的。参见，例如Harlow和Lane，在前。此外，亦可为了高输贯量筛选按比例扩大免疫测定，以便就IGF-IR的激活或抑制作用，测试大量的化合物。; 亦可使用本发明之抗-IGF-IR抗体，定出在组织中或在衍生自该组织之细胞中的IGF-IR含量。在较佳的具体实施例中，该组织为肿瘤或其生检试样。在该方法的较佳具体实施例中，从患者中切除该组织或其生检试样。然後在免疫测定中使用该组织或生检试样，藉着上文讨论的方法，决定例如IGF-IR含量、IGF-IR的细胞表面含量、IGF-IR的酪胺酸磷酸化作用程度，或IGF-IR的局部化。可使用该方法决定肿瘤是否以高程度表现IGF-IR。; 可使用上述的诊断方法决定肿瘤是否表现高程度的IGF-IR，这可表示该肿瘤将对利用抗-IGF-IR抗体的处理有良好的反应。亦可使用该诊断方法决定肿瘤是否可能是癌性的(如果其表现高程度的IGF-IR)，或是良性的(如果其表现低程度的IGF-IR)。此外，亦可使用该诊断方法，决定利用抗-IGF-IR抗体的处理(参见下文)，是否引起肿瘤表现较低程度的IGF-IR，及/或表现较低程度的酪胺酸自体磷酸化作用，并因此可用来决定该处理是否是成功的。一般而言，决定抗-IGF-IR抗体是否降低酪胺酸磷酸化作用的方法，包括在改兴趣的细胞或组织中，测量酪胺酸磷酸化作用的程度，将该细胞或组织与抗-IGF-IR抗体或其抗原-结合部份一起培养，然後再度-测量在该细胞或组织中酪胺酸磷酸化作用之程度的步骤。可测量IGF-IR或其他蛋白质(们)的酪胺酸磷酸化作用。亦可使用该诊断方法，决定组织或细胞是否不表现足够高之含量的IGF-IR，或足够高之含量的已激活IGF-IR，这可能是罹患矮小、骨质疏松症或糖尿病之个体的案例。IGF-IR或活性IGF-IR之含量太低的诊断，可使用激活抗-IGF-IR抗体、IGF-I或其他增加IGF-IR含量或活性的治疗剂来治疗之。; 亦可在活体内使用本发明之抗体，使表现IGF-IR的组织和器官局限化。在较佳的具体实施例中，可使用抗-IGF-IR抗体使表现IGF-IR的肿瘤局限化。本发明之抗-IGF-IR抗体的优点是在投与它时，将不产生免疫反应。该方法包括对需要这类诊断试验的患者投与抗-IGF-IR抗体或其医药组合物，并使该患者接受影像分析，定出表现IGF-IR之组织的位置之步骤。影像分析是在医学技艺中已熟知的，并包括但不限於x-射线分析、核磁共振光谱法(MRI)或电脑断层摄影(CE)。在该方法的其他具体实施例中，从患者中获得生检试样，决定感兴趣的组织是否表现IGF-IR，而非使患者接受影像分析。在较佳的具体实施例中，可利用可检测之制剂标示抗-IGF-IR抗体，其可在患者中显影。例如，可利用诸如钡之类的照影剂(其可用於x-射线分析)，或诸如钆螯合物之类的磁性照影剂(其可用於MRI或CE)，来标示抗体。其他的标示剂，包括但不限於放射性同位素，像是 99 Tc。在其他的具体实施例中，抗-IGF-IR抗体将是未标示的，并将藉着投与二级抗体或其他可检测，并可与抗-IGF-IR抗体结合的分子，而使其显影。; 治疗方法的用途; 在其他的具体实施例中，本发明藉着对需要其之患者投与抗-IGF-IR抗体，提供抑制IGF-IR活性的方法。可在治疗上使用在本文中描述的任何类型之抗体。在较佳的具体实施例中，抗-IGF-IR抗体是人类、嵌合型或人类化的抗体。在另一个较佳的具体实施例中，IGF-IR是人类的，且患者是人类患者。或者，患者可以是表现IGF-IR的哺乳动物，且抗-IGF-IR抗体与其产生交叉-反应。可为了兽医的目的，或作为人类疾病的动物模式，对非-人类的、表现与该抗体产生交叉-反应之IGF-IR的哺乳动物(也就是灵长类，或猕猴或恒河猴)投与该抗体。这类动物模式可用来评估本发明之抗体的治疗效力。; 当在本文中使用"其中IGF-IR活性是有害的障碍"一词时，企图包括某种疾病或其他的障碍，其中已经显示在受该障碍所苦的个体中，高含量IGF-IR的出现，是或怀疑是引起该障碍之病理生理学的原因，或是促使该障碍恶化的因素。因此，其中高含量之IGF-IR活性是有害的障碍，是其中预期抑制IGF-IR活性将可改善其症状及/或进行的障碍。例如，可藉着在受该障碍所苦之个体受影响的细胞或组织中，增加在细胞表面上的IGF-IR含量，或增加IGF-IR之酪胺酸自体磷酸化作用，来证实这类障碍。例如，可使用如同上述的抗-IGF-IR抗体，检测在IGF-IR含量上的增加。; 在较佳的具体实施例中，可对罹患表现IGF-IR之肿瘤的患者投与抗-IGF-IR抗体。肿瘤可以是固体肿瘤或可以是非-固体的肿瘤，像是淋巴瘤。在更佳的具体实施例中，可对罹患为癌性之表现IGF-IR的肿瘤的患者投与抗-IGF-IR抗体。在再更佳的具体实施例中，对罹患肺癌、乳癌、前列腺癌或结肠癌的患者投与抗-IGF-IR抗体。在更佳的具体实施例中，该方法导致肿瘤不增加重量或体积，或减少重量或体积。在其他的具体实施例中，该方法导致在肿瘤上的IGF-IR被内化。在较佳的具体实施例中，该抗体选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2或6.1.1，或包括其重链、轻链或抗原-结合区。; 在另一个较佳的具体实施例中，可对表现不适当之高含量IGF-I的患者，投与抗-IGF-IR抗体。在此项技艺中，已知IGF-I的高程度表现可能导致各种常见的癌症。在更佳的具体实施例中，对患有前列腺癌、神经胶质瘤或纤维肉瘤的患者投与抗-IGF-IR抗体。在再更佳的具体实施例中，该方法导致癌症中止异常的增殖，或不再增加重量或体积，或减少重量或体积。; 在一个具体实施例中，该方法系关於诸如脑、鳞状细胞、膀胱、胃、胰脏、乳房、头、颈、食道、前列腺、结直肠、肺、肾的、肾、卵巢、妇科学的或甲状腺癌之类癌症的治疗。可利用本发明之化合物，根据本发明之方法来处理的患者，包括例如已经诊断为罹患肺癌、骨癌、胰脏癌、皮肤癌、头和颈的癌症、皮肤或眼内的黑色素瘤、子宫癌、卵巢癌、直肠癌、肛门区域的癌症、胃癌、结肠癌、乳癌、妇科学的肿瘤(例如子宫肉瘤、输卵管的癌症、子宫内膜癌、子宫颈癌、阴道的癌症或阴户的癌症)、霍奇金氏(Hodgkin' s)症、食道癌、小肠的癌症、内分泌系统的癌症(例如甲状腺、副甲状腺或肾上腺的癌症)、软组织的肉瘤、尿道癌、阴茎癌、前列腺癌、慢性或急性的白血病、小孩的固体肿瘤、淋巴细胞的淋巴瘤、膀胱癌肾脏和输尿管的癌症(例如肾细胞癌、肾盂的癌症)，或中枢神经系统的赘生物(例如原发性CNS淋巴瘤、脊髓轴肿瘤、脑干神经胶质瘤、或脑下垂体腺瘤)的患者。; 可投与抗体一次，但较佳的是多次投药。可从每日3次到每6个月一次投与抗体。可按照诸如每日3次、每日2次、每日1次、每2日1次、每3日1次、每周1次、每2周1次、每月1次、每2个月1次、每3个月1次和每6个月1次之类的计划投药。抗体可经由口服、黏膜、颊部、鼻内、可吸入、静脉内、皮下、肌肉内、非经肠、肿瘤内或局部的路径投与。可在远离肿瘤部位之处投与抗体。亦可经由迷你帮浦连续投与抗体。可投与抗体一次、至少两次，或持续至少一段时间，直到该病况被治疗、减轻或治癒为止。通常将投与抗体像肿瘤出现一样长的时间，其限制条件为该抗体引起肿瘤或癌症中止生长，或减少重量或体积。通常将投与抗体，成为如同前述之医药组合物的一部份。抗体的剂量通常将是在0.1-100毫克/公斤的范围内，较佳的是0.5-50毫克/公斤，更佳的是1-20毫克/公斤，而再更佳的是1-10毫克/公斤。可藉着此项技艺中已知的任何方法来测量抗体的血清浓度。参见，例如下文的实例XVII。亦可在预防上投与抗体，以便预防癌症或肿瘤发生。这在具有"高正常"值之IGF-I的患者中是特别有用的，因为这些患者已经显示有发展出常见癌症的较高风险。参见Rosen等人，在前。; 在其他方面，可将抗-IGF-IR抗体与其他治疗剂，像是抗赘生物药物或分子共同-投与罹患过度增殖性障碍，像是癌症或肿瘤的患者。一方面，本发明系关於在哺乳动物中治疗过度增殖性障碍的方法，包括对该哺乳动物投与与抗-肿瘤制剂混合之在治疗上有效含量的本发明化合物，该抗-肿瘤制剂系选自包括，但不限於有丝分裂抑制剂、烷基化制剂、抗-代谢物、嵌入剂、生长因子抑制剂、细胞周期抑制剂、酵素、拓朴异构酶抑制剂、生物反应修改剂、抗-荷尔蒙、激酶抑制剂、基质金属蛋白酶抑制剂、遗传治疗剂和抗-雄激素。在较佳的具体实施例中，可与抗赘生物制剂，像是亚德里亚霉素或紫杉醇一起投与抗体。在另一个较佳的具体实施例中，连同放射性治疗、化学治疗、光动力治疗、外科或其他的免疫治疗，一起投与抗体或组合治疗。在另一个更佳的具体实施例中，将与其他的抗体一起投与抗体。例如，可将抗-IGF-IR抗体与已知可抑制肿瘤或癌症细胞增殖之抗体或其他制剂一起投与，例如抑制erbB2受体、EGF-R、CD20或VEGF的抗体或制剂。; 抗体与额外之治疗剂的共同投药(组合治疗)，包括投与包括抗-IGF-IR抗体之医药组合物，以及额外的治疗剂，并投与二或多种分开的医药组合物，一种包括抗-IGF-IR抗体，而其他种(们)包括额外的治疗剂(们)。此外，虽然共同-投药或组合治疗通常意指抗体和额外的治疗剂在彼此相同的时间投药，但亦包括其中在不同时间投与抗体和额外之治疗剂的例子。例如，可每3天一次投与抗体，而每天一次投与额外之治疗剂。或者，可在利用额外的治疗剂治疗该障碍之前或之後，投与抗体。同样地，可在其他治疗，像是放射性治疗、化学治疗、光动力治疗、外科或其他免疫治疗之前或之後，投与抗-IGF-IR抗体。; 可投与抗体和一或多种额外之治疗剂(组合治疗)一次、两次或至少一段时间，直到该病况被治疗、减轻或治癒为止。最好多次投与组合治疗。可从每天3次到每6个月一次，投与组合治疗。可按照诸如每日3次、每日2次、每日1次、每2日1次、每3日1次、每周1次、每2周1次、每月1次、每2个月1次、每3个月1次和每6个月1次之类的计划投药，或可经由迷你帮浦连续投药。可经由口服、黏膜、颊部、鼻内、可吸入、静脉内、皮下、肌肉内、非经肠、肿瘤内或局部的路径投与组合治疗。可在远离肿瘤部位之处投与组合治疗。通常将投与组合治疗像肿瘤出现一样长的时间，其限制条件为该抗体引起肿或癌症中止生长，或减少重量或体积。; 在更进一步的具体实施例中，以放射性标记、免疫毒素或毒素标示抗-IGF-IR抗体，或其为包括毒性肽的融合蛋白质。该抗-IGF-IR抗体或抗-IGF-IR抗体融合多肽，指挥放射性标记、免疫毒素、毒素或毒性肽到达表现IGF-IR的肿瘤或癌症细胞处。在较佳的具体实施例中，在抗-IGF-IR抗体与在肿瘤或癌症细胞表面上的IGF-IR结合之後，将放射性标记、免疫毒素、毒素或毒性肽内化。; 另一方面，可在治疗上使用抗-IGF-IR抗体，在需要其之患者中，诱导特定细胞的细胞凋零。在许多案例中，为了细胞凋零而瞄准的细胞是癌性或肿瘤细胞。因此，在较佳的具体实施例中，本发明提供藉着对需要其之患者投与在治疗上有效含量的抗-IGF-IR抗体，而诱导细胞凋零的方法。在较佳的具体实施例中，该抗体选自2.12.1、2.13.2、2.14.3、3.1.1、4.9.2或6.1.1，或包括其重链、轻链或抗原-结合区。; 另一方面，可使用抗-IGF-IR抗体来治疗非癌症的状态，其中高含量的IGF-I及/或IGF-IR已经与该非癌症之状态或疾病有关。在一个具体实施例中，该方法包括对罹患非癌症之病理学状态的患者投与抗-IGF-IR抗体，该非癌症之病理学状态系由高含量的IGF-I及/或IGF-IR含量或活性所引起或使其恶化。在较佳的具体实施例中，非癌症的病理学状态是肢端肥大症、巨人症、牛皮癣、粥样硬化、血管的平滑肌再狭窄或不适当的微血管增殖，像是在糖尿病之并发症中发现的，特别是衍睛的并发症。在更佳的具体实施例中，抗-IGF-IR抗体减慢了非癌症之病理学状态的进行。在更佳的具体实施例中，抗-IGF-IR抗体至少部份地中止或逆转了该非癌症的病理学状态。; 另一方面，本发明提供对需要其之患者投与激活抗-IGF-IR抗体的方法。在一个具体实施例中，以有效增加IGF-IR活性之含量，对需要其之患者投与激活抗体或医药组合物。在更佳的具体实施例中，该激活抗体能够重建正常的IGF-IR活性。在另一个较佳的具体实施例中，可对罹患矮小、神经病变、减少肌肉质量或骨质疏松症的患者投与激活抗体。在另一个较佳的具体实施例中，可与一或多种其他增加细胞增殖的因子一起投与激活抗体，预防细胞凋零或增加IGF-IR活性。这类因子包括生长因子，像是IGF-I及/或激活IGF-IR的IGF-I之类似物。在较佳的具体实施例中，该抗体系选自4.17.3，或包括其重链、轻链或抗原-结合部份。; 基因治疗; 可经由基因治疗将本发明之核酸分子投与需要其之患者。该治疗可以是在活体内或在活体外的。在较佳的具体实施例中，将编码重链和轻链两者的核酸分子投与患者。在较佳的具体实施例中，投与核酸分子，使得其稳定地整合到B细胞的染色体内，因为这些细胞特化而产生抗体。在较佳的具体实施例中，在活体外转移感染或感染前驱物B细胞，并再度-移植到需要其之患者内。在另一个具体实施例中，使用已知感染感兴趣之细胞类型的病毒，在活体内感染前驱物B细胞或其他细胞。用於基因治疗的代表性载体包括微脂粒、质体或病毒载体，像是逆转录病毒、腺病毒和与腺有关的病毒。在活体内或在活体外感染之後，藉着从进行处理之患者中取得试样，并使用任何此项技艺中已知和在本文中讨论的免疫测定，来监视抗体表现的程度。; 在较佳的具体实施例中，基因疗法包括投与有效含量之经过分离的核酸分子，其编码人类抗体或其一部份的重链或其抗原-结合部份，并表现该核酸分子的步骤。在另一个具体实施例中，基因疗法包括投与有效含量之经过分离的核酸分子，其编码人类抗体或其一部份的轻链或其抗原-结合部份，并表现该核酸分子的步骤。在更佳的方法中，基因疗法包括投与有效含量之经过分离的核酸分子，其编码人类抗体或其一部份的重链或其抗原-结合部份，以及有效含量之经过分离的核酸分子，其编码人类抗体或其一部份的轻链或其抗原-结合部份，并表现该核酸分子的步骤。基因疗法亦可包括投与其他抗-癌制剂，像是紫杉醇、他莫昔芬、5-FU、亚德里亚霉素或CP-358, 774的步骤。; 为了更彻底地了解本发明，陈述下列的实例。这些实例仅为了解释之目的，而不可以任何方式解释为限制本发明之范围。

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申请人：艾默根佛蒙特有限公司; 辉瑞大药厂

**377、HEALING ENERGY GENERATOR AND LASER NUCLEAR FUSION**

摘要：PROBLEM TO BE SOLVED : To freely create energy and matter by applying such a phenomenon to nuclear fusion that, since ancient times it has been said that a pyramid has wonder energy, the pyramid is though to generate infinite energy, it is though that as there seem to be the pyramid with positive nature and the one with negative nature, the infinite energy is though to be generated when these pyramids are stuck together and placed at the center of X, Y and Z representing three dimension, and drawing upon an insemination mechanism, it is noticed that a phenomenon like DNA being divided and made asymmetric is occurred.SOLUTION : Two square pyramid of 45 are stuck together, six such stuck pyramids are made and placed at the center of the X, Y and Z precisely. Thereby, the healing energy is generated and it is applied to the nuclear fusion.

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申请人：GENSU YOSHITOSHI

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**378、Laser accelerator produced colliding ion beams fusion device**

摘要：A fusion device consisting of two colliding ion beams, each produced by a high power, femtosecond regime, chirped pulsed amplification (CPA) laser acceleration device. The CPA laser creates an ionized plasma and subsequently accelerates electrons to multi-MeV energies, thus creating electric fields due to separation of electrons and ions, of sufficient magnitude to accelerate the plasma ions to energies ranging from multi-keV to multi-MeV levels. The magnetic fields created by the laser pulses, as well as the electrons and/or ions, also helps confine the ions to the region of the size of the laser beam focal spot diameter, and thus enhance the collision probability of the counter-streaming ions and provide a sizable population of fusion events. Ion beam generation by high powered, short pulse CPA lasers has been previously demonstrated in thin foil targets. This novel use of the colliding beam geometry should lead to near break-even levels of fusion energy production in compact geometry suitable for small laboratory use for weapons design applications and commercial fusion energy characterization emulations. In addition, the low emittance of any radiation produced in the small fusion reaction region could provide a significant feature for use of this technology in high resolution neutron radiography, or other commercial or medical applications of neutrons, ions, electrons or photons(5) produced by components of this technology. It should be noted that the ion beam(s) created with only one foil target could produce neutrons for radiography by other than fusion reactions; for example for protons, (p, n) reactions on the target atoms will produce a neutron source of varying energies, although the cross sections for the reactions may be somewhat lower than for fusion.

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申请人：SCHOEN NEIL C

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状态代码：LAPS;?

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状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 2002181655A1Effective Date:;20120120

**379、可控核聚变动力装置**

摘要：一种产生可控制的核聚变能的动力装置，主要采 用氢的同位素氘和氚作为燃料。本装置采用离子注入、激光和 中子引燃。高压氘气和氚气经等离子喷嘴电离后进入真空室， 经加速后聚焦于聚变反应器的聚变核反应区，由环绕离子注入 器的高功率激光器组和强中子源组对离子加热和加压实现引 燃和维持燃烧。聚变反应器是三层球壳容器，内壳由复合石墨 层吸收光和热辐射并反射中子，石墨层外是耐热钢壳组成的金 属钠热载体容器及保温水壳和外壳。液态金属钠作为热载体输 入换热器产生过热蒸气驱动蒸气轮机发电机组用于发电等。本 动力装置用于提供廉价能源。

公开（公告）号：[CN2563708Y](https://www.incopat.com/detail/init2?formerQuery=q180RYw8GYIWtChrBb6NYw%3D%3D&local=zh)

公开（公告）日：2003-07-30

申请号：CN01273905.7

申请日：2001-11-06

申请人：左炜

法律状态：法律状态公告日：20030730;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20061011;?

法律状态：地址不明的通知;?

描述信息：<收件人>左炜</收件人><文件名称>专利权终止通知书</文件名称>;?

法律状态公告日：20070502;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**380、高能激光器**

摘要：本发明涉及光电领域, 公开了一种高能激光器发 明方案, 解决了利用现有激光器难以发出高能量激光的难题。其 特征是由高功率激光发生器[1]和电极[2]组成, 电极[2]接在高压 电上, 高功率激光发生器[1]发出的激光从电极产生的高压电场 中通过并将空气电离形成放电通道, 在射中目标后便引发放电 (闪电)释放出巨大能量来破坏和摧毁目标。利用本发明方案, 通 过放电电能来增强激光的能量, 可将激光能量提高1000～100 万倍。另外这种高能激光器发出的携带电能的高能激光还可用 于机械加工、灭虫、施肥等作业及科学研究(如核聚变点火)等 方面。

公开（公告）号：[CN1347175A](https://www.incopat.com/detail/init2?formerQuery=Lj2ZFblZruzjnUN7uJEcvg%3D%3D&local=zh)

公开（公告）日：2002-05-01

申请号：CN01129793.X

申请日：2001-10-19

申请人：周良勇

法律状态：法律状态公告日：20020501;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20050706;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：;?

**381、METHOD FOR CONDUCTING THERMONUCLEAR REACTION IN MAGNETIC FUSION REACTOR**

摘要：FIELD : controlled fusion; extracting fusion energy, generating three-dimensional neutron sources (for instance to recover nuclear wastes). SUBSTANCE : method involves irradiation of heavy particles of fuel pellets injected in reactor chamber wherein high pressure of working gas not lower than atmospheric pressure is maintained using laser pulses or beams for the purpose. In the process problems of production of hot plasma, maintenance of inertialess current, and monitoring of plasma-magnetic configuration are solved. Circuit arrangement of magnetic fusion reactor of proposed type enables directly placing the installation in steady state running dispensing with rather sophisticated standard scheme of organizing hot plasma (gas breakdown at low working gas pressure, preheating of plasma with ohmic current, and the like). Proposed reactor enables combining advantages of magnetic heat insulation and near-wall plasma confinement implemented by building up so-called high- pressure gas cushion at plasma boundary. Proposed method may be found useful for installations with magnetic field configuration of tokamak, stellarator, or adiabatic trap type. Near-wall plasma confinement used in tokamaks makes it possible to avoid dangerous instability of discharge failure. As rather high pressure (and density) of plasma can be maintained in proposed reactor (compared with traditional magnetic confinement of plasma), this reactor can be used for conducting fusion reactions at low section of reactions (for instance in case of D+He3 nuclei fusion reaction). EFFECT : enlarged functional capabilities. 1 cl, 1 dwg

公开（公告）号：[RU2212063C2](https://www.incopat.com/detail/init2?formerQuery=hOgRvNVPrHaRqXruZf0%2B3%2FR0OjOTHMZL&local=zh)

公开（公告）日：2003-09-10

申请号：RU2001123443

申请日：2001-08-22

申请人：Gosudarstvennyj nauchnyj tsentr RF Troitskij institut innovatsionnykh i termojadernykh issledovanij

**382、Device, for controlling nuclear fusion in opposing ion bundles, has symmetrical ion-deviating tubes comprising arc-like parts connected to reactor at one end by coaxial tubes**

摘要：Device for controlling nuclear fusion in opposing ion bundles comprises a reactor (1); accelerator (2); ion bundle injectors (3); magnetic field coils (4); a vacuum system (5); a boiler with heat carriers (6); lasers (7), plasma injectors (8); anodes (9) and symmetrical ion-deviating tubes (13) comprising two arc-like parts connected to the reactor at one end by coaxial tubes (12) and to each other at the other end by a straight section. Dielectric plates (16) are on the straight sections of the ion deviating tubes, magnetic coils and in the arc-like parts of the ion deviating tubes. The device also has a generator (17) and the accelerator, plasma injectors, anodes, magnetic field coils and the lasers are parallel to the axis of the reactor and coaxial with the straight sections of the ion-deviating tubes. Preferred Features : The generator operates for a duration of 3-15 micro s with a frequency of 167-337 kHz for the periodic acceleration of the cyclically moving ion bundle.

公开（公告）号：[DE10125760A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4925TVjZk%2Bt7Yn2r4kAd0KKkg&local=zh)

公开（公告）日：2002-11-21

申请号：DE10125760

申请日：2001-05-17

申请人：BAKAL SEMEN

法律状态：法律状态公告日：20030320;?

状态效果：+;?

状态代码：8110;?

法律状态：REQUEST FOR EXAMINATION PARAGRAPH 44描述信息：Docdb Publication Number:; DE 10125760A1法律状态公告日：20060914;?

状态效果：+;?

状态代码：8364;?

法律状态：NO OPPOSITION DURING TERM OF OPPOSITION描述信息：Docdb Publication Number:; DE 10125760A1法律状态公告日：20120629;?

状态代码：R409;?

法律状态：INTERNAL RECTIFICATION OF THE LEGAL STATUS COMPLETED描述信息：Docdb Publication Number:; DE 10125760A1法律状态公告日：20120730;?

状态代码：R409;?

法律状态：INTERNAL RECTIFICATION OF THE LEGAL STATUS COMPLETED描述信息：Docdb Publication Number:; DE 10125760A1

**383、KNY Chaos nuclear reactor**

摘要：PURPOSE : A mid/low temperature hydrogen nuclear fusion method and semi-fusion reactor is provided to achieve improved economic advantage by permitting a nuclear fusion reaction to be occurred at a mid/low temperature.CONSTITUTION : A mid/low temperature hydrogen nuclear fusion method comprises a step of inducing a first combustion by adjusting hydrogen and oxygen such that surplus hydrogen is generate, and allowing the hydrogen and oxygen to react to a catalyzer; a step of accelerating plasma by providing deuterium and tritium, while accelerating plasma by an electromagnetic field of coil and electromagnetic wave of magnetron; and a step of inducing fusion reaction at a relatively mid/low temperature, by adjusting chaos of surplus hydrogen to reach a maximum degree through a corona discharge, interference of laser beam and resonance. A semi-fusion reactor comprises a closed cylinder type bearing wall(3) integrated with a solenoid coil; a heat exchange unit for circulation of water coolant; a tube type air chamber surrounding an incinerator and heat exchange unit; an automatic control unit; an electrolytic analysis unit(26) for analyzing water into hydrogen and oxygen; a multi-stage nozzle unit for supplying hydrogen and oxygen to a combustion chamber; a first combustion unit(33) for first ignition; a second combustion unit(39) for supplying deuterium and tritium; a third combustion unit(43) for supplying active oxygen; a solenoid electromagnetic field induction unit; a magnetron electromagnetic wave oscillation unit; a high pressure induction unit(17); a corona discharge unit; and a laser beam radiation and laser resonance induction unit.? KIPO 2003

公开（公告）号：[KR1020020087817A](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkcztxyHGQMRVRynupYtkTYUKV&local=zh)

公开（公告）日：2002-11-23

申请号：KR1020010026859

申请日：2001-05-16

申请人：KIM NAM YOUNG

法律状态：法律状态公告日：20060517;?

状态效果：-;?

状态代码：WITN;?

法律状态：WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; KR 20020087817A

**384、METHOD FOR CONTROLLING AN OPERATION OF SEALED CLOSURE BY WELDING OF A FILLING CHANNEL PASSING THROUGH THE TOP CAP OF A NUCLEAR FUEL PENCIL**

摘要：A method of inspecting an operation of sealed closure by welding an end opening of a filling channel axially traversing an upper plug for closing the cladding of a fuel rod for a nuclear reactor, the cladding of the rod containing a plurality of pellets of nuclear fuel stacked in the axial direction of the cladding and two closure plugs, one of the plugs or the upper plug being traversed axially by the channel for filling the cladding of the rod with an inert gas and the sealed closure by welding of the filling channel of the upper plug being carried out after filling the cladding with inert gas, in a filling apparatus, by melting central part of the end of the upper plug adjacent to the opening of the filling channel, this method allowing for inspection of the conditions for implementing and carrying out the sealed closure of the upper plug by welding, efficiently and without extending the time needed for the manufacture of the fuel rod.

公开（公告）号：[EP1264316A1](https://www.incopat.com/detail/init2?formerQuery=WtZVElQGYYEmgXo2qvf1f%2FR0OjOTHMZL&local=zh)

公开（公告）日：2002-12-11

申请号：EP01904048

申请日：2001-02-02

申请人：Société Franco-Belge de Fabrication de Combustibles - FBFC

法律状态：法律状态公告日：20021211;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 1264316A1Effective Date:;20020521法律状态公告日：20021211;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 1264316A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE;TR;法律状态公告日：20050727;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 1264316A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE;TR;法律状态公告日：20050727;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;ATFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20050727;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20050727;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;IEFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20050727;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;FIFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20050727;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;ITFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20050727;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;TRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20050727;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;GBDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENT GRANTEDFree Text Description:;NOT ENGLISH法律状态公告日：20050729;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20050824;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELANDFree Text Description:;LANGUAGE OF EP DOCUMENT: FRENCH法律状态公告日：20050901;?

状态代码：REF;?

法律状态：CORRESPONDS TO:描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;EPCorresponding Publication Number:;60112256Corresponding Authority:;DECorresponding Publication Date:;20050901法律状态公告日：20051018;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;SEDesignated State Event Code:;TRGRDesignated State Description:;TRANSLATION OF GRANTED EP PATENT法律状态公告日：20051027;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20051027法律状态公告日：20051027;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20051027法律状态公告日：20051123;?

状态效果：+;?

状态代码：GBT;?

法律状态：GB: TRANSLATION OF EP PATENT FILED (GB SECTION 77(6)(A)/1977)描述信息：Docdb Publication Number:; EP 1264316A1Effective Date:;20051101法律状态公告日：20051227;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20051227法律状态公告日：20060116;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;ESDesignated State Event Code:;FG2ADesignated State Description:;DEFINITIVE PROTECTIONCorresponding Publication Number:;2245680Corresponding Authority:;ESCorresponding Kind:;T3法律状态公告日：20060201;?

状态效果：-;?

状态代码：NLV1;?

法律状态：NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT描述信息：Docdb Publication Number:; EP 1264316A1法律状态公告日：20060222;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;IEDesignated State Event Code:;FD4DDesignated State Description:;EUROPEAN PATENTS DESIGNATING IRELAND TREATED AS ALWAYS HAVING BEEN VOID法律状态公告日：20060228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;CHFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20060228法律状态公告日：20060228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;LIFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20060228法律状态公告日：20060228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;MCFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20060228法律状态公告日：20060228;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;LUFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20060228法律状态公告日：20060705;?

状态效果：+;?

状态代码：26N;?

法律状态：NO OPPOSITION FILED描述信息：Docdb Publication Number:; EP 1264316A1Effective Date:;20060428法律状态公告日：20061013;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;CHDesignated State Event Code:;PLDesignated State Description:;PATENT CEASED法律状态公告日：20081128;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;CYFree Text Description:;LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMITEffective Date:;20050727法律状态公告日：20110531;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;FRPayment Date:;20110224Fee Payment-year:;11法律状态公告日：20110531;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;DEPayment Date:;20110210Fee Payment-year:;11法律状态公告日：20110729;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;BEPayment Date:;20110224Fee Payment-year:;11法律状态公告日：20120831;?

状态效果：-;?

状态代码：BERE;?

法律状态：BE: LAPSED描述信息：Docdb Publication Number:; EP 1264316A1New Owner:;SOC. FRANCO-BELGE DE FABRICATION DE COMBUSTIBLES -Effective Date:;20120228法律状态公告日：20121123;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;FRDesignated State Event Code:;STDesignated State Description:;NOTIFICATION OF LAPSEEffective Date:;20121031法律状态公告日：20121227;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;DEDesignated State Event Code:;R119Designated State Description:;APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEECorresponding Publication Number:;60112256Corresponding Authority:;DEEffective Date:;20120901法律状态公告日：20121231;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;BEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20120228法律状态公告日：20130131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;FRFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20120229法律状态公告日：20130628;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;DEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20120901法律状态公告日：20131219;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;ESDesignated State Event Code:;PC2ADesignated State Description:;TRANSFER OF PATENTNew Owner:;AREVA NPEffective Date:;20131213法律状态公告日：20131225;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;GBDesignated State Event Code:;732EDesignated State Description:;AMENDMENTS TO THE REGISTER IN RESPECT OF CHANGES OF NAME OR CHANGES AFFECTING RIGHTS (SECT. 32/1977)Free Text Description:;REGISTERED BETWEEN 20131128 AND 20131204法律状态公告日：20150430;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;ESPayment Date:;20150220Fee Payment-year:;15法律状态公告日：20150529;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;GBPayment Date:;20150216Fee Payment-year:;15法律状态公告日：20150529;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;SEPayment Date:;20150211Fee Payment-year:;15法律状态公告日：20161004;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;SEDesignated State Event Code:;EUGDesignated State Description:;EUROPEAN PATENT HAS LAPSED法律状态公告日：20161026;?

状态效果：-;?

状态代码：GBPC;?

法律状态：GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; EP 1264316A1Effective Date:;20160202法律状态公告日：20161130;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20160203法律状态公告日：20170131;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;GBFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20160202法律状态公告日：20170531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 1264316A1Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20160203

**385、METHOD FOR CONTROLLING AN OPERATION OF SEALED CLOSURE BY WELDING OF A FILLING CHANNEL PASSING THROUGH THE TOP CAP OF A NUCLEAR FUEL PENCIL**

摘要：The invention concerns a control method in an installation (9) filling a pencil (1) with inert gas under pressure inserted in the sheath (2) of the pencil via a filling channel passing through the top cap (4) of the pencil (1). The sealed closure of the pencil (1) after it has been filled is carried out by welding means such as a laser beam melting part of the top cap (4) of the fuel pencil (1) at the periphery of the pencil filling channel (7). Prior to the sealed closure of the pencil (1) filling channel (7) by welding, the method consists in scanning the end of the cap whereon the filling channel emerges in a circular opening, to obtain a digitised image and in determining by analysing the digitised image, the position of the centre of the opening of the circular inlet of the channel filling the cap (4), relative to a reference position and the diameter of the inlet of the filler channel and deducing therefrom whether it is possible to perform the welding, and in the event the welding is carried out, scanning the end of the cap (4) after welding and determining the presence of a weld seam providing the top cap (4) of the fuel pencil (1) with sealed closure.

公开（公告）号：[WO0161707A1](https://www.incopat.com/detail/init2?formerQuery=yjHgOFUpsUhZxsUUN64pp%2FR0OjOTHMZL&local=zh)

公开（公告）日：2001-08-23

申请号：WOFR01000331

申请日：2001-02-02

申请人：FRANCO BELGE COMBUSTIBLES; MAHE PHILIPPE

法律状态：法律状态公告日：20010823;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Kind:;A1Legal Designated States:;CN;JP;KR;RU;US;法律状态公告日：20010823;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Kind:;A1Legal Designated States:;AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LU;MC;NL;PT;SE;TR;法律状态公告日：20011017;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 0161707A1法律状态公告日：20011101;?

状态代码：DFPE;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)描述信息：Docdb Publication Number:; WO 0161707A1法律状态公告日：20020521;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Publication Number:;2001904048Corresponding Authority:;EP法律状态公告日：20020808;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Publication Number:;10203443Corresponding Authority:;US法律状态公告日：20020809;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Publication Number:;018047548Corresponding Authority:;CN法律状态公告日：20020916;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 0161707A1Designated State Authority:;RUCorresponding Publication Number:;2002 2002124575Corresponding Kind:;A法律状态公告日：20021211;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Publication Number:;2001904048Corresponding Authority:;EP法律状态公告日：20041108;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 0161707A1Designated State Authority:;JP法律状态公告日：20050727;?

状态效果：+;?

状态代码：WWG;?

法律状态：WIPO INFORMATION: GRANT IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 0161707A1Corresponding Publication Number:;2001904048Corresponding Authority:;EP

**386、STORAGE AND DELIVERY SYSTEM FOR GASEOUS COMPOUNDS**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[GR3034932T3](https://www.incopat.com/detail/init2?formerQuery=tHNLxsvmytyR43npJbGYA%2FR0OjOTHMZL&local=zh)

公开（公告）日：2001-02-28

申请号：GR20000402638

申请日：2000-11-29

申请人：ADVANCED TECH MATERIALS

**387、Inertial confinement laser/ deuteron beam thermo nuclear fusion reactor**

公开（公告）号：[GB0028748D0](https://www.incopat.com/detail/init2?formerQuery=dxX43mhCXngJsAfSNvCAt%2FR0OjOTHMZL&local=zh)

公开（公告）日：2001-01-10

申请号：GB0028748

申请日：2000-11-24

申请人：MADDISON JOHN

法律状态：法律状态公告日：20020213;?

状态效果：-;?

状态代码：AT;?

法律状态：APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 0028748D0

**388、Atomic nucleus cold fusion apparatus uses Bose-Einstein condensate and chambers with wall sections permeable to laser and other emissions**

摘要：The apparatus comprises mechanical assemblies for cooling atomic nuclei to a temperature below a hundred thousandth of a Kelvin to obtain a Bose-Einstein or Einstein-Bose condensate from a deuterium tritium mixture. It incorporates one or more chambers that contain the cold atoms, each with one or more wall sections that are permeable to laser and other radiation. The radiation emissions from the different sources converge to heat the condensate atoms, causing fusion of hydrogen nuclei and producing energy that can be recuperated.

公开（公告）号：[FR2815163A1](https://www.incopat.com/detail/init2?formerQuery=IxljUG%2BivEPYNoLlZVn1bfR0OjOTHMZL&local=zh)

公开（公告）日：2002-04-12

申请号：FR00013034

申请日：2000-10-06

申请人：FOULGOC PATRICK

法律状态：法律状态公告日：20020809;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2815163A1

**389、CAPSULE CAPABLE OF IRRADIATING FUSION REACTOR FRAME WITH LASER BEAM WHEN NEEDED AND PROTECTING LENS FROM HEAT INSIDE REACTOR**

摘要：PROBLEM TO BE SOLVED : To irradiate a laser beam before a lens deforms in a fusion reactor where intense heat remains after an explosion in the reactor and time is required to suspend the next fusion reactor frame in a predetermined position causing the lens to deform during this time.SOLUTION : The fusion reactor frame 14 is suspended by three or more wire-cum-suspending pipes 31 and 34, an upper lid 1A is supported via a lid support, dismountable capsule side lids 4A and 11A are supported by the upper lid, and the capsule 12 is supported below this. An outer side of the fusion reactor frame 14 is wrapped by a net 13 and its outer side is wrapped the capsule 12 and the capsule side lids 4A and 11A to be dismounted just before irradiation of the laser beam. The convex lens 28A is supported by the net 13.

公开（公告）号：[JP2002098787A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZYC4CqI7N2v2GuxfaWZrjp&local=zh)

公开（公告）日：2002-04-05

申请号：JP2000344449

申请日：2000-09-25

申请人：ABE YOSHIO

**390、Maximum temperature detector and recorder, for closed chamber e.g. for transporting nuclear fuel rods, has series of fusible wires of different metals**

摘要：The temperature detector and recorder consists of a series of fusible wires (13) made from metals with different melting points, located between lengthwise elements (12) like the rungs (14) of a ladder (11) inside a quartz capsule (10) filled with a heat-conducting gas - helium. The fusible wires are made e.g. from alloys of lead, tin and silver, and their behavior can be monitored by laser beam.

公开（公告）号：[FR2812939A1](https://www.incopat.com/detail/init2?formerQuery=IxljUG%2BivEM841Klj7NbmfR0OjOTHMZL&local=zh)

公开（公告）日：2002-02-15

申请号：FR00010600

申请日：2000-08-11

申请人：ATEA SOC ATLANTIQUE DE TECH AV

法律状态：法律状态公告日：20050603;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2812939A1

**391、Nuclear fusion controlling unit comprises reactor, accelerators, ion bundle injectors, magnetic field spools, vacuum system, boiler with heat carrying agent, plasma injectors and anodes**

摘要：An arrangement for controlling nuclear fusion in bundles of ions, comprises a reactor (1), accelerators (2), ion bundle injectors (3), magnetic field spools (4), a vacuum system (5), a boiler with a heat carrying agent, lasers (7), plasma injectors (8), anodes (9) and symmetrically arranged ion guide tubes (13). The guide tubes comprise two curved sections, which are connected to the reactor at one end using coaxial pipes, and to each other via straight sections at the other end. The magnetic spools are arranged on the straight sections, and dielectric plates are arranged over the curved sections. The arrangement has a generator.

公开（公告）号：[DE10033969A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4924nAEcoHCVWgWr4kAd0KKkg&local=zh)

公开（公告）日：2002-03-21

申请号：DE10033969

申请日：2000-07-06

申请人：BAKAL SEMEN

法律状态：法律状态公告日：20020321;?

状态效果：+;?

状态代码：OP8;?

法律状态：REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW描述信息：Docdb Publication Number:; DE 10033969A1法律状态公告日：20070104;?

状态效果：+;?

状态代码：8364;?

法律状态：NO OPPOSITION DURING TERM OF OPPOSITION描述信息：Docdb Publication Number:; DE 10033969A1

**392、Control rod guide pipe used in nuclear reactors consists of a first tube connected to a second tube along the supporting surface by a welding joint**

摘要：Control rod guide pipe consists of a first tube (3) connected to a second tube (4) along the supporting surface (5) by a welding joint extending over the whole supporting surface. An Independent claim is also included for a process for joining a control rod guide pipe. Preferred Features : The welding joint is produced by fusion welding, laser welding or electron beam welding. The guide pipe is made of a metallic alloy containing zirconium.

公开（公告）号：[DE10012592A1](https://www.incopat.com/detail/init2?formerQuery=K6nQvfc4927g%2F%2FNelc1m9Wr4kAd0KKkg&local=zh)

公开（公告）日：2000-09-28

申请号：DE10012592

申请日：2000-03-15

申请人：ABB AB VAESTERAAS

法律状态：法律状态公告日：20010927;?

状态代码：8127;?

法律状态：NEW PERSON/NAME/ADDRESS OF THE APPLICANT描述信息：Docdb Publication Number:; DE 10012592A1New Owner:;ABB ATOM AB, VAESTERAAS, SE法律状态公告日：20070614;?

状态效果：-;?

状态代码：8141;?

法律状态：DISPOSAL/NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; DE 10012592A1

**393、DEVICE OF GUIDANCE Of a BAR OF ORDERING Of a NUCLEAR PLANT AND PROCESS Of ASSEMBLY Of a DEVICE OF GUIDANCE**

摘要：Control rod guide pipe consists of a first tube (3) connected to a second tube (4) along the supporting surface (5) by a welding joint extending over the whole supporting surface. An Independent claim is also included for a process for joining a control rod guide pipe. Preferred Features : The welding joint is produced by fusion welding, laser welding or electron beam welding. The guide pipe is made of a metallic alloy containing zirconium.

公开（公告）号：[FR2790985A1](https://www.incopat.com/detail/init2?formerQuery=3sXuqp3qitQM5g%2Ba5Y4mgfR0OjOTHMZL&local=zh)

公开（公告）日：2000-09-22

申请号：FR00003234

申请日：2000-03-14

申请人：ABB AB

法律状态：法律状态公告日：20010316;?

状态代码：TP;?

法律状态：TRANSMISSION OF PROPERTY描述信息：Docdb Publication Number:; FR 2790985A1法律状态公告日：20011228;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2790985A1

**394、可控热核聚变反应锅炉**

摘要：本发明可控热核聚变反应锅炉, 由镜面镉锅锅炉 装置 : 内层镜面镉锅像蛋壳; 中层支架保护层像蜂窝; 外层密封防 护层像球壳。磁力网络装置 : 由两个完全相同直螺线管, 安装在 中层支架上, 磁力网络约束和迫使氘核和氚核在反应区域内碰 撞。激光器引燃装置 : 各台激光器安装在中层蜂房内, 多道激光 照射反应区域, 加热氘核和氚核, 温升到发生热核聚变反应, 释放 出能量。以重水或海水为核燃料供给系统。冷却水和工质合二 为一的冷却及供热系统。

公开（公告）号：[CN1309398A](https://www.incopat.com/detail/init2?formerQuery=Lj2ZFblZruxq1cA2Buqgpg%3D%3D&local=zh)

公开（公告）日：2001-08-22

申请号：CN00101381.5

申请日：2000-02-17

申请人：李先克

法律状态：法律状态公告日：20010822;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20010124;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20040825;?

法律状态：发明专利申请公布后的驳回;?

描述信息：;?

**395、PROCESS OF Control Of an OPERATION OF CLOSING SEALS BY WELDING OF The END Of a CHANNEL OF FILLING CROSSING the HIGHER STOPPER Of a NUCLEAR FUEL PENCIL**

摘要：The invention concerns a control method in an installation (9) filling a pencil (1) with inert gas under pressure inserted in the sheath (2) of the pencil via a filling channel passing through the top cap (4) of the pencil (1). The sealed closure of the pencil (1) after it has been filled is carried out by welding means such as a laser beam melting part of the top cap (4) of the fuel pencil (1) at the periphery of the pencil filling channel (7). Prior to the sealed closure of the pencil (1) filling channel (7) by welding, the method consists in scanning the end of the cap whereon the filling channel emerges in a circular opening, to obtain a digitised image and in determining by analysing the digitised image, the position of the centre of the opening of the circular inlet of the channel filling the cap (4), relative to a reference position and the diameter of the inlet of the filler channel and deducing therefrom whether it is possible to perform the welding, and in the event the welding is carried out, scanning the end of the cap (4) after welding and determining the presence of a weld seam providing the top cap (4) of the fuel pencil (1) with sealed closure.

公开（公告）号：[FR2805075A1](https://www.incopat.com/detail/init2?formerQuery=IxljUG%2BivEMeZtnNwCI9xvR0OjOTHMZL&local=zh)

公开（公告）日：2001-08-17

申请号：FR00001859

申请日：2000-02-15

申请人：FRANCO BELGE COMBUSTIBLES

法律状态：法律状态公告日：20071130;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2805075A1Effective Date:;20071030

**396、METHOD AND DEVICE FOR NUCLEAR FUSION**

摘要：PROBLEM TO BE SOLVED : To provide technology for nuclear fusion, having superior efficiency, in particular, technology for nuclear fusion utilizing additional thermal ignition. SOLUTION : This method for nuclear fusion of a fuel pellet charged into a container using a laser beam comprises a primary compression step of radiating a laser beam to the periphery of the fuel pellet, to compress the fuel pellet in the container and a secondary compression step of radiating a γ-ray obtained by collision of an electron beam with the laser beam to the periphery of the fuel pellet compressed in the primary compression step to further compress the fuel pellet in the container.

公开（公告）号：[JP2001183482A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXZtCjLgXLqTZGGuxfaWZrjp&local=zh)

公开（公告）日：2001-07-06

申请号：JP11372376

申请日：1999-12-28

申请人：RI KINZO

**397、光学元件面形及波纹度误差实时修正方法及装置**

摘要：本发明涉及一种对光学元件面形误差、尤其是对 于表面细小带差及波纹度误差实时修正方法及装置的改进。采 用CCD摄像、计算机及图象处理与传统修正方法相比修抛精 度提高、修磨针对性强、定位准确、加工过程能够对误差进行 定量描述, 适用于解决数控高精度非球面光学元件加工过程中 的波纹度误差及细小带差。对于空间军用高质量成像光学系 统、激光核聚变系统、X光光刻系统中的高精度光学元件的加 工, 与数字波面干涉仪配合使用将扩展仪器的功能。

公开（公告）号：[CN1295905A](https://www.incopat.com/detail/init2?formerQuery=mryYPMPFHqVnfDa4DZRCng%3D%3D&local=zh)

公开（公告）日：2001-05-23

申请号：CN99124519.9

申请日：1999-11-12

申请人：中国科学院长春光学精密机械研究所

法律状态：法律状态公告日：20010523;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20031015;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20010725;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20070110;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**398、光学元件面形及波纹度误差实时修正装置**

摘要：本实用新型属于光学技术领域, 涉及一种对光学 元件面形误差、尤其是对于表面细小带差及波纹度误差实时修 正装置的改进。采用CCD摄像、计算机及图象处理与传统修 正方法相比修抛精度提高、修磨针对性强、定位准确、定量描 述, 适用于解决数控高精度非球面光学元件加工过程中的波纹 度误差及细小带差。对于空间军用高质量成像光学系统、激光 核聚变系统、X光光刻系统中的高精度光学元件的加工起重要 作用, 与数字波面干涉仪配合使用将大大扩展仪器的功能。

公开（公告）号：[CN2393682Y](https://www.incopat.com/detail/init2?formerQuery=8Nsv8fFjuK6zV%2FczFgS9nA%3D%3D&local=zh)

公开（公告）日：2000-08-30

申请号：CN99252966.2

申请日：1999-11-12

申请人：中国科学院长春光学精密机械研究所

法律状态：法律状态公告日：20000830;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20021218;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**399、SURFACE TREATMENT METHOD FOR WELDED STRUCTURE IN NUCLEAR REACTOR**

摘要：PROBLEM TO BE SOLVED : To improve intergranular corrosion resistance property of a nickel base alloy. SOLUTION : An end side of a nozzle pipe 28 inserted in an opening 26 of a vessel body 22 is welded to the vessel body 22 with a build-up weld metallic part 30 of a nickel base alloy and a butt welded metallic part 32 of the nickel base alloy, and Nb powder is applied on the surfaces of these structures in the nuclear reactor so that the Nb powder coating layer 44 may be formed, and the surfaces are irradiated with laser beam 58 and a molten metal is made to be the alloy.

公开（公告）号：[JP2001079663A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXb4XKWU3g3wRmGuxfaWZrjp&local=zh)

公开（公告）日：2001-03-27

申请号：JP11256466

申请日：1999-09-10

申请人：BABCOCK HITACHI KK

法律状态：法律状态公告日：20050413;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20050413法律状态公告日：20050414;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 3682599B2法律状态公告日：20050420;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20050419法律状态公告日：20050602;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20050510法律状态公告日：20050603;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT (=GRANT) OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20080624;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;PAYMENT UNTIL: 20090603Fee Payment-year:;4法律状态公告日：20090623;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;PAYMENT UNTIL: 20100603Fee Payment-year:;5法律状态公告日：20100608;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3682599B2Free Text Description:;PAYMENT UNTIL: 20110603Fee Payment-year:;6法律状态公告日：20110603;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 3682599B2

**400、METHOD OF TISSUE REPAIR**

公开（公告）号：[ININPCT2000665A](https://www.incopat.com/detail/init2?formerQuery=BxqqeJ6cA%2FKIdpJR9b76Yi4kvjMjQu%2BQ&local=zh)

公开（公告）日：2001-08-04

申请号：ININPCT2000665

申请日：1999-06-18

申请人：THE MICROSEARCH FOUNDATION OF AUATRALIA AND OTHERS

**401、METHOD AND APPARATUS FOR THE PRODUCTION OF NEUTRONS AND OTHER PARTICLES**

摘要：Assemblies of multiple microdroplets made of liquid deuterium are illuminated with pulses from an ultrafast (femtosecond) laser, causing the microdroplets to turn into expanding ion clouds in which the ionized nuclei (deuterons) have kinetic energy sufficient to overcome the Coulomb barrier and cause fusion to produce free neutrons, tritium nuclei, and more kinetic energy. The droplets of liquid deuterium are first illuminated with pulses from an infrared laser in order to cause Coulomb explosion of the droplets and resulting formation of the microdroplets. Alternatively, assemblies of microdroplets of a material containing higher Z atoms such as neon or argon are illuminated by an ultrafast laser and the resulting plasma clouds collide and generate recombination x-rays.

公开（公告）号：[EP1082727A2](https://www.incopat.com/detail/init2?formerQuery=AAt123Tcok1L55c8%2F8NqkvR0OjOTHMZL&local=zh)

公开（公告）日：2001-03-14

申请号：EP99938692

申请日：1999-04-28

申请人：AMERICAN TECHNOLOGIES GROUP INC

**402、Method and device for generation of particles and other neutron**

摘要：Assemblies of multiple microdroplets made of liquid deuterium are illuminated with pulses from an ultrafast (femtosecond) laser, causing the microdroplets to turn into expanding ion clouds in which the ionized nuclei (deuterons) have kinetic energy sufficient to overcome the Coulomb barrier and cause fusion to produce free neutrons, tritium nuclei, and more kinetic energy. The droplets of liquid deuterium are first illuminated with pulses from an infrared laser in order to cause Coulomb explosion of the droplets and resulting formation of the microdroplets. Alternatively, assemblies of microdroplets of a material containing higher Z atoms such as neon or argon are illuminated by an ultrafast laser and the resulting plasma clouds collide and generate recombination x-rays.

公开（公告）号：[JP2002514740A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXblugZixcZOhGGuxfaWZrjp&local=zh)

公开（公告）日：2002-05-21

申请号：JP2000546569

申请日：1999-04-28

申请人：アメリカン テクノロジーズ グループ インコーポレイテッド

**403、METHOD AND APPARATUS FOR THE PRODUCTION OF NEUTRONS AND OTHER PARTICLES**

摘要：Assemblies of multiple microdroplets made of liquid deuterium are illuminated with pulses from an ultrafast (femtosecond) laser, causing the microdroplets to turn into expanding ion clouds in which the ionized nuclei (deuterons) have kinetic energy sufficient to overcome the Coulomb barrier and cause fusion to produce free neutrons, tritium nuclei, and more kinetic energy. The droplets of liquid deuterium are first illuminated with pulses from an infrared laser in order to cause Coulomb explosion of the droplets and resulting formation of the microdroplets. Alternatively, assemblies of microdroplets of a material containing higher Z atoms such as neon or argon are illuminated by an ultrafast laser and the resulting plasma clouds collide and generate recombination x-rays.

公开（公告）号：[WO9956521A2](https://www.incopat.com/detail/init2?formerQuery=bygN3QnuKFeRLql6dz7bN%2FR0OjOTHMZL&local=zh)

公开（公告）日：1999-11-11

申请号：WOUS99008941

申请日：1999-04-28

申请人：AMERICAN TECH GROUP

法律状态：法律状态公告日：19991111;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Kind:;A2Legal Designated States:;JP;法律状态公告日：19991111;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Kind:;A2Legal Designated States:;AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LU;MC;NL;PT;SE;法律状态公告日：20000105;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 9956521A3法律状态公告日：20000608;?

状态代码：DFPE;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)描述信息：Docdb Publication Number:; WO 9956521A3法律状态公告日：20000629;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Kind:;A3Legal Designated States:;JP;法律状态公告日：20000629;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Kind:;A3Legal Designated States:;AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LU;MC;NL;PT;SE;法律状态公告日：20001106;?

状态代码：ENP;?

法律状态：ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 9956521A3Designated State Authority:;JPCorresponding Publication Number:;2000 546569Corresponding Kind:;A法律状态公告日：20001205;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Publication Number:;1999938692Corresponding Authority:;EP法律状态公告日：20001207;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Publication Number:;1999938692Corresponding Authority:;EP法律状态公告日：20010314;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9956521A3Corresponding Publication Number:;1999938692Corresponding Authority:;EP

**404、Nuclear fusion reaction comprises using a single exchange step of the driving pulse with the plasma of the nuclear fusion material**

摘要：Nuclear fusion reaction comprises using a single exchange step of the driving pulse with the plasma of the nuclear fusion material. Preferred Features : Sealing of the fuel occurs at more than 300 times the body density. A plasma temperature of more than 300 electron volts and a driving energy of more than 3 megajoules are used. The driving pulse is a laser pulse, preferably an ion pulse. An adiabatic compression of the plasma occurs.

公开（公告）号：[DE19911386A1](https://www.incopat.com/detail/init2?formerQuery=%2B6vzJuzv%2Bwk1NHK9COnBBWr4kAd0KKkg&local=zh)

公开（公告）日：2000-09-21

申请号：DE19911386

申请日：1999-03-15

申请人：HORA HEINRICH; HoraHeinrich Prof Dr Dr Poing 85586 DEPoing85586DEDE

法律状态：法律状态公告日：20030116;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 19911386A1

**405、METHOD AND DEVICE FOR GENERATING POWERFUL LASER BEAM AND METHOD AND DEVICE FOR NUCLEAR FUSION USING THEM**

摘要：PROBLEM TO BE SOLVED : To generate a powerful laser beam from the laser beam emitted from the conventional laser system and to cause nuclear fusion by using the powerful laser beam. SOLUTION : A powerful laser beam is obtained from a laser beam by tunably combining the reflected laser beam, which is produced when the laser beam emitted from a laser system 6 comes into collision with the reflecting surface 3 of an X-ray laser anode 2 and the reflected X-ray, which is produced when the X-rays emitted from an X-ray device is brought into collision with the reflecting surface 3. In addition, deuteriums and tritiums obtained from water, such as seawater, etc., are made to cause nuclear fusion by having deuteriums and tritiums irradiated with the powerful laser beam.

公开（公告）号：[JP2000261083A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXYuh%2B3SndNF%2F2GuxfaWZrjp&local=zh)

公开（公告）日：2000-09-22

申请号：JP11105680

申请日：1999-03-10

申请人：HIRAMURA KOSAKU

法律状态：法律状态公告日：20080111;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2000261083A 法律状态公告日：20080111;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 3265475B2

**406、Cold nuclear fusion apparatus comprises high energy particle emitter and fusion cell with electrolysis particle trap**

摘要：The apparatus has at least one emitter (4) of very high energy particles produced by the superposition of energy forces and/or electric currents (13) giving energies which exceed the speed of light, and at least one cold nuclear fusion cell (10) comprising one or more electrolysis units (43) acting as a trap for the very high energy particles and bombarded or not with waves (3). The apparatus has at least one emitter (4) of very high energy particles produced by the superposition of energy forces and/or electric currents (13) giving energies which exceed the speed of light, and at least one cold nuclear fusion cell (10) comprising one or more electrolysis units (43) acting as a trap for the very high energy particles and bombarded or not with waves (3). The superposition of energy forces and/or electric currents is produced by lightning, air ionization, laser beams or microwaves at 2.45 or 3 GHz, and the bombardment waves are of radio, sound or light waves.

公开（公告）号：[FR2786020A1](https://www.incopat.com/detail/init2?formerQuery=3sXuqp3qitRdUgAAnFwLKfR0OjOTHMZL&local=zh)

公开（公告）日：2000-05-19

申请号：FR99002379

申请日：1999-02-25

申请人：KALESKI FRANCOIS HENRI GASTON ALBERT

法律状态：法律状态公告日：20070105;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2786020A1Effective Date:;20061031

**407、Holography fusion reactor bin for semiconductor laser array tunable oscillation hologram jointly using semiconductor laser array turnable oscillation hologram bin and gravitational wave, method for gravitational wave holography and apparatus therefor**

摘要：A method of giving energy to a substance by holography. This method, in which hologram is identified as interference fringe pattern formed by oscillation and non-oscillation of a phase-controlled semiconductor laser array and reproduction light is identified as laser oscillation of a semiconductor laser element, gives energy using holography by confining the substance in a holography-split-progress-multiple-light shell. The laser array is disposed in a space inside a container which enables the use of an opaque container and the effective absorption of the energy generated by nuclear fusion in the container. A technique for realizing a further miniaturized plasma-confining apparatus is provided by jointly using the attractive force of the gravitational wave generated by gravitational wave generator provided in the central part of the holography-split-progress-multiple-light shell.

公开（公告）号：[AU4480399A](https://www.incopat.com/detail/init2?formerQuery=t5Lv1V7CY1hMKT40DDeZXQ%3D%3D&local=zh)

公开（公告）日：1999-09-20

申请号：AU4480399

申请日：1999-02-18

申请人：JUN TOYAMA

法律状态：法律状态公告日：20001102;?

状态效果：-;?

状态代码：MK6;?

法律状态：APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE描述信息：Docdb Publication Number:; AU 4480399A

**408、HOLOGRAPHY FUSION REACTOR BIN FOR SEMICONDUCTOR LASER ARRAY TUNABLE OSCILLATION HOLOGRAM JOINTLY USING SEMICONDUCTOR LASER ARRAY TURNABLE OSCILLATION HOLOGRAM BIN AND GRAVITATIONAL WAVE, METHOD FOR GRAVITATIONAL WAVE HOLOGRAPHY AND APPARATUS THEREFOR**

摘要：A method of giving energy to a substance by holography. This method, in which hologram is identified as interference fringe pattern formed by oscillation and non-oscillation of a phase-controlled semiconductor laser array and reproduction light is identified as laser oscillation of a semiconductor laser element, gives energy using holography by confining the substance in a holography-split-progress-multiple-light shell. The laser array is disposed in a space inside a container which enables the use of an opaque container and the effective absorption of the energy generated by nuclear fusion in the container. A technique for realizing a further miniaturized plasma-confining apparatus is provided by jointly using the attractive force of the gravitational wave generated by gravitational wave generator provided in the central part of the holography-split-progress-multiple-light shell.

公开（公告）号：[WO9945544A1](https://www.incopat.com/detail/init2?formerQuery=bygN3QnuKFd%2BOrQd5i3XAPR0OjOTHMZL&local=zh)

公开（公告）日：1999-09-10

申请号：WOJP99000696

申请日：1999-02-18

申请人：TOYAMA Jun

法律状态：法律状态公告日：19990910;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 9945544A1Corresponding Authority:;WOCorresponding Kind:;A1Legal Designated States:;AL;AM;AT;AU;AZ;BA;BB;BG;BR;BY;CA;CH;CN;CU;CZ;DE;DK;EE;ES;FI;GB;GD;GE;GH;GM;HR;HU;ID;IL;IN;IS;KE;KG;KR;KZ;LC;LK;LR;LS;LT;LU;LV;MD;MG;MK;MN;MW;MX;NO;NZ;PL;PT;RO;RU;SD;SE;SG;SI;SK;SL;TJ;TM;TR;TT;UA;UG;US;UZ;VN;YU;ZW;法律状态公告日：19990910;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 9945544A1Corresponding Authority:;WOCorresponding Kind:;A1Legal Designated States:;GH;GM;KE;LS;MW;SD;SZ;UG;ZW;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LU;MC;NL;PT;SE;BF;BJ;CF;CG;CI;CM;GA;GN;GW;ML;MR;NE;SN;TD;TG;法律状态公告日：19991028;?

状态代码：DFPE;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)描述信息：Docdb Publication Number:; WO 9945544A1法律状态公告日：19991110;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 9945544A1法律状态公告日：20000817;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 9945544A1Corresponding Publication Number:;09622416Corresponding Authority:;US法律状态公告日：20000818;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 9945544A1Designated State Authority:;KR法律状态公告日：20000908;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 9945544A1Corresponding Publication Number:;1999905220Corresponding Authority:;EP法律状态公告日：20001221;?

状态代码：REG;?

法律状态：REFERENCE TO NATIONAL CODE描述信息：Docdb Publication Number:; WO 9945544A1Designated State Authority:;DEDesignated State Event Code:;8642Designated State Description:;IMPACT ABOLISHED FOR DE - I.E. PCT APPL. NOT ENT. GERMAN PHASE法律状态公告日：20011212;?

状态效果：-;?

状态代码：WWR;?

法律状态：WIPO INFORMATION: REFUSED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9945544A1Corresponding Publication Number:;1999905220Corresponding Authority:;EP法律状态公告日：20020111;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9945544A1Corresponding Publication Number:;1999905220Corresponding Authority:;EP

**409、An intertial confinement thermo nuclear fusion reactor employing a laser?deuteron particle beam device**

公开（公告）号：[GB9901252D0](https://www.incopat.com/detail/init2?formerQuery=WLoPw1%2Bl0d6oAwvOVvYd3%2FR0OjOTHMZL&local=zh)

公开（公告）日：1999-03-10

申请号：GB9901252

申请日：1999-01-20

申请人：MADDISON LESLIE J

法律状态：法律状态公告日：20000524;?

状态效果：-;?

状态代码：AT;?

法律状态：APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 9901252D0

**410、The storage and delivery system for gases**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[JP3916788B2](https://www.incopat.com/detail/init2?formerQuery=u37Sd7rkoFYNynF%2FStKYPvR0OjOTHMZL&local=zh)

公开（公告）日：2007-05-23

申请号：JP11007073

申请日：1999-01-13

申请人：ADVANCED TECH MATERIALS

法律状态：法律状态公告日：20040128;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20040127法律状态公告日：20040427;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20040426法律状态公告日：20040524;?

状态代码：A911;?

法律状态：TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A911Effective Date:;20040521法律状态公告日：20040603;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20040602法律状态公告日：20040629;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20040602法律状态公告日：20040816;?

状态效果：-;?

状态代码：A912;?

法律状态：REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A912Effective Date:;20040813法律状态公告日：20061122;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20061121法律状态公告日：20061128;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20061127法律状态公告日：20061128;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20061127法律状态公告日：20061222;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20061127法律状态公告日：20070215;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20070207法律状态公告日：20070216;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20100212;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20100216Fee Payment-year:;3法律状态公告日：20100216;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20110216Fee Payment-year:;4法律状态公告日：20110215;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20120216Fee Payment-year:;5法律状态公告日：20120202;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20120216Fee Payment-year:;5法律状态公告日：20120207;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20130216Fee Payment-year:;6法律状态公告日：20130131;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20130216Fee Payment-year:;6法律状态公告日：20130205;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;PAYMENT UNTIL: 20140216Fee Payment-year:;7法律状态公告日：20140204;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150203;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20150610;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313111法律状态公告日：20150715;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP H11264500A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20151013;?

状态效果：-;?

状态代码：EXPY;?

法律状态：CANCELLATION BECAUSE OF COMPLETION OF TERM描述信息：Docdb Publication Number:; JP H11264500A

**411、NUCLEAR FUSION APPARATUS**

摘要：PROBLEM TO BE SOLVED : To reduce a number of laser beams to simplify a structure and operation control by condensing laser light in a vacuum vessel to a pellet which has occluded nuclear fusion fuel to cause high density nuclear fusion reaction.SOLUTION : A pellet 3 is made of a solid material which has occluded nuclear fusion fuel and coated by a coating material to prevent a temperature from rising. The pellet 3 is dropped into a vacuum vessel 1 via a pellet transfer path 5 or emitted at a pellet injection part 4, and laser beams 11 from a plurality of laser beam injection devices 2 are condensed. Implosion pressure associated with the coating material being into plasma compresses the pellet 3 to cause high density nuclear fusion reaction. Therefore, need for a conventional structure for enclosing the nuclear fusion fuel and supporting compression elements is eliminated, and the pellet 3 can be kept at a predetermined temperature without rise in temperature, whereby high density nuclear fusion reaction can be repetitively caused. Thus it is not necessary to compress the pellet 3 uniformly, and the number of laser beams can be reduced.

公开（公告）号：[JP2000162352A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXbQwleigboTYmGuxfaWZrjp&local=zh)

公开（公告）日：2000-06-16

申请号：JP10335281

申请日：1998-11-26

申请人：HITACHI LTD

**412、一种全固体自锁模飞秒激光器**

摘要：一种能产生1054nm激光波长的Nd : LMA全固体 自锁模飞秒激光器, 本发明采用SF57为克尔介质, 增强了自聚 焦效应、降低了自锁模自启动阈值功率, 解决了Nd : LMA增益 介质因非线性系数小不能直接自锁模的问题, 其激光脉冲宽度 可达610fs, 实现了全固体化, 成为体积小、输出稳定的飞秒激光 光源, 其在大规模和超大规模激光系统、场强物理、激光核聚 变、X光激光及超快过程研究等领域有应用价值。

公开（公告）号：[CN1211095A](https://www.incopat.com/detail/init2?formerQuery=mryYPMPFHqVi2Q45iAwa7A%3D%3D&local=zh)

公开（公告）日：1999-03-17

申请号：CN98112985.4

申请日：1998-10-06

申请人：中国科学院西安光学精密机械研究所

法律状态：法律状态公告日：19990317;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20030122;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20000719;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20081203;?

法律状态：专利权的终止(未缴年费专利权终止);?

描述信息：专利权的终止(未缴年费专利权终止)授权公告日：2003.1.22;?

**413、The blanket of laser type remote welding · cutting device**

摘要：PROBLEM TO BE SOLVED : To provide a laser type remote welding and cutting device capable of smoothly and efficiently effecting the welding and cutting work of a structural member located in a narrow space. SOLUTION : A laser type remote welding and cutting device comprises a head frame of the width to be insertable in a narrow space, a welding and cutting nozzle 8 projected on one side orthogonal to a tip part of the head frame, an optical system laser beam device 9 to converge the laser beam emitted from an optical fiber 10 to the welding and cutting nozzle supported by the head frame, a support box 37 to support the head frame, a remotely-operated wire feeder 39 which is provided on the support box, feeds a filler wire to a welding part, and adjusts the position of the filler wire, and a remotely- operated drive device which is provided in the support box and drives the optical system laser beam device.

公开（公告）号：[JP3657126B2](https://www.incopat.com/detail/init2?formerQuery=BSORol3%2FXtyC0huG9EOWn%2FR0OjOTHMZL&local=zh)

公开（公告）日：2005-06-08

申请号：JP10261469

申请日：1998-09-16

申请人：JAPAN ATOMIC ENERGY RES INST; KAWASAKI HEAVY IND LTD

法律状态：法律状态公告日：20041025;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20041025法律状态公告日：20041102;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20041102法律状态公告日：20041221;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20041220法律状态公告日：20041227;?

状态代码：RD02;?

法律状态：NOTIFICATION OF ACCEPTANCE OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7422Effective Date:;20041224法律状态公告日：20050111;?

状态代码：RD04;?

法律状态：NOTIFICATION OF RESIGNATION OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A7424Effective Date:;20050107法律状态公告日：20050303;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 2000094176A 法律状态公告日：20050309;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20050308法律状态公告日：20050317;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20050308法律状态公告日：20050318;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20060223;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20060303;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20060720;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20060728;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20070515;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20080403;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20080411;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20090318Fee Payment-year:;4法律状态公告日：20080411;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20080605;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20090318Fee Payment-year:;4法律状态公告日：20080610;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20100318Fee Payment-year:;5法律状态公告日：20090507;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20110318Fee Payment-year:;6法律状态公告日：20100511;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20120318Fee Payment-year:;7法律状态公告日：20110405;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20110413;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20120318Fee Payment-year:;7法律状态公告日：20110413;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20110428;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20120318Fee Payment-year:;7法律状态公告日：20110510;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20130318Fee Payment-year:;8法律状态公告日：20120426;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20130318Fee Payment-year:;8法律状态公告日：20120508;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 2000094176A Free Text Description:;PAYMENT UNTIL: 20140318Fee Payment-year:;9法律状态公告日：20140318;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 2000094176A

**414、LASER BEAM CUTTING AND WELD EQUIPMENT FOR PIPING**

摘要：PROBLEM TO BE SOLVED : To easily and efficiently conduct a sound welding work by fixing a laser beam machine to a wall face, inserting a laser beam from a piping opening part of a wall face side, aligning the beam with a piping center axis line with a positioning mechanism and moving a laser irradiation optical system with a drive device in the rotational and axial directions. SOLUTION : A fixing pin with flange 62 is inserted into an opening 61 for fixing laser beam cutting weld equipment of a wall face 3, the laser beam cutting/welding equipment is fixed to the wall face 3. A laser beam irradiation optical system 1 is moved in the axial direction and inserted into a piping opening part. Due to an effect of a compliance device 50, the laser beam irradiation optical system 1 is freely inclined corresponding to sliding with the piping opening part, axial lines are gradually aligned each other. The laser beam irradiation optical system 1 is inserted into a piping 71, a positioning device is brought into contact with an inner face of the piping 71, axial lines are aligned each other, the deviation is set to ≤1 mm. The laser beam irradiation optical system 1 is positioned at a prescribed position in the piping 71, rotated around the axis and cuts or welds the piping 71 from the inner face.

公开（公告）号：[JP2000084685A](https://www.incopat.com/detail/init2?formerQuery=SNok9%2B1vnXbuRsDCmRdErWGuxfaWZrjp&local=zh)

公开（公告）日：2000-03-28

申请号：JP10255697

申请日：1998-09-09

申请人：JAPAN ATOMIC ENERGY RES INST; TOSHIBA CORP; TOSHIBA F A SYSTEM ENG

法律状态：法律状态公告日：20031215;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20031212法律状态公告日：20031215;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20031212法律状态公告日：20040122;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20031212法律状态公告日：20040308;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20040305法律状态公告日：20040402;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20040305法律状态公告日：20051202;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20051202法律状态公告日：20060105;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20060104法律状态公告日：20060301;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A712Effective Date:;20060228法律状态公告日：20060304;?

状态代码：RD04;?

法律状态：NOTIFICATION OF RESIGNATION OF POWER OF ATTORNEY描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A7424Effective Date:;20060303法律状态公告日：20060515;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP 2000084685AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20060512

**415、METHOD AND DEVICE FOR EXTRACTING INTERNAL ENERGY- MASS OF MATERIAL VACUUM RELEASED FROM MULTIPLE QUANTIZED WORLD POWER SYSTEM MATERIAL VACUUM + NUCLIDES?**

摘要：FIELD : industrial extraction of useful environment- oriented energy-mass from material vacuum. SUBSTANCE : method depends on producing artificial non-equilibrium thermodynamic state in limited space of material vacuum accompanied by first-degree phase transition of quasi-gas structure of material vacuum into vacuum condensate involving separation of internal energy of material vacuum. Non-equilibrium state of material vacuum is attained due to collision between two opposing beams of heavy relativistic nuclides and fixed target-membrane mounted in special device whose mechanical design is similar to that of laser fusion reactor. Method provides for extraction of about 107 to 1013 J of internal energy-mass of material vacuum. EFFECT : improved output. 6 cl, 1 dwg

公开（公告）号：[RU2145742C1](https://www.incopat.com/detail/init2?formerQuery=DnjNw5Ne%2BkesVfsu2tV5vvR0OjOTHMZL&local=zh)

公开（公告）日：2000-02-20

申请号：RU98115101

申请日：1998-08-03

申请人：Jarosh Vsevolod Sergeevich

法律状态：法律状态公告日：20051210;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2145742C1Effective Date:;20040804

**416、含高价离子氧化物的掺镱硼酸盐激光玻璃**

摘要：一种含高价离子氧化物的掺镱硼酸盐激光玻璃， 含有玻璃形成体B2O3，网络修饰二价组元XO，发光离子氧化物Yb2O3，高价离子氧化物RmOn，以及少量的SiO2。本发明的Yb3+硼酸盐玻璃比已有技术的磷酸盐及铝酸盐玻璃，诱导放出系数σ高，荧光寿命τ长，二阶非线性系数n2小，同时可以满足任意大尺寸的要求，更适用于激光核聚变的激光工作物质。

公开（公告）号：[CN1238309A](https://www.incopat.com/detail/init2?formerQuery=mryYPMPFHqXrIQirkvg2sg%3D%3D&local=zh)

公开（公告）日：1999-12-15

申请号：CN98110892.X

申请日：1998-06-10

申请人：中国科学院上海光学精密机械研究所

法律状态：法律状态公告日：19991215;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20030507;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20000405;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20060823;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**417、Laser system utilizing sorbent-based gas storage and delivery system**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[US6125131A](https://www.incopat.com/detail/init2?formerQuery=5anmTwHwI8Sc%2FbCRNgqrAA%3D%3D&local=zh)

公开（公告）日：2000-09-26

申请号：US09080895

申请日：1998-05-18

申请人：ADVANCED TECH MATERIALS

法律状态：法律状态公告日：20000105;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 6125131A New Owner:;ATMI, INC., CONNECTICUTFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:BRANDES, GEORGE R.;TOM, GLENN M.;MCMANUS, JAMES V.;REEL/FRAME:010493/0878;SIGNING DATES FROM 20000103 TO 20000104法律状态公告日：20010508;?

状态代码：CC;?

法律状态：CERTIFICATE OF CORRECTION描述信息：Docdb Publication Number:; US 6125131A 法律状态公告日：20040322;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6125131A Fee Payment-year:;4法律状态公告日：20080228;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6125131A Fee Payment-year:;8法律状态公告日：20080314;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 6125131A New Owner:;ADVANCED TECHNOLOGY MATERIALS, INC., CONNECTICUTFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ATMI, INC.;REEL/FRAME:020654/0631Effective Date:;20080312法律状态公告日：20120507;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 6125131A 法律状态公告日：20120926;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 6125131A 法律状态公告日：20121113;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 6125131A Effective Date:;20120926法律状态公告日：20150204;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 6125131A New Owner:;ENTEGRIS, INC., MASSACHUSETTSFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:ADVANCED TECHNOLOGY MATERIALS, INC.;REEL/FRAME:034894/0025Effective Date:;20150204

**418、HOLOGRAPHY NUCLEAR FUSION REACTOR BIN ALSO USING GRAVITATIONAL WAVE UTILIZING SEMICONDUCTOR LASER ARRAY VARIABLE OSCILLATING HOLOGRAM BIN BY SEMICONDUCTOR LASER ARRAY VARIABLE OSCILLATION HOLOGRAM, AND GRAVITATIONAL-WAVE HOLOGRAPHY METHOD AND DEVICE THEREOF**

摘要：PROBLEM TO BE SOLVED : To obtain a detailed form, to make it possible to operate even with an opaque container, and to make it possible to perform the effective absorption and the utilization of energy and technologically free utilization of gravitational waves, by identifying the hologram-shaped pattern made by the contrast mode by the oscillation and the stopping of the laser of a semiconductor laser element in the hologram. SOLUTION : When many semiconductor laser elements 6 are aligned in line and a spherical wave 8 is generated from each laser element 6, the synthesized wave of these spherical waves 8 forms the next wave front. When a control circuit layer 7 is utilized and the phases of the oscillating spherical waves 8 are synchronized, the coherent spherical waves 8 can be generated. Furthermore, the interference-fringe pattern made by the contrast made by the oscillation (ON) and the stop (OFF) of the coherent spherical wave 8 from the semiconductor laser elements 6 aligned in line by utilizing the control circuit layer 7 can be identified in the ordinary hologram. ON is in correspondence with bright, part, i.e., transparent part of the hologram, wherein the laser passes, and OFF is in correspondence with the opaque part of the hologram, which shields the laser.

公开（公告）号：[JP11238947A](https://www.incopat.com/detail/init2?formerQuery=5HKUoEyapSlDRSEsjLkX0fR0OjOTHMZL&local=zh)

公开（公告）日：1999-08-31

申请号：JP1010074778

申请日：1998-02-18

申请人：MATSUNAGA SHIGEKO

法律状态：法律状态公告日：20050316;?

状态效果：+;?

状态代码：A621;?

法律状态：WRITTEN REQUEST FOR APPLICATION EXAMINATION描述信息：Docdb Publication Number:; JP H11238947AFree Text Description:;JAPANESE INTERMEDIATE CODE: A621Effective Date:;20050217法律状态公告日：20061219;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP H11238947AFree Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20061219法律状态公告日：20070316;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11238947AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20070219法律状态公告日：20071213;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H11238947AFree Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20071115法律状态公告日：20071213;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP H11238947AFree Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20071115法律状态公告日：20090512;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP H11238947AFree Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20090512

**419、Laser beam focussing and aligning**

摘要：In order to focus and aim light from a powerful laser precisely onto a pellet in an inertial confinement fusion reactor, a false target 21 (larger and possibly of different shape - figure 3) is placed where the real target is expected to be. Light from the laser passes through a non-linear frequency multiplying material 10, is reflected by separator grating 11 and focussed by lens 12 onto the false target 21. Light reflected by the false target passes through the separator grating 11 and is reflected by mirror 33 and half-silvered mirror 32 onto Hartmann wavefront analyser 35. Light also passes directly from the laser to the analyser via separator grating 11 and half-silvered mirror 32. Wavefront analyser analyses the difference between the incident light beams to determine whether the laser beam is correctly aligned and focussed.

公开（公告）号：[GB2321813A](https://www.incopat.com/detail/init2?formerQuery=CFENI8HWQa96vs0S7R17kg%3D%3D&local=zh)

公开（公告）日：1998-08-05

申请号：GB9801955

申请日：1998-01-29

申请人：THOMSON CSF

法律状态：法律状态公告日：20020918;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 9801955D0Effective Date:;20020129

**420、MICROSCOPE ANALYZING SHAPE OF ELEMENTARY PARTICLE WITH NEUTRINO**

摘要：PROBLEM TO BE SOLVED : To provide a microscope capable of observing small material such as elementary particles. SOLUTION : Neutrino generated with a slightly slanting ambient temperature fusion device is focused through a convex lens and a material is put on the focus point, and a plurality of vertical laser light correcting slightly the moving shift vertically and horizontally in the same direction as the neutrino in the convex lens is emitted and received. A microscope analyzes the shape of elementary particles with neutrino having the above constitution.

公开（公告）号：[JP11194200A](https://www.incopat.com/detail/init2?formerQuery=5HKUoEyapSl0ef7CBcYwcvR0OjOTHMZL&local=zh)

公开（公告）日：1999-07-21

申请号：JP10031925

申请日：1998-01-05

申请人：KOMORI KAORU

法律状态：法律状态公告日：20041215;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP H11194200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20041215法律状态公告日：20050104;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP H11194200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20050104法律状态公告日：20050510;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP H11194200A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20050510

**421、NUCLEAR FUSION BY TIME DIFFERENCE IRRADIATION OF LASER BEAM**

摘要：PROBLEM TO BE SOLVED : To enable stably supplying electricity by concentrating plenty of laser beam on a cannonball from all directions intermittently with time difference for causing fusion of deuterium and generating heat and generating electricity with the heat used as heat source instead of petroleum since deuterium exists in seawater much more plentifully than uranium for fission. SOLUTION : A cannonball is placed in the center of a reactor and a plurality of laser surrounding it are collimated to the center. Laser beams are irradiated for a short time from all directions with small time differences. A plenty of laser is irradiated from all direction with time shift in this manner repeatedly so as to attack with laser beam with time differences to cause fusion.

公开（公告）号：[JP11142559A](https://www.incopat.com/detail/init2?formerQuery=5HKUoEyapSk6ZLEYrqhXofR0OjOTHMZL&local=zh)

公开（公告）日：1999-05-28

申请号：JP09353974

申请日：1997-11-04

申请人：YAMAMOTO YOSHITAKE

**422、FRONT END TOOL AND CUTTING DEVICE FOR CUTTING BLANKET SUPPORTING LEG OF NUCLEAR FUSION EXPERIMENTAL REACTOR**

摘要：PROBLEM TO BE SOLVED : To cut the supporting leg of a blanket to a welding bevel shape with high efficiency. SOLUTION : Front end tools 100a, 100b are formed to have such a structure as a cutter or a grinder 1 is supported by a retaining member 2, driven through a driving bevel gear, a loose bevel gear 8, and a bevel gear 8 mounted on the retaining member 2, and the cutter or the grinder 1 is bent by a cylinder 10, and are jointed with a front access arm mechanism 101 so as to face each other. When a supporting leg 103 is moved to a section to be cut, the cutter or the grinder 1 is stored, and the respective front end tools are inserted between supporting legs 103 from the lowest end opening part of a blanket 102 and set at a cutting point. The cutter or the grinder 1 is rotated and bent to cut while it is being pressed against the supporting leg 103. After bending operation by 90°, the front access arm mechanism 101 is moved in a cutting direction by means of manipulator driving, and the supporting legs 103 on both sides are then cut into a welding bevel shape at the same time. The final welding bevel root surface is formed by a YAG laser front end head.

公开（公告）号：[JP11014778A](https://www.incopat.com/detail/init2?formerQuery=5HKUoEyapSlOBd9jduBNqvR0OjOTHMZL&local=zh)

公开（公告）日：1999-01-22

申请号：JP09164089

申请日：1997-06-20

申请人：JAPAN ATOMIC ENERGY RES INST

**423、SINGLE PANCAKE WINDING, DOUBLE PANCAKE WINDING, SUPERCONDUCTING COIL, AND NUCLEAR FUSION DEVICE PROVIDED WITH THE COIL**

摘要：PROBLEM TO BE SOLVED : To reduce the working amount and welding amount of the lid of a single pancake winding, by providing such a lid that is integrally formed with a disk and covers superconducting conductors and is joined with the disk or welded to the disk with a penetrating electron beam or penetrating laser. SOLUTION : Grooves are provided on one surface of a disk 1 and superconducting conductors 2 which are insulated after the conductors 2 are wound in the same shape as that of the grooves are housed in the grooves. Then, a single pancake winding is formed by covering the disk 1 with a lid 3 which is integrally formed with the disk 1 and supports and fixes the conductors 2 and welding the lid 3 to the disk 1 with a penetrating electron beam or penetrating laser. In the case, the lid 3 can be divided into a plurality of parts, so that two or more superconducting conductors 2 may be covered with one lid 3 in the radial direction. A superconducting coil is formed by laminating a plurality of single pancake windings thus formed upon another. Therefore, the working time and welding time of the lid 3 can be reduced and the deformation of the lid 3 which occurs when the lid 3 is worked and welded can be reduced. In addition, a sufficient strength can be secured.

公开（公告）号：[JP11003814A](https://www.incopat.com/detail/init2?formerQuery=5HKUoEyapSkBxnr5pmIEQvR0OjOTHMZL&local=zh)

公开（公告）日：1999-01-06

申请号：JP09154744

申请日：1997-06-12

申请人：HITACHI LTD; JAPAN ATOM ENERGY RES INST

**424、A method for generating nuclear fusion through high pressure**

摘要：A method of generating nuclear fusion, whereby bubbles of a gas of about 10 micron diameter, contained in heavy water, are expanded by use of a vacuum to about 100 microns in diameter. The subsequent thermal cooling and collapse of the bubbles is augmented by a uniform pressure externally applied and acting on the bubbles through the heavy water. Symmetry in the bubbles' shape is imparted by the addition of heat from a laser as the bubbles continue to contract. High pressures and therefore temperatures are achieved, sufficient to generate nuclear fusion in specific materials.

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公开（公告）日：1998-01-14

申请号：AU3384297

申请日：1997-06-11

申请人：AMERICAN TECH GROUP

**425、A METHOD FOR GENERATING NUCLEAR FUSION THROUGH HIGH PRESSURE**

摘要：A method of generating nuclear fusion, whereby bubbles of a gas of about 10 micron diameter, contained in heavy water, are expanded by use of a vacuum to about 100 microns in diameter. The subsequent thermal cooling and collapse of the bubbles is augmented by a uniform pressure externally applied and acting on the bubbles through the heavy water. Symmetry in the bubbles' shape is imparted by the addition of heat from a laser as the bubbles continue to contract. High pressures and therefore temperatures are achieved, sufficient to generate nuclear fusion in specific materials.

公开（公告）号：[WO9749274A2](https://www.incopat.com/detail/init2?formerQuery=r2%2BsG7jJML1%2FPQppwiuxW%2FR0OjOTHMZL&local=zh)

公开（公告）日：1997-12-31

申请号：WOUS97010012

申请日：1997-06-11

申请人：AMERICAN TECH GROUP; LO SHUI YIN

法律状态：法律状态公告日：19971231;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 9749274A2Corresponding Authority:;WOCorresponding Kind:;A2Legal Designated States:;AL;AM;AT;AT;AU;AZ;BB;BG;BR;BY;CA;CH;CN;CZ;CZ;DE;DE;DK;DK;EE;EE;ES;FI;FI;GB;GE;GH;HU;IL;IS;JP;KE;KG;KP;KR;KZ;LK;LR;LS;LT;LU;LV;MD;MG;MK;MN;MW;MX;NO;NZ;PL;PT;RO;RU;SD;SE;SG;SI;SK;SK;TJ;TM;TR;TT;UA;UG;US;UZ;VN;YU;AM;AZ;BY;KG;KZ;MD;RU;TJ;TM;法律状态公告日：19971231;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 9749274A2Corresponding Authority:;WOCorresponding Kind:;A2Legal Designated States:;GH;KE;LS;MW;SD;SZ;UG;ZW;AT;BE;CH;DE;DK;ES;FI;FR;GB;GR;IE;IT;LU;法律状态公告日：19980409;?

状态效果：-;?

状态代码：WA;?

法律状态：WITHDRAWAL OF INTERNATIONAL APPLICATION描述信息：Docdb Publication Number:; WO 9749274A2法律状态公告日：19980513;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 9749274A2法律状态公告日：19980520;?

状态效果：-;?

状态代码：122;?

法律状态：EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE描述信息：Docdb Publication Number:; WO 9749274A2法律状态公告日：19981008;?

状态代码：REG;?

法律状态：REFERENCE TO NATIONAL CODE描述信息：Docdb Publication Number:; WO 9749274A2Designated State Authority:;DEDesignated State Event Code:;8642Designated State Description:;IMPACT ABOLISHED FOR DE - I.E. PCT APPL. NOT ENT. GERMAN PHASE法律状态公告日：19990211;?

状态代码：NENP;?

法律状态：NON-ENTRY INTO THE NATIONAL PHASE IN:描述信息：Docdb Publication Number:; WO 9749274A2Designated State Authority:;CA

**426、Miniature thermonuclear fusion device for electrical energy production**

摘要：Equipment for electrical energy production by electrocatalytic fusion of deuterium includes a chamber (1) which contains deuterium and a system (2, 2' ) for focussing two laser beams with rotary quadripolar modes having the chamber axis as common axis. One beam (with a wavelength 10 times that of the other) generates a plasma column which forms, at its centre, the target, on which is concentrated the energy of the other beam. This other beam causes ignition and consequent propagation of electronic shock waves (spikes) which cause renewed nuclear fusion and creation of current pulses. The current pulses are received by the internal conductors (5, 5' ) of two coaxial cables, the external conductors (6, 6' ) of which surround the tubes (4, 4' ) in which the spikes propagate fusion. The focussing system comprises mirrors (3, 3' ) which have centre openings for passage of the spikes and which reflect the laser beams so that the lasers can be positioned outside the spike trajectory.

公开（公告）号：[FR2763420A1](https://www.incopat.com/detail/init2?formerQuery=3sXuqp3qitSbfd9vef35VPR0OjOTHMZL&local=zh)

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申请号：FR97006004

申请日：1997-05-15

申请人：MARIE GEORGES ROBERT PIERRE

法律状态：法律状态公告日：20000303;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2763420A1

**427、METHOD AND APPARATUS FOR GENERATION OF NUCLEAR FUSION REACTION**

摘要：PROBLEM TO BE SOLVED : To obtain a method and an apparatus in which a high gain is obtained and in which a target resistant to instability during an implosion can be used by a method wherein, by using high-energy ions generated from a high-energy particle accelerator, elementary particles such as pions or the like are stuck to a nuclear fusion fuel substance so as to be compressed to a high density and a nuclear fusion reaction is promoted. SOLUTION : A high-energy ion particle beam which is generated in such a way that it is incident from an ion-particle-beam generator 1 and that it is accelerated by a particle accelerator 2 is pulse-shaped by a pulse shaping part 3, and it is emitted to a conversion target 5 at a nuclear fusion target 5 inside a nuclear fusion reactor 4 so as to be converted into pions at its inside. The pions are diffused into a nuclear fusion target so as to be stuck to a nuclear fusion fuel 7 inside the target. A laser 8 irradiates a high-energy laser beam so as to compress and accelerate an implosion target. Since hydrogen atoms in pion hydrogen molecules are in a satte that they are adjacent to a minimum distance range, a condition under which a nuclear fusion reaction is easy to generate is prepared.

公开（公告）号：[JP10253785A](https://www.incopat.com/detail/init2?formerQuery=%2B4kpt%2FTccq7SBUyFBvYNlPR0OjOTHMZL&local=zh)

公开（公告）日：1998-09-25

申请号：JP09057656

申请日：1997-03-12

申请人：LASER GIJUTSU SOGO KENKYUSHO

**428、FUEL PELLETS FOR THERMONUCLEAR REACTIONS**

摘要：Fuel pellets for use as targets in a device employing thermonuclear fusion by inertial confinement (Laser fusion) are manufactured from high polymer hydrocarbons in which bound hydrogen has been replaced with tritium. The required polymer is prepared by polymerizing monomer(s) which contain carbon and tritium. The hollow pellets are filled with thermonuclear fuel, e.g., a mixture of deuterium-tritium. To improve the sphericity of the pellets and the uniformity of their wall thickness, manufacture of the pellets is contemplated in the near-zero gravity of space.

公开（公告）号：[US20020057754A1](https://www.incopat.com/detail/init2?formerQuery=IBO7qw220rGGax4lqjRNPCKnnohyIMbS&local=zh)

公开（公告）日：2002-05-16

申请号：US08793432

申请日：1997-02-26

申请人：STAUFFER JOHN E; STAUFFER JOHN C

法律状态：法律状态公告日：20060109;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6418177B1Fee Payment-year:;4法律状态公告日：20091209;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 6418177B1Fee Payment-year:;8法律状态公告日：20140214;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 6418177B1法律状态公告日：20140709;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 6418177B1法律状态公告日：20140826;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 6418177B1Effective Date:;20140709法律状态公告日：20170428;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 6418177B1New Owner:;JES TECHNOLOGY, LLC, MARYLANDFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STAUFFER, JOHN EUGENE, MR;REEL/FRAME:042172/0668Effective Date:;20161227

**429、METHOD FOR MANUFACTURING THIN-WALL TARGET BODY**

摘要：FIELD : manufacture of targets with holes consisting of one or several layers in modern research of controlled nuclear fusion and in modelling of physical processes with employment of powerful lasers. SUBSTANCE : method includes making of matrix, application of target material to matrix and its subsequent removal. Matrix is made of sublimated metal with sublimation point lower than temperature of heat resistance of target material and strength with which matrix does not change its geometric shape during application of target material to it. Matrix is removed by sublimation in vacuum. EFFECT : increased ratio of radius of closed target body to wall thickness; extension of a number of processes modelled with use of powerful lasers. 3 cl

公开（公告）号：[RU2117710C1](https://www.incopat.com/detail/init2?formerQuery=DnjNw5Ne%2BkfVEnuP4T2TXvR0OjOTHMZL&local=zh)

公开（公告）日：1998-08-20

申请号：RU97102905

申请日：1997-02-20

申请人：Rossijskij federal' nyj jadernyj tsentr Vserossijskij nauchno issledovatel' skij institut ehksperimental' noj fiziki; Ministerstvo Rossijskoj Federatsii po atomnoj ehnergii

法律状态：法律状态公告日：20110720;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2117710C1Effective Date:;20090221

**430、潜藏式钨与石英过渡封接的脉冲氙灯**

摘要：一种潜藏式钨与石英过渡封接的脉冲氙灯主要 用于激光核聚变装置中大功率、大能量固体激光系统的泵浦 源。它由灯管和两端对称置放结构完全相同的灯头所构成。置 于灯头内的灯头内部构件中心轴线上的电极通过电极密封 区、内密封区、过渡玻璃封接区和外密封区与灯管的尾管封 接。具有负载能量大, 抗压强度高, 灯体上无排气口、外形美观, 寿命长等特点。

公开（公告）号：[CN2288507Y](https://www.incopat.com/detail/init2?formerQuery=Nuk1wWllHqNWF2ySNyZ7uw%3D%3D&local=zh)

公开（公告）日：1998-08-19

申请号：CN97206471.0

申请日：1997-01-30

申请人：中国科学院上海光学精密机械研究所

法律状态：法律状态公告日：19980819;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：20020313;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**431、PHTHALOCYANINE COMPOUND**

摘要：PROBLEM TO BE SOLVED : To obtain the subject compound having a strong absorption peak in the near infrared region of electromagnetic spectrum and useful for various electronic devices. SOLUTION : This phthalocyanine compound is expressed by the formula I (MkPc is a phthalocyanine nucleus of the formula II (M is a metal, a halogeno- metal group, an oxy-metal group or H; (k) is the reciprocal of a half of the atomic valence of M; R is a 1, 2-arylene; Y is O or S; R1 is a hydrocarbyl; Z is a halogen or H; A is H, a metal or ammonium; (x) is 1-8; (y) is 0-14; (m) is 0-14; (n) is 0-32; etc.). The compound of the formula I can be produced by reacting a properly substituted phthalonitrile with a metal or a metal salt at a high temperature in the presence or absence of an inert solvent and/or a catalyst and optionally sulfonating the reaction product. The compound can be used in printed currency, check, ink-jet print, laser thermal print, flash fusion of toner, storage of optical data and charge-generation substance for laser thermal print.

公开（公告）号：[JP10001481A](https://www.incopat.com/detail/init2?formerQuery=%2B4kpt%2FTccq5uKU8dsARwcvR0OjOTHMZL&local=zh)

公开（公告）日：1998-01-06

申请号：JP09012231

申请日：1997-01-27

申请人：ZENECA LTD

法律状态：法律状态公告日：20050720;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20050719法律状态公告日：20050721;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20050720法律状态公告日：20051018;?

状态代码：A601;?

法律状态：WRITTEN REQUEST FOR EXTENSION OF TIME描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A601Effective Date:;20051017法律状态公告日：20051021;?

状态代码：A602;?

法律状态：WRITTEN PERMISSION OF EXTENSION OF TIME描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A602Effective Date:;20051020法律状态公告日：20060118;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20060117法律状态公告日：20060511;?

状态代码：A711;?

法律状态：NOTIFICATION OF CHANGE IN APPLICANT描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A711Effective Date:;20060510法律状态公告日：20060607;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A821Effective Date:;20060510法律状态公告日：20060720;?

状态效果：-;?

状态代码：A02;?

法律状态：DECISION OF REFUSAL描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A02Effective Date:;20060719法律状态公告日：20100618;?

状态效果：-;?

状态代码：A045;?

法律状态：WRITTEN MEASURE OF DISMISSAL OF APPLICATION描述信息：Docdb Publication Number:; JP H101481A Free Text Description:;JAPANESE INTERMEDIATE CODE: A045Effective Date:;20100617

**432、Nuclear fusion reactor**

摘要：The nuclear fusion reactor has a fusion chamber in which the fusion material (1) is contained and an array of lasers (3A). The fusion vessel (2) is located within in a fusion space (5) which is filled with a heat transfer material; and the laser light passes through guides (3B) to converge on the fusion material. Also claimed is the generation of energy with the above fusion reactor.

公开（公告）号：[DE19706136A1](https://www.incopat.com/detail/init2?formerQuery=%2B6vzJuzv%2BwlBD8%2FPGhTszWr4kAd0KKkg&local=zh)

公开（公告）日：1997-10-23

申请号：DE19706136

申请日：1997-01-22

申请人：Gangkofner, Max

法律状态：法律状态公告日：19971023;?

状态效果：+;?

状态代码：OAV;?

法律状态：APPLICANT AGREED TO THE PUBLICATION OF THE UNEXAMINED APPLICATION AS TO PARAGRAPH 31 LIT. 2 Z1描述信息：Docdb Publication Number:; DE 19706136A1法律状态公告日：19971023;?

状态效果：+;?

状态代码：ON;?

法律状态：LATER SUBMITTED PAPERS描述信息：Docdb Publication Number:; DE 19706136A1法律状态公告日：19971023;?

状态效果：+;?

状态代码：OP8;?

法律状态：REQUEST FOR EXAMINATION AS TO PARAGRAPH 44 PATENT LAW描述信息：Docdb Publication Number:; DE 19706136A1法律状态公告日：19971127;?

状态代码：8122;?

法律状态：NONBINDING INTEREST IN GRANTING LICENCES DECLARED描述信息：Docdb Publication Number:; DE 19706136A1法律状态公告日：20050901;?

状态效果：+;?

状态代码：8364;?

法律状态：NO OPPOSITION DURING TERM OF OPPOSITION描述信息：Docdb Publication Number:; DE 19706136A1法律状态公告日：20091119;?

状态效果：-;?

状态代码：8339;?

法律状态：CEASED/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 19706136A1

**433、nuclear fusion -Reactor**

摘要：Fusion reactor with a fusion housing, fusion material is incorporated into the, and a plurality of lasers, characterized in that the fusion housing (2) by a further fusion area (5) is surrounded, which contains a working medium for heat dissipation, and the laser beams of the laser (38) over into the fusion housing (2) projecting laser guidance staffs (3A) on the fusion material (1) are guided.

公开（公告）号：[DE29724525U1](https://www.incopat.com/detail/init2?formerQuery=x1AvT73qrYUBMCjIVWL87Wr4kAd0KKkg&local=zh)

公开（公告）日：2002-05-08

申请号：DE29724525

申请日：1997-01-22

申请人：GANGKOFNER MAX

法律状态：法律状态公告日：20020508;?

状态代码：R207;?

法律状态：UTILITY MODEL SPECIFICATION描述信息：Docdb Publication Number:; DE 29724525U1Effective Date:;20020508法律状态公告日：20020808;?

状态效果：+;?

状态代码：R150;?

法律状态：TERM OF PROTECTION EXTENDED TO 6 YEARS描述信息：Docdb Publication Number:; DE 29724525U1Effective Date:;20020604法律状态公告日：20030424;?

状态效果：+;?

状态代码：R151;?

法律状态：TERM OF PROTECTION EXTENDED TO 8 YEARS描述信息：Docdb Publication Number:; DE 29724525U1Effective Date:;20030217法律状态公告日：20050504;?

状态效果：+;?

状态代码：R152;?

法律状态：TERM OF PROTECTION EXTENDED TO 10 YEARS描述信息：Docdb Publication Number:; DE 29724525U1Effective Date:;20050301法律状态公告日：20070131;?

状态效果：-;?

状态代码：R071;?

法律状态：EXPIRY OF RIGHT描述信息：Docdb Publication Number:; DE 29724525U1

**434、Device for generating and exploiting the thermonuclear micro-fusion**

摘要：The nuclear fusion generator comprises a chamber (1) filled with deuterium which is concentrated in a central volume (F) by a magnetic field and formed into a plasma by a first layer beam. A second laser beam, whose wavelength is one tenth as long at that of the first beam, is directed onto the plasma from the opposite direction, and both beams are focussed by devices which modify their electric components so that they vary in a rotating quadripolar fashion. This causes rapidly intermittent fusion reactions accompanied by the release of pulses of electric current. The pulses are picked up by a pair of anodes (9) spaced from opposite ends of the plasma and at least one cathode (15) extending radially up to the central part of the plasma, to create a pulsed electric current as a power output.

公开（公告）号：[EP772203A1](https://www.incopat.com/detail/init2?formerQuery=DLY5ruxQrhr8TcLGu%2BK0qg%3D%3D&local=zh)

公开（公告）日：1997-05-07

申请号：EP96402361

申请日：1996-11-06

申请人：MARIE GEORGES ROBERT PIERRE

法律状态：法律状态公告日：19970507;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0772203A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;DE;FR;GB;法律状态公告日：19980107;?

状态效果：-;?

状态代码：18W;?

法律状态：APPLICATION WITHDRAWN描述信息：Docdb Publication Number:; EP 0772203A1

**435、全耐液式电机**

摘要：全耐液式电机是可以在液体中工作的交流电机, 解决绕组耐水、耐高温、耐高压力的动密封问题; 其绕组由并联 支路构成, 支路在槽中的导体数等于槽中本支路导体数; 用于各 种防泄漏电机, 快中子反应堆可调流量钠泵, 激光热核聚变反应 可调流量锂泵, 钢水搅拌器, 万米海深潜水器仿鱼灵活游动的推 进器用大功率驱动电机, 水下电动工具, 万米深海采锰结核提升 电泵, 油田五公里下深井采油用电泵, 高温高压防泄漏电泵, 航天 飞机燃料泵等。

公开（公告）号：[CN1180259A](https://www.incopat.com/detail/init2?formerQuery=3eQEo0gaDTibb3CowzDJ3Q%3D%3D&local=zh)

公开（公告）日：1998-04-29

申请号：CN96112954.9

申请日：1996-10-07

申请人：张喜信

法律状态：法律状态公告日：19980429;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20011226;?

法律状态：发明专利申请公布后的视为撤回;?

描述信息：;?

法律状态公告日：20000112;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20011031;?

法律状态：地址不明的通知;?

描述信息：<收件人>张喜信</收件人><文件名称>视为撤回通知书</文件名称>;?

**436、FLUID STORAGE AND DELIVERY SYSTEM FOR GASEOUS COMPOUNDS**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[KR0199885B1](https://www.incopat.com/detail/init2?formerQuery=BQbA4hqiqOKSak0zjTmE9%2FR0OjOTHMZL&local=zh)

公开（公告）日：1999-03-08

申请号：KR1019967005456

申请日：1996-10-01

申请人：ADVANCED TECH MATERIALS

**437、FLUID STORAGE AND DELIVERY SYSTEM FOR GASEOUS COMPOUNDS**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[KR100199885B1](https://www.incopat.com/detail/init2?formerQuery=IEpxhWZkcztz3CYQBDp6Nxl3Z10vNpVJ&local=zh)

公开（公告）日：1999-03-08

申请号：KR1019960705456

申请日：1996-10-01

申请人：ADVANCED TECH MATERIALS

**438、TREATMENT METHOD FOR MATERIAL ACCOUNTANCY OF RADIOACTIVE MATERIAL**

摘要：PROBLEM TO BE SOLVED : To accurately calculate tritium amount captured in whole surface area by casting ultraviolet laser, giving material surface abrasion and uniformly vaporizing or gasifying only within the irradiation area with photochemical effects. SOLUTION : Ultraviolet laser transmitted through a fiber 24 is focused with a lens 26 and casted on a specific area surface of a material 20. On the surface of the material 20 irradiated by the ultraviolet laser, abrasion is caused and the surface is ground according to the energy density and shot number. Tritium dissociated from the surface by the abrasion is extracted out through an exhaust pipe 28. By measuring the tritium amount in the exhaust air with a quadrupole mass analyzer 30 connected with the exhaust pipe 28, the tritium in the area of abrasion can be measured. By examining the measured tritium amount as a function of depth, the captured tritium amount as a function of the depth in the surface layer of the material 20 can be measured.

公开（公告）号：[JP10048370A](https://www.incopat.com/detail/init2?formerQuery=%2B4kpt%2FTccq7qcQIpkb2q2%2FR0OjOTHMZL&local=zh)

公开（公告）日：1998-02-20

申请号：JP08202030

申请日：1996-07-31

申请人：JAPAN ATOMIC ENERGY RES INST; SUMITOMO HEAVY INDUSTRIES

法律状态：法律状态公告日：20050526;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20050526法律状态公告日：20050526;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP 3698821B2法律状态公告日：20050607;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20050607法律状态公告日：20050714;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20050706法律状态公告日：20050715;?

状态效果：+;?

状态代码：R150;?

法律状态：CERTIFICATE OF PATENT (=GRANT) OR REGISTRATION OF UTILITY MODEL描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R150法律状态公告日：20060223;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20060303;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20071129;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;PAYMENT UNTIL: 20080715Fee Payment-year:;3法律状态公告日：20071129;?

状态代码：S531;?

法律状态：WRITTEN REQUEST FOR REGISTRATION OF CHANGE OF DOMICILE描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R313531法律状态公告日：20071207;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;PAYMENT UNTIL: 20080715Fee Payment-year:;3法律状态公告日：20071207;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20080729;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (PRS DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3698821B2Free Text Description:;PAYMENT UNTIL: 20090715Fee Payment-year:;4法律状态公告日：20090715;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 3698821B2

**439、NARROW PIPE REPARING DEVICE FOR NUCLEAR REACTOR AND METHOD THEREOF**

摘要：PROBLEM TO BE SOLVED : To ensure the soundness of narrow pipe welded part by applying a laser beam having a specified power concentration and a specified pulse width to a welded part inside a narrow part welded to a reactor vessel. SOLUTION : A visible pulse laser beam 4 from an obtical fiber 2 is converged with a combination condensing lens 3 and incident to the inner surface of a narrow pipe 1. An outer cylinder 62 of rotatively driving motor 7 and the emission part of the fiber 2 are connected by a partially transparent cylindrical laser application window 6 and the power supply to the motor 7 is made by a storage battery 8 mounted at an end of the motor 7. A laser reparing or correcting device 13 for the inner surface of a narrow pipe is put at the deep position of the pipe 1 by a device for putting the device 13 in and out of the pipe 1, and the device 13 is moved while pulled to the direction of the pipe 1. An optical connection structure 61 is composed of a connection structure 66, the optical fiber 2, the lens 3, a fixation ring 68 and the like, and the window 6 is connected to the outer cylinder 65 while the cylinder 65 to the structure 66.

公开（公告）号：[JP09257984A](https://www.incopat.com/detail/init2?formerQuery=bzKYkoP%2FKEXo58Zr836Rr%2FR0OjOTHMZL&local=zh)

公开（公告）日：1997-10-03

申请号：JP08095987

申请日：1996-03-26

申请人：TOSHIBA CORP

法律状态：法律状态公告日：20040325;?

状态代码：A977;?

法律状态：REPORT ON RETRIEVAL描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A971007Effective Date:;20040325法律状态公告日：20041020;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20041019法律状态公告日：20041220;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20041217法律状态公告日：20050404;?

状态效果：-;?

状态代码：A131;?

法律状态：NOTIFICATION OF REASONS FOR REFUSAL描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A131Effective Date:;20050401法律状态公告日：20050518;?

状态代码：A521;?

法律状态：WRITTEN AMENDMENT描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A523Effective Date:;20050517法律状态公告日：20050610;?

状态效果：+;?

状态代码：TRDD;?

法律状态：DECISION OF GRANT OR REJECTION WRITTEN描述信息：Docdb Publication Number:; JP H09257984A 法律状态公告日：20050615;?

状态效果：+;?

状态代码：A01;?

法律状态：WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A01Effective Date:;20050614法律状态公告日：20050707;?

状态效果：+;?

状态代码：A61;?

法律状态：FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;JAPANESE INTERMEDIATE CODE: A61Effective Date:;20050628法律状态公告日：20080617;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;PAYMENT UNTIL: 20090708Fee Payment-year:;4法律状态公告日：20090618;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;PAYMENT UNTIL: 20090708Fee Payment-year:;4法律状态公告日：20090623;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;PAYMENT UNTIL: 20100708Fee Payment-year:;5法律状态公告日：20100622;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;PAYMENT UNTIL: 20110708Fee Payment-year:;6法律状态公告日：20110614;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;PAYMENT UNTIL: 20120708Fee Payment-year:;7法律状态公告日：20120612;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP H09257984A Free Text Description:;PAYMENT UNTIL: 20130708Fee Payment-year:;8法律状态公告日：20130708;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H09257984A

**440、THERMONUCLEAR REACTOR**

摘要：FIELD : production of power by means of controlled laser thermonuclear fission, enrichment and regeneration of nuclear fuel. SUBSTANCE : device has coaxial rotation-body jackets which are connected into single three- dimensional frame system. Both two inner jackets contain through and blind pipes which serve as power receivers, absorb most of explosion power and provide significant decrease in dynamic load. Pipes of power boiler are located in space between said pipes. Rest space of reactor chamber is filled with additional body which consists of sand temperature-proof heat-absorbing materials of great strength and heavy density. Uranium cassettes, part of power boiler pipes and additional body are located between two outer jackets. Frame of reactor has protection system against destruction by gamma quanta and alpha particles. Reactor has holes for input of laser beams, system for target input, vacuum pumping system and region for regeneration of thermonuclear fuel regeneration. Center of region of target explosion is located above mass center of reactor. EFFECT : increased functional capabilities. 2 dwg

公开（公告）号：[RU2094858C1](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4Kdd8iU4sHZM%2FR0OjOTHMZL&local=zh)

公开（公告）日：1997-10-27

申请号：RU96101100

申请日：1996-01-16

申请人：Levkin Viktor Vasil' evich

**441、DEVICE CAUSING AND USING “MICROFUSION” THERMONUCLAIRE**

摘要：The nuclear fusion generator comprises a chamber (1) filled with deuterium which is concentrated in a central volume (F) by a magnetic field and formed into a plasma by a first layer beam. A second laser beam, whose wavelength is one tenth as long at that of the first beam, is directed onto the plasma from the opposite direction, and both beams are focussed by devices which modify their electric components so that they vary in a rotating quadripolar fashion. This causes rapidly intermittent fusion reactions accompanied by the release of pulses of electric current. The pulses are picked up by a pair of anodes (9) spaced from opposite ends of the plasma and at least one cathode (15) extending radially up to the central part of the plasma, to create a pulsed electric current as a power output.

公开（公告）号：[FR2740898A1](https://www.incopat.com/detail/init2?formerQuery=3sXuqp3qitR0NzWy5R9GX%2FR0OjOTHMZL&local=zh)

公开（公告）日：1997-05-09

申请号：FR95013065

申请日：1995-11-06

申请人：MARIE GEORGES ROBERT PIERRE

法律状态：法律状态公告日：19990827;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2740898A1

**442、CAMP AND DELIVERY SYSTEM FOR GASEOUS CONNECTIONS**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[AT195888T](https://www.incopat.com/detail/init2?formerQuery=zrvRscz9jTTBOL2celKj3g%3D%3D&local=zh)

公开（公告）日：2000-09-15

申请号：AT93630295

申请日：1995-10-13

申请人：ADVANCED TECH MATERIALS

法律状态：法律状态公告日：20010115;?

状态效果：+;?

状态代码：UEP;?

法律状态：PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION描述信息：Docdb Publication Number:; AT 195888T

**443、Storage and delivery system for gaseous compounds**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[AU3830095A](https://www.incopat.com/detail/init2?formerQuery=fe0FHMn9w8cwYN%2Fj6ojpHw%3D%3D&local=zh)

公开（公告）日：1996-05-06

申请号：AU3830095

申请日：1995-10-13

申请人：Advanced Technology Materials Inc

**444、Device of adsor??o-dessor??o system of ion implantation process for supply of gaseous reagent process of adsor??o-dessor??o and process for storage and sorvível gas distribution**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[BRPI9509134A](https://www.incopat.com/detail/init2?formerQuery=NtABT%2FmxwnSOs6inb6yZUmr4kAd0KKkg&local=zh)

公开（公告）日：1998-11-03

申请号：BRPI9509134

申请日：1995-10-13

申请人：ADVANCED TECH MATERIALS; JAMES V MCMANUS

法律状态：法律状态公告日：20001128;?

状态效果：-;?

状态代码：FB36;?

法律状态：TECHNICAL AND FORMAL REQUIREMENTS: REQUIREMENT - ARTICLE 36 OF INDUSTRIAL PROPERTY LAW描述信息：Docdb Publication Number:; BR 9509134A 法律状态公告日：20010605;?

状态效果：+;?

状态代码：FF;?

法律状态：DECISION: INTENTION TO GRANT描述信息：Docdb Publication Number:; BR 9509134A 法律状态公告日：20011016;?

状态效果：+;?

状态代码：FG9A;?

法律状态：PATENT OR CERTIFICATE OF ADDITION GRANTED描述信息：Docdb Publication Number:; BR 9509134A 法律状态公告日：20140401;?

状态效果：-;?

状态代码：B21F;?

法律状态：LAPSE ACC. ART. 78, ITEM IV - ON NON-PAYMENT OF THE ANNUAL FEES IN TIME描述信息：Docdb Publication Number:; BR 9509134A Free Text Description:;REFERENTE A 18A ANUIDADE.法律状态公告日：20170124;?

状态效果：-;?

状态代码：B24J;?

法律状态：LAPSE BECAUSE OF NON-PAYMENT OF ANNUAL FEES (DEFINITIVELY: ART 78 IV LPI, RESOLUTION 113/2013 ART. 12)描述信息：Docdb Publication Number:; BR 9509134A Free Text Description:;EM VIRTUDE DA EXTINCAO PUBLICADA NA RPI 2256 DE 01-04-2014 E CONSIDERANDO AUSENCIA DE MANIFESTACAO DENTRO DOS PRAZOS LEGAIS, INFORMO QUE CABE SER MANTIDA A EXTINCAO DA PATENTE E SEUS CERTIFICADOS, CONFORME O DISPOSTO NO ARTIGO 12, DA RESOLUCAO 113/2013.

**445、气体化合物的储存和释放系统**

摘要：本发明涉及吸附-解吸装置(102)，储存和分配气体如氢化物和卤化物气体，以及V族有机金属化合物的方法，通过从吸附剂材料上经压差解吸选择性进行分配。该吸附剂材料优选避免含有如水、金属和氧化的过渡金属物质，它们可严重降解装置(102)中的吸附气。

公开（公告）号：[CN1132662C](https://www.incopat.com/detail/init2?formerQuery=3eQEo0gaDTjpfM2cQwM2%2Bg%3D%3D&local=zh)

公开（公告）日：2003-12-31

申请号：CN95195667.1

申请日：1995-10-13

申请人：高级技术材料公司

法律状态：法律状态公告日：19980325;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：20031231;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：19980408;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20150610;?

法律状态：专利申请权、专利权的转移;?

描述信息：专利权的转移IPC(主分类):B01D 53/04;变更事项:专利权人;变更前权利人:高级技术材料公司;变更后权利人:安格斯公司;变更事项:地址;变更前权利人:美国康涅狄格州;变更后权利人:美国马萨诸塞州;登记生效日:20150519;?

法律状态公告日：20151125;?

法律状态：专利权的终止;?

描述信息：专利权有效期届满IPC(主分类):B01D 53/04;申请日:19951013;授权公告日:20031231;?

**446、CAMP AND DELIVERY SYSTEM FOR GASEOUS CONNECTIONS**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[DE69518657D1](https://www.incopat.com/detail/init2?formerQuery=HilRvq7YSdSNbdyW1L8RMWr4kAd0KKkg&local=zh)

公开（公告）日：2000-10-05

申请号：DE69518657

申请日：1995-10-13

申请人：ADVANCED TECH MATERIALS

法律状态：法律状态公告日：20010920;?

状态效果：+;?

状态代码：8364;?

法律状态：NO OPPOSITION DURING TERM OF OPPOSITION描述信息：Docdb Publication Number:; DE 69518657D1

**447、STORAGE AND DELIVERY SYSTEM FOR GASEOUS COMPOUNDS**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[EP785817A1](https://www.incopat.com/detail/init2?formerQuery=BU2mvLOQCyePGkd6qQKo6w%3D%3D&local=zh)

公开（公告）日：1997-07-30

申请号：EP95936302

申请日：1995-10-13

申请人：ADVANCED TECH MATERIALS

法律状态：法律状态公告日：19970730;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 0785817A1Effective Date:;19970509法律状态公告日：19970730;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0785817A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE;法律状态公告日：19971003;?

状态效果：+;?

状态代码：EL;?

法律状态：FR: TRANSLATION OF CLAIMS FILED描述信息：Docdb Publication Number:; EP 0785817A1法律状态公告日：19971107;?

状态效果：+;?

状态代码：ITCL;?

法律状态：IT: TRANSLATION FOR EP CLAIMS FILED描述信息：Docdb Publication Number:; EP 0785817A1Representative Name:;STUDIO APRA' BREVETTI法律状态公告日：19971201;?

状态效果：+;?

状态代码：TCNL;?

法律状态：NL: TRANSLATION OF PATENT CLAIMS FILED描述信息：Docdb Publication Number:; EP 0785817A1法律状态公告日：19980129;?

状态代码：DET;?

法律状态：DE: TRANSLATION OF PATENT CLAIMS描述信息：Docdb Publication Number:; EP 0785817A1法律状态公告日：19980729;?

状态效果：+;?

状态代码：A4;?

法律状态：DESPATCH OF SUPPLEMENTARY SEARCH REPORT描述信息：Docdb Publication Number:; EP 0785817A1Effective Date:;19980615法律状态公告日：19980729;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0785817A1Corresponding Authority:;EPCorresponding Kind:;A4Legal Designated States:;AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE;法律状态公告日：19981028;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 0785817A1Effective Date:;19980911法律状态公告日：20000830;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0785817A1Corresponding Authority:;EPCorresponding Kind:;B1Legal Designated States:;AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE;法律状态公告日：20000830;?

状态代码：REF;?

法律状态：CORRESPONDS TO:描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;EPCorresponding Publication Number:;195888Corresponding Authority:;ATCorresponding Publication Date:;20000915Corresponding Kind:;T法律状态公告日：20000831;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHDesignated State Event Code:;EPDesignated State Description:;ENTRY IN THE NATIONAL PHASE法律状态公告日：20000920;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;IEDesignated State Event Code:;FG4DDesignated State Description:;EUROPEAN PATENTS GRANTED DESIGNATING IRELAND法律状态公告日：20001005;?

状态代码：REF;?

法律状态：CORRESPONDS TO:描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;EPCorresponding Publication Number:;69518657Corresponding Authority:;DECorresponding Publication Date:;20001005法律状态公告日：20001020;?

状态效果：+;?

状态代码：ITF;?

法律状态：IT: TRANSLATION FOR A EP PATENT FILED描述信息：Docdb Publication Number:; EP 0785817A1New Owner:;STUDIO APRA' BREVETTI法律状态公告日：20001027;?

状态效果：+;?

状态代码：ET;?

法律状态：FR: TRANSLATION FILED描述信息：Docdb Publication Number:; EP 0785817A1法律状态公告日：20001115;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHDesignated State Event Code:;NVDesignated State Description:;NEW AGENTRepresentative Name:;PATENTANWAELTE BREITER + WIEDMER AG法律状态公告日：20001201;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ESDesignated State Event Code:;FG2ADesignated State Description:;DEFINITIVE PROTECTIONCorresponding Publication Number:;2150588Corresponding Authority:;ESCorresponding Kind:;T3法律状态公告日：20010108;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DKDesignated State Event Code:;T3Designated State Description:;TRANSLATION OF EP PATENT法律状态公告日：20010330;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;PTDesignated State Event Code:;SC4ADesignated State Description:;TRANSLATION IS AVAILABLEFree Text Description:;AVAILABILITY OF NATIONAL TRANSLATIONEffective Date:;20001130法律状态公告日：20010816;?

状态效果：+;?

状态代码：26N;?

法律状态：NO OPPOSITION FILED描述信息：Docdb Publication Number:; EP 0785817A1法律状态公告日：20020101;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;GBDesignated State Event Code:;IF02Designated State Description:;EUROPEAN PATENT IN FORCE AS OF 2002-01-01法律状态公告日：20070413;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHDesignated State Event Code:;PFADesignated State Description:;NAME/FIRM CHANGEDNew Owner:;ADVANCED TECHNOLOGY MATERIALS, INC.Free Text Description:;ADVANCED TECHNOLOGY MATERIALS, INC.#7 COMMERCE DRIVE#DANBURY, CT 06810 (US) -TRANSFER TO- ADVANCED TECHNOLOGY MATERIALS, INC.#7 COMMERCE DRIVE#DANBURY, CT 06810 (US)法律状态公告日：20110331;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;GRPayment Date:;20101018Fee Payment-year:;16法律状态公告日：20110331;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ITPayment Date:;20101026Fee Payment-year:;16法律状态公告日：20110331;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;GBPayment Date:;20101021Fee Payment-year:;16法律状态公告日：20120131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;LUPayment Date:;20111024Fee Payment-year:;17法律状态公告日：20120131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;NLPayment Date:;20111025Fee Payment-year:;17法律状态公告日：20120131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;SEPayment Date:;20111021Fee Payment-year:;17法律状态公告日：20120131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;MCPayment Date:;20111013Fee Payment-year:;17法律状态公告日：20120131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;IEPayment Date:;20111020Fee Payment-year:;17法律状态公告日：20120131;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;PTPayment Date:;20111011Fee Payment-year:;17法律状态公告日：20121231;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DKPayment Date:;20121010Fee Payment-year:;18法律状态公告日：20130423;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;PTDesignated State Event Code:;MM4ADesignated State Description:;ANNULMENT/LAPSE DUE TO NON-PAYMENT OF FEES, SEARCHED AND EXAMINED PATENTFree Text Description:;LAPSE DUE TO NON-PAYMENT OF FEESEffective Date:;20130415法律状态公告日：20130515;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;NLDesignated State Event Code:;V1Designated State Description:;LAPSED BECAUSE OF NON-PAYMENT OF THE ANNUAL FEEEffective Date:;20130501法律状态公告日：20130531;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;MCFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20121031法律状态公告日：20130618;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;GRDesignated State Event Code:;MLDesignated State Description:;LAPSE DUE TO NON-PAYMENT OF FEESCorresponding Publication Number:;20000402638Corresponding Authority:;GREffective Date:;20130508法律状态公告日：20130626;?

状态效果：-;?

状态代码：GBPC;?

法律状态：GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; EP 0785817A1Effective Date:;20121013法律状态公告日：20130717;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;IEDesignated State Event Code:;MM4ADesignated State Description:;PATENT LAPSED法律状态公告日：20130731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;GBFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20121013法律状态公告日：20130731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;SEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20121014法律状态公告日：20130731;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;IEFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20121013法律状态公告日：20130830;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ITFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20121013法律状态公告日：20130830;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;PTFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20130415法律状态公告日：20130830;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;GRFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20130508法律状态公告日：20130830;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;NLFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20130501法律状态公告日：20140526;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DKDesignated State Event Code:;EBPDesignated State Description:;EP PATENT LAPSEDEffective Date:;20131031法律状态公告日：20140530;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;LUFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20121013法律状态公告日：20141031;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DKFree Text Description:;LAPSE BECAUSE OF NON-PAYMENT OF DUE FEESEffective Date:;20131031法律状态公告日：20141128;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ESPayment Date:;20140911Fee Payment-year:;20法律状态公告日：20150130;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DEPayment Date:;20141007Fee Payment-year:;20法律状态公告日：20150130;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;FRPayment Date:;20141008Fee Payment-year:;20法律状态公告日：20150130;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHPayment Date:;20141014Fee Payment-year:;20法律状态公告日：20150227;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ATPayment Date:;20140925Fee Payment-year:;20法律状态公告日：20150331;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHDesignated State Event Code:;PCARDesignated State Description:;CHANGE OF THE ADDRESS OF THE REPRESENTATIVEFree Text Description:;NEW ADDRESS: EIGERSTRASSE 2 POSTFACH, 3000 BERN 14 (CH)法律状态公告日：20150430;?

状态效果：+;?

状态代码：PGFP;?

法律状态：POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;BEPayment Date:;20141013Fee Payment-year:;20法律状态公告日：20150715;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHDesignated State Event Code:;PUEDesignated State Description:;ASSIGNMENTNew Owner:;ENTEGRIS INC., USFree Text Description:;FORMER OWNER: ADVANCED TECHNOLOGY MATERIALS, INC., US法律状态公告日：20150729;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DEDesignated State Event Code:;R082Designated State Description:;CHANGE OF REPRESENTATIVECorresponding Publication Number:;69518657Corresponding Authority:;DERepresentative Name:;FLEUCHAUS & GALLO PARTNERSCHAFT MBB, DE法律状态公告日：20150729;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DEDesignated State Event Code:;R081Designated State Description:;CHANGE OF APPLICANT/PATENTEECorresponding Publication Number:;69518657Corresponding Authority:;DENew Owner:;ENTEGRIS, INC., BILLERICA, USFree Text Description:;FORMER OWNER: ADVANCED TECHNOLOGY MATERIALS, INC., DANBURY, CONN., US法律状态公告日：20150821;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ESDesignated State Event Code:;PC2ADesignated State Description:;TRANSFER OF PATENTEffective Date:;20150817法律状态公告日：20151013;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;DEDesignated State Event Code:;R071Designated State Description:;EXPIRY OF RIGHTCorresponding Publication Number:;69518657Corresponding Authority:;DE法律状态公告日：20151023;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;FRDesignated State Event Code:;TPDesignated State Description:;TRANSMISSION OF PROPERTYNew Owner:;ENTEGRIS, INC., USEffective Date:;20150922法律状态公告日：20151030;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;CHDesignated State Event Code:;PLDesignated State Description:;PATENT CEASED法律状态公告日：20151215;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ATDesignated State Event Code:;MK07Designated State Description:;EXPIRYCorresponding Publication Number:;195888Corresponding Authority:;ATEffective Date:;20151013法律状态公告日：20160126;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ESDesignated State Event Code:;FD2ADesignated State Description:;ANNOUNCEMENT OF LAPSE IN SPAINEffective Date:;20160126法律状态公告日：20160429;?

状态效果：-;?

状态代码：PG25;?

法律状态：LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ESFree Text Description:;LAPSE BECAUSE OF EXPIRATION OF PROTECTIONEffective Date:;20151014法律状态公告日：20160515;?

状态代码：REG;?

法律状态：REFERENCE TO A NATIONAL CODE描述信息：Docdb Publication Number:; EP 0785817A1Designated State Authority:;ATDesignated State Event Code:;PCDesignated State Description:;CHANGE OF THE OWNERCorresponding Publication Number:;195888Corresponding Authority:;ATNew Owner:;ENTGRIS, INC., USEffective Date:;20160321

**448、Storage and delivery system for gaseous hydride halide, and organometallic group v compounds**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[IL115619D0](https://www.incopat.com/detail/init2?formerQuery=Y6k7vUWqDT769ocUu7yOkA%3D%3D&local=zh)

公开（公告）日：1996-01-19

申请号：IL115619

申请日：1995-10-13

申请人：ATMI ECOSYS CORP

法律状态：法律状态公告日：20010430;?

状态效果：+;?

状态代码：FF;?

法律状态：PATENT GRANTED描述信息：Docdb Publication Number:; IL 115619D0法律状态公告日：20010724;?

状态效果：+;?

状态代码：KB;?

法律状态：PATENT RENEWED描述信息：Docdb Publication Number:; IL 115619D0法律状态公告日：20020210;?

状态效果：+;?

状态代码：KB;?

法律状态：PATENT RENEWED描述信息：Docdb Publication Number:; IL 115619D0法律状态公告日：20060205;?

状态效果：+;?

状态代码：KB;?

法律状态：PATENT RENEWED描述信息：Docdb Publication Number:; IL 115619D0法律状态公告日：20100517;?

状态效果：+;?

状态代码：KB;?

法律状态：PATENT RENEWED描述信息：Docdb Publication Number:; IL 115619D0法律状态公告日：20131031;?

状态效果：+;?

状态代码：KB;?

法律状态：PATENT RENEWED描述信息：Docdb Publication Number:; IL 115619D0法律状态公告日：20160531;?

状态效果：-;?

状态代码：EXP;?

法律状态：PATENT EXPIRED描述信息：Docdb Publication Number:; IL 115619D0

**449、The storage and delivery system for gases**

摘要：A laser system utilizing a fluid as the excitatory medium for stimulated light emission, wherein the fluid is supplied from a sorbent-based fluid storage and dispensing system coupled in fluid-supplying relationship with the laser apparatus. The laser may be an excimer laser utilizing as the laser working fluid a rare gas halide compound such as fluorides and/or chlorides of krypton, xenon and argon, as well as fluorine and/or chlorine per se. The laser system may alternatively be a far infrared gas laser utilizing a gas such as CO2, N2O, CD3OD, CH3OD, CH3OH, CH3NH2, C2H2F2, HCOOH, CD3I, CH3F, and C13H3F. Laser systems of the present invention may be utilized in applications such as materials processing, measurement and inspection, reading, writing, and recording of information, holography, communications, displays, spectroscopy and analytical chemistry, remote sensing, surveying, marking, and alignment, surgical and medical applications, plasma diagnostics, laser weaponry, laser-induced nuclear fusion, isotope enrichment and atomic physics.

公开（公告）号：[JP10503268A](https://www.incopat.com/detail/init2?formerQuery=%2B4kpt%2FTccq6zCm9OGL9wG%2FR0OjOTHMZL&local=zh)

公开（公告）日：1998-03-24

申请号：JP07513365

申请日：1995-10-13

申请人：ADVANCED TECH MATERIALS

**450、METHOD FOR DETERMINING COLD-FUSION PRODUCT NUCLEAR SPECIES**

摘要：PURPOSE : To fix chemical species whose mass numbers are very close to each other by a constitution in which the chemical species containing a desired nuclear species are irradiated with their natural wavelengths for selective ionization. CONSTITUTION : A second harmonic generator SHG 10 is used in order to obtain an ultraviolet laser beam by excitation of a dye laser 9 using a YAG laser 8. An electric field is applied by an electrode 3 to ions 11 generated within a vacuum chamber 1, and the ions are detected by a Ceratron (ceramic secondary-electron multiplier) 4. A preamplifier 12 for signal amplification and a digital oscilloscope 13 for measuring ion flight time and signal intensity are connected to the Ceratron 4. A gas sample which shows mass number 4 is introduced into a mass spectrometer and, if an ion signal is detected during sweep at laser wavelengths up to 300nm, it indicates that HT or D2 is contained, therefore, the HT and D2 can be discriminated from each other according to isotope shifts. Identification of unclear species produced by cold fusion is thus facilitated, and analysis of nuclear species produces by other nuclear fusion is also facilitated.

公开（公告）号：[JP09015210A](https://www.incopat.com/detail/init2?formerQuery=bzKYkoP%2FKEU14LMVCyUv%2BPR0OjOTHMZL&local=zh)

公开（公告）日：1997-01-17

申请号：JP07163795

申请日：1995-06-29

申请人：MITSUBISHI HEAVY IND LTD

**451、Cold nuclear fusion apparatus.**

摘要：A cold nuclear fusion apparatus which is high in industrial value in that the screening effect and a cooperative phenomenon are enhanced for a substance for nuclear fusion after occluded into an occlusion member to promote a nuclear fusion reaction and the time, the scale and so forth of occurrence of nuclear fusion can be controlled is disclosed. An excitation apparatus (10) for promoting a nuclear fusion reaction of a substance (25) for nuclear fusion occluded in a reactor (11) in a reaction vessel (26) from the outside is provided in close contact with a portion (11b) of the reactor (11). The excitation apparatus includes one or more of a battery (12), a magnetic flux generator (13), a heating unit (14), an ultrasonic wave generator (15), a laser light irradiation apparatus (16) and a high voltage discharging apparatus (17). Also a confinement apparatus for preventing the substance (25) for nuclear fusion occluded in the occlusion member (11) from escaping to the outside of the occlusion member (11) is provided.

公开（公告）号：[EP645777A1](https://www.incopat.com/detail/init2?formerQuery=Gyw7QrLvX1gOPw9U0wKmPQ%3D%3D&local=zh)

公开（公告）日：1995-03-29

申请号：EP94115147

申请日：1994-09-26

申请人：CHIKUMA TOICHI

法律状态：法律状态公告日：19950329;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0645777A1Corresponding Authority:;EPCorresponding Kind:;A1Legal Designated States:;BE;CH;DE;FR;GB;IT;LI;NL;SE;法律状态公告日：19950531;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 0645777A1Effective Date:;19950331法律状态公告日：19960605;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 0645777A1Effective Date:;19960419法律状态公告日：19990922;?

状态效果：-;?

状态代码：18D;?

法律状态：APPLICATION DEEMED TO BE WITHDRAWN描述信息：Docdb Publication Number:; EP 0645777A1Effective Date:;19990401

**452、Appts. for initiation and use of thermonuclear micro-fusion**

摘要：Appts. is used to induce thermonuclear fusion using coherent electromagnetic waves generated by CO2 and Nd lasers focussed on a deuterium target at a point F. The fusion creates a jet of electrons which are collected in the cavity (11) of an anode, creating recoverable electrical energy. A support (1) has an array of mirrors (2) which focus a spread of laser beams between points F and F' , and a chamber (4) containing measurement and control units. A tubular radiator (8) cools the support (1) using fluid entering via tubes (6, 7) at flange (5) and exiting via tube (9). An anode has a hollow metal cylinder (11), covered with an insulant (12), connected by a wire (14) to a terminal (13).

公开（公告）号：[FR2718275A1](https://www.incopat.com/detail/init2?formerQuery=3sXuqp3qitQ76p3GbbDE%2BfR0OjOTHMZL&local=zh)

公开（公告）日：1995-10-06

申请号：FR94003643

申请日：1994-03-29

申请人：MARIE GEORGES ROBERT PIERRE

法律状态：法律状态公告日：19970131;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2718275A1

**453、SEMICONDUCTOR OPTICAL MOIDULE**

摘要：PURPOSE : To facilitate the coupling of a single-mode optical fiber or plane optical waveguide, to relax the precision of constituent components, and to lower the price of the semiconductor optical module. CONSTITUTION : The laser light which is projected by a semiconductor laser array is coupled with a lens array which is arranged and fixed in optical transmission relation with the semiconductor laser array, and further coupled with a core extension optical fiber array 1, incorporated in an optical fiber holder, so as to have optical transmission relation, so that light is propagated in the optical fiber array 1. At this time, a multicore semiconductor laser package is made airtight with low-fusion-point glass or solder, etc., between the lens array and lens array holder, and also made airtight by soldering or laser welding at the lens array holder.

公开（公告）号：[JP07218772A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvZQwby2NP5Q8vR0OjOTHMZL&local=zh)

公开（公告）日：1995-08-18

申请号：JP06007417

申请日：1994-01-27

申请人：HITACHI LTD

**454、AIR-COOLED MAGNETIC CORES.**

摘要：Commercial and medical use of discharge-pumped lasers such as excimer lasers, metal vapor lasers, and pulsed CO2 lasers has resulted in the demand for increased repetition rates to provide increased total power output. Increased repetition rates, however, also result in greater losses in magnetic cores used to drive these lasers. The use of air cooling with known magnetic core configurations is inadequate to cool the magnetic cores. As a result, the excessive temperature rise of the magnetic core material results in undesirable changes in the magnetic properties such as reduced saturation induction. In addition, the excessive temperature rise may compromise the insulation materials either on the wire windings or interlaminar insulation within the magnetic core itself.The present invention provides a magnetic core which has improved cooling within the current cross-sectional area and length of cores used in lasers and which requires no cooling fluid. The present magnetic core comprises at least two concentric corelets wherein the corelets are formed of magnetic amorphous metal alloy and are substantially separated by a gas passage. The present magnetic cores are useful in various pulse power applications including in high power pulse sources for linear induction particle accelerators, as induction modules for coupling energy from the pulse source to the beam of these accelerators, as magnetic switches in power generators for inertial confinement fusion research, and in magnetic modulators for driving excimer lasers, metal vapor lasers, and pulsed CO2 assembly line lasers.

公开（公告）号：[EP674803A1](https://www.incopat.com/detail/init2?formerQuery=lLXKV8h8pOmV4tteHc05mQ%3D%3D&local=zh)

公开（公告）日：1995-10-04

申请号：EP94903489

申请日：1993-12-06

申请人：ALLIEDSIGNAL INC

法律状态：法律状态公告日：19951004;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Effective Date:;19950526法律状态公告日：19951004;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Corresponding Kind:;A1Legal Designated States:;DE;FR;GB;法律状态公告日：19961127;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Effective Date:;19961011法律状态公告日：19980812;?

状态效果：-;?

状态代码：18R;?

法律状态：REFUSED描述信息：Effective Date:;19980327

**455、Air-cooled core**

摘要：Commercial and medical use of discharge-pumped lasers such as excimer lasers, metal vapor lasers, and pulsed CO2 lasers has resulted in the demand for increased repetition rates to provide increased total power output. Increased repetition rates, however, also result in greater losses in magnetic cores used to drive these lasers. The use of air cooling with known magnetic core configurations is inadequate to cool the magnetic cores. As a result, the excessive temperature rise of the magnetic core material results in undesirable changes in the magnetic properties such as reduced saturation induction. In addition, the excessive temperature rise may compromise the insulation materials either on the wire windings or interlaminar insulation within the magnetic core itself.The present invention provides a magnetic core which has improved cooling within the current cross-sectional area and length of cores used in lasers and which requires no cooling fluid. The present magnetic core comprises at least two concentric corelets wherein the corelets are formed of magnetic amorphous metal alloy and are substantially separated by a gas passage. The present magnetic cores are useful in various pulse power applications including in high power pulse sources for linear induction particle accelerators, as induction modules for coupling energy from the pulse source to the beam of these accelerators, as magnetic switches in power generators for inertial confinement fusion research, and in magnetic modulators for driving excimer lasers, metal vapor lasers, and pulsed CO2 assembly line lasers.

公开（公告）号：[JP08505011A](https://www.incopat.com/detail/init2?formerQuery=soHGogTFJ7bRz6nhV18VnvR0OjOTHMZL&local=zh)

公开（公告）日：1996-05-28

申请号：JP6515195

申请日：1993-12-06

申请人：ARAIDO SHIGUNARU INC

**456、AIR-COOLED MAGNETIC CORES**

摘要：Commercial and medical use of discharge-pumped lasers such as excimer lasers, metal vapor lasers, and pulsed CO2 lasers has resulted in the demand for increased repetition rates to provide increased total power output. Increased repetition rates, however, also result in greater losses in magnetic cores used to drive these lasers. The use of air cooling with known magnetic core configurations is inadequate to cool the magnetic cores. As a result, the excessive temperature rise of the magnetic core material results in undesirable changes in the magnetic properties such as reduced saturation induction. In addition, the excessive temperature rise may compromise the insulation materials either on the wire windings or interlaminar insulation within the magnetic core itself.The present invention provides a magnetic core which has improved cooling within the current cross-sectional area and length of cores used in lasers and which requires no cooling fluid. The present magnetic core comprises at least two concentric corelets wherein the corelets are formed of magnetic amorphous metal alloy and are substantially separated by a gas passage. The present magnetic cores are useful in various pulse power applications including in high power pulse sources for linear induction particle accelerators, as induction modules for coupling energy from the pulse source to the beam of these accelerators, as magnetic switches in power generators for inertial confinement fusion research, and in magnetic modulators for driving excimer lasers, metal vapor lasers, and pulsed CO2 assembly line lasers.

公开（公告）号：[WO9415346A1](https://www.incopat.com/detail/init2?formerQuery=Jn0nJDpvIHhDSgr9vu3RQvR0OjOTHMZL&local=zh)

公开（公告）日：1994-07-07

申请号：WOUS93011834

申请日：1993-12-06

申请人：ALLIED SIGNAL INC

法律状态：法律状态公告日：19940707;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 9415346A1Corresponding Authority:;WOCorresponding Kind:;A1Legal Designated States:;JP;法律状态公告日：19940707;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 9415346A1Corresponding Authority:;WOCorresponding Kind:;A1Legal Designated States:;AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LU;MC;NL;PT;SE;法律状态公告日：19940915;?

状态代码：DFPE;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)描述信息：Docdb Publication Number:; WO 9415346A1法律状态公告日：19941012;?

状态代码：121;?

法律状态：EP: THE EPO HAS BEEN INFORMED BY WIPO THAT EP WAS DESIGNATED IN THIS APPLICATION描述信息：Docdb Publication Number:; WO 9415346A1法律状态公告日：19950526;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 9415346A1Corresponding Publication Number:;1994903489Corresponding Authority:;EP法律状态公告日：19951004;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9415346A1Corresponding Publication Number:;1994903489Corresponding Authority:;EP法律状态公告日：19980327;?

状态效果：-;?

状态代码：WWR;?

法律状态：WIPO INFORMATION: REFUSED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9415346A1Corresponding Publication Number:;1994903489Corresponding Authority:;EP法律状态公告日：19980622;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9415346A1Corresponding Publication Number:;1994903489Corresponding Authority:;EP

**457、COLD NUCLEAR FUSION DEVICE**

摘要：PURPOSE : To provide a cold nuclear fusion device of high practicability improving a shielding effect and a cooperative phenomenon to nuclear fusion material after being occluded to a reactant so as to accelerate nuclear fusion reaction while being able to control the generating time, scale, and the like of nuclear fusion. CONSTITUTION : An exciting means for accelerating the nuclear fusion reaction of nuclear fusion material, occluded to the reactant 11 of a reaction container, from the outside is provided in close contact with a part of the reactant 11. One or two or more of a capacitor 12, a magnetic flux generator 13, a heater 14, an ultrasonic wave generator 15, a laser beam irradiation device and a high-voltage discharge device 17 are used as the exciting means.

公开（公告）号：[JP07140277A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvbU6Ngg07tvbPR0OjOTHMZL&local=zh)

公开（公告）日：1995-06-02

申请号：JP05325772

申请日：1993-12-01

申请人：CHIKUMA TOICHI

**458、VACUUM VESSEL FOR NUCLEAR FUSION DEVICE**

摘要：PURPOSE : To provide a vacuum vessel for nuclear fusion device with a sufficient strength and rigidity for enormous electromagnetic force generated by plasma disruption as torus circumferential electric resistance is ensured. CONSTITUTION : An inner wall facing the plasma side, an outer wall covering the circumference of the inner wall and a rib connecting and reinforcing parts between the inner wall and the outer wall are made an H-shaped cross section integrated structure, a plurality of the H-shaped cross section integrated structures are continuously disposed in the direction of a torus and mutually neighboring H-shaped cross section members are joined by butt welding 25a, for instance, electron beam welding or laser beam welding.

公开（公告）号：[JP07128468A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvZZd60NiZnrHfR0OjOTHMZL&local=zh)

公开（公告）日：1995-05-19

申请号：JP05271550

申请日：1993-10-29

申请人：HITACHI LTD; JAPAN ATOM ENERGY RES INST

法律状态：法律状态公告日：20060223;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP 3356842B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20060303;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP 3356842B2Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20071218;?

状态效果：+;?

状态代码：FPAY;?

法律状态：RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)描述信息：Docdb Publication Number:; JP 3356842B2Free Text Description:;PAYMENT UNTIL: 20081004Fee Payment-year:;6法律状态公告日：20081004;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP 3356842B2

**459、TOLERANT METAL FUEL/CLADDING BARRIER AND RELATED METHOD OF INSTALLATION**

摘要：[Purpose] nuclear reactor fuel element for a or welding between a welding portion deficiency in barrier attached to the decrease are stainless steel coatings, metal fuel and tower-mounted barrier between the alloy blanket provides method. [Configured] multilayer wound metal thin film laser is welded the, fuel from an assembly process it buys the royal tomb oriented the intermediate space between the of the coating (16), which can be inserted to form a tube. Laser welding penetration of thin film the amount curled at least two a welding portion a barrier in the plural thin film than one ideal fusion layers is adjusted to make the bit. Blanket fuel or during electrospinning welding portion according to the integral formation alloy, is designed to be up. After welding is broken, , fuel is expanded multi-layer thin film slipping layers overlying the glue from being a fuel or blanket alloy and the coating between the continuous, attached to a barrier is formed, welding part welding or barrier in barrier attached to be changed in various forms and the decrease are deficiency, plurality of thin film barrier for seperating each layer of film using sliding of has not been detected in. the decrease deficiency features.

公开（公告）号：[KR19940010121A](https://www.incopat.com/detail/init2?formerQuery=04y2CKtGEVgoepHg09U0eC34vJL4GBl3&local=zh)

公开（公告）日：1994-05-24

申请号：KR1019930021908

申请日：1993-10-21

申请人：GENERAL ELECTRIC CO

**460、MANUFACTURE OF THIN FILM TRANSISTOR**

摘要：PURPOSE : To uniformly recrystallize a polycrystalline silicon layer, by laser irradiation having energy density wherein the laser irradiation surface is fused, and polycrystalline silicon which is not fused exists on the surface opposite to the laser irradiation surface. CONSTITUTION : After a polycrystalline silicon film 2 is formed on a substrate 1, the film is irradiated with an excimer laser beam. The irradiation density is so set that a part 2a on the laser irradiation surface side is fused and a part 2b on the opposite side is not fused. The fused polycrystalline silicon film part 2a is recrystallized by interrupting the laser irradiation, and turned to a polycrystalline silicon film 2c. The silicon film part 2b which has not been fused is recrystallized as nucleus. After that, an active layer 3 is patterned, a gate oxide film 4 is deposited, and a gate electrode 5 is formed. After source.drain regions 6, 7 are formed by ion implantaion, and an interlayer film 9 is deposited, an aluminum wiring 10 is formed. Thereby transistor characteristics can be improved while characteristics irregularity is restrained.

公开（公告）号：[JP07106596A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvZ3lMkr8c1JCPR0OjOTHMZL&local=zh)

公开（公告）日：1995-04-21

申请号：JP05277290

申请日：1993-09-30

申请人：NEC CORP

**461、FUSION DEVICE WITH LASER-IRRADIATION CURRENT-APPLICATION IN HIGH PRESSURE GAS**

摘要：PURPOSE : To prevent the wastage of electrodes for current path and the pipe wall of reaction pipes by circularly connecting pipes filled with the gas for fusion at high pressure which is fixed by a laser source. CONSTITUTION : In a reaction pipe 1 configulated in square by connecting straight pipes made of aluminum alloy, titanium alloy and the like, fusion gas of mixture of deuterium and tritium compressed to 100 to hundreds thousand atmospheric pressure is filled. Just after starting to allow current to pass through the coil 15 surrounding a square column magnetic core 14, the increasing rate of magnetic lines becomes maximum. Along with the magetism, lasers 6 to 9 are operated to produce a strong ultraviolet beam for as short a time as 1ms or less, and the gas is irradiated with the beam through windows 2 to 5 along the pipe axis of a pipe 1. The gas in the laser paths 10 to 13 is ionized and get conductive. These four paths 10 to 13 form a # shape to make an electroconductive circuit. Owing to the electromotive force produced by the rapidly increasing current in the coil 15, an electric current flows in the conductive path, which heats the flow path to high temperature and nuclei of gases colide each other to cause fusion.

公开（公告）号：[JP07084077A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvaW4dlEdXjnqvR0OjOTHMZL&local=zh)

公开（公告）日：1995-03-31

申请号：JP05269410

申请日：1993-09-14

申请人：FUJIMURA AKIHIRO

**462、WAVEGUIDE TYPE OPTICAL MODULE**

摘要：PURPOSE : To prolong fracture life to a load stress and fracture life to a local strain generated by fusing by subjecting a fusion-spliced part of an optical fiber and an optical waveguide to hermetic coating. CONSTITUTION : This waveguide type optical module is constituted by fusion splicing the optical fiber 2 to the optical waveguide 1. The optical waveguide 1 is constituted by forming a clad region 13 of a low refractive index and a core region 12 of a high refractive index on a quartz glass substrate 11 so as to confine and propagate light in this core region 12. The optical fiber 2 is made by coating a core 21 with a clad 22. The core region 12 and core 21 of the optical waveguide 1 and the optical fiber 2 are so brought into contact with each other to face each other and are fusion-spliced by irradiating the part near the contact point with a CO2 laser. The hermetic film 3 is thereafter formed on the fusion-spliced part. Films consisting of metal, carbon, ceramic, etc., are usable for the hermetic film 3.

公开（公告）号：[JP07063932A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvYIQBaB7mLOSPR0OjOTHMZL&local=zh)

公开（公告）日：1995-03-10

申请号：JP05209505

申请日：1993-08-24

申请人：HITACHI CABLE

**463、Fuel pellets for thermonuclear reactions**

摘要：Fuel pellets for use as targets in a device employing thermonuclear fusion by inertial confinement (Laser fusion) are manufactured from high polymer hydrocarbons in which bound hydrogen has been replaced with tritium. The required polymer is prepared by polymerizing monomer(s) which contain carbon and tritium. The hollow pellets are filled with thermonuclear fuel, e.g., a mixture of deuterium-tritium. To improve the sphericity of the pellets and the uniformity of their wall thickness, manufacture of the pellets is contemplated in the near-zero gravity of space.

公开（公告）号：[US5430776A](https://www.incopat.com/detail/init2?formerQuery=gISzEitcxP0hL0Frl8JcYQ%3D%3D&local=zh)

公开（公告）日：1995-07-04

申请号：US08107447

申请日：1993-08-16

申请人：STAUFFER; J CHRISTIAN; JOHN E

法律状态：法律状态公告日：19990126;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 5430776A 法律状态公告日：19990706;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 5430776A Fee Payment-year:;4法律状态公告日：19990706;?

状态效果：+;?

状态代码：SULP;?

法律状态：SURCHARGE FOR LATE PAYMENT描述信息：Docdb Publication Number:; US 5430776A 法律状态公告日：20030107;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 5430776A Fee Payment-year:;8法律状态公告日：20030107;?

状态效果：+;?

状态代码：SULP;?

法律状态：SURCHARGE FOR LATE PAYMENT描述信息：Docdb Publication Number:; US 5430776A Fee Payment-year:;7法律状态公告日：20070104;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 5430776A Fee Payment-year:;12法律状态公告日：20170428;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 5430776A New Owner:;JES TECHNOLOGY, LLC, MARYLANDFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:STAUFFER, JOHN EUGENE, MR;REEL/FRAME:042174/0278Effective Date:;20161227

**464、脉冲高能量密度等离子体用于材料表面处理的方法**

摘要：本发明属于等离子体技术的应用领域，特别是脉 冲高能量密度等离子体用于材料表面处理的方法，其 特征在于将用于受控核聚变研究的高能量密度等离 子体引入材料表面改性领域，除了具有激光束和电子 束的快速加热速冷却的热效应外，还有等离子体气相 沉积和表面元素渗入的效应，使用不同的等离子体 源、电极材料和工作气体，既可有个别的效应，也可有 复合效应，并可提交能量利用效率，降低材料表面改 性的成本，达到一机多用。

公开（公告）号：[CN1097223A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2jYIA7CqGlyRw%3D%3D&local=zh)

公开（公告）日：1995-01-11

申请号：CN93107530.0

申请日：1993-07-03

申请人：中国科学院物理研究所

法律状态：法律状态公告日：19950111;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：19980506;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：19960403;?

法律状态：实质审查请求的生效;?

描述信息：;?

法律状态公告日：20020828;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**465、Inertial fusion with volume ignition**

摘要：The invention relates to gaining energy by means of the fusion of light nuclei (fusion), a dense high temperature plasma being generated by means of intensive short pulses of laser radiation or particle radiation and being enclosed by means of its inertia during the gas-dynamic compression and expansion (inertial enclosure); in the process, the ignition of the nuclear fusion reaction in the plasma is undertaken according to the invention as volume ignition in contrast to the known central ignition.

公开（公告）号：[DE4316450A1](https://www.incopat.com/detail/init2?formerQuery=%2BaNIBRsV6T7c0QOx5yjURPR0OjOTHMZL&local=zh)

公开（公告）日：1994-11-24

申请号：DE4316450

申请日：1993-05-18

申请人：HORA HEINRICH PROF DR DR 85586 POING DE; HoraHeinrich Prof Dr Dr Poing 85586 DEPoing85586DEDE

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状态代码：8122;?

法律状态：NONBINDING INTEREST IN GRANTING LICENCES DECLARED描述信息：Docdb Publication Number:; DE 4316450A1法律状态公告日：19970507;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 4316450A1

**466、Laser beam converter**

摘要：A laser beam with non uniform intensity profile is given a uniform intensity profile by passage through a principal focusing lens and a phase zone plate array having a random two dimensional array of close packed diffracting Fresnel type zone plates 17, 19 and modified by having the radii of the concentric annuli proportional to the square root of whole numbers and the spaces between the annuli alternatively arranged to cause a phase delay of 0 or pi radians. Half of the plates have a central zone 16 of 0 radius phase delay and the other half a central zone 18 of pi radius phase delay. The focal length of the zone plates, which can be circular or elliptical, may be varied at random across the phase zone plate array. For use in laser fusion, heat treatment, plasma interactions, or generation of X-rays the phase zone plate array is placed either before or after the principle focusing lens and this combination is placed between the laser source and a target which, to achieve a uniform focal spot profile intensity, is placed slightly out of focus.

公开（公告）号：[GB2278458A](https://www.incopat.com/detail/init2?formerQuery=ExamzB2nZ06Bzm2nc%2BVR%2BQ%3D%3D&local=zh)

公开（公告）日：1994-11-30

申请号：GB9309423

申请日：1993-05-07

申请人：THE SECRETARY OF STATE FOR DEFENCE; SCIENCE AND ENGINEERING RESEARCH COUNCIL

法律状态：法律状态公告日：19970108;?

状态代码：732E;?

法律状态：AMENDMENTS TO THE REGISTER IN RESPECT OF CHANGES OF NAME OR CHANGES AFFECTING RIGHTS (SECT. 32/1977)描述信息：Docdb Publication Number:; GB 2278458A法律状态公告日：20071114;?

状态代码：732E;?

法律状态：AMENDMENTS TO THE REGISTER IN RESPECT OF CHANGES OF NAME OR CHANGES AFFECTING RIGHTS (SECT. 32/1977)描述信息：Docdb Publication Number:; GB 2278458A法律状态公告日：20090128;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 2278458AEffective Date:;20080507

**467、Remote maintenance method and system for a fusion reactor**

摘要：Optical paths of laser beams generated from at least two laser beam generators, which are used for performing connection and cutting work at prescribed locations of structural members, are each switched by corresponding optical path switchers, and the laser beams polarized by the corresponding optical path switchers are reflected in the same direction by a laser beam combiner to combine the plurality of laser beams into a parallel laser beam bundle, in order to perform cutting or welding at the corresponding prescribed location. This configuration removes the need to provide high-power laser beam generators for situations such as vacuum walls of fusion devices where the laser generation efficiency is low, while also making it possible to use more powerful high-power lasers therein if necessary.

公开（公告）号：[US5444213A](https://www.incopat.com/detail/init2?formerQuery=gISzEitcxP06PIAAJkgS%2BA%3D%3D&local=zh)

公开（公告）日：1995-08-22

申请号：US08051883

申请日：1993-04-26

申请人：TOSHIBA KK

法律状态：法律状态公告日：19930426;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 5444213A New Owner:;KABUSHIKI KAISHA TOSHIBA, JAPANFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MAKINO, YOSHINOBU;HONDA, KEIZOH;KIMURA, SEIICHIRO;AND OTHERS;REEL/FRAME:006541/0391Effective Date:;19930405法律状态公告日：19990216;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 5444213A Fee Payment-year:;4法律状态公告日：20030312;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 5444213A 法律状态公告日：20030822;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 5444213A 法律状态公告日：20031021;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 5444213A Effective Date:;20030822

**468、POLYCRYSTALLINE TRANSPARENT CERAMICS FOR LASER BEAM NUCLEAR FUSION**

摘要：PURPOSE : To produce a large-sized laser material with transparent polycrystalline ceramics having a garnet structure contg. an active element. CONSTITUTION : This polycrystalline transparent ceramics for laser beam nuclear fusion having a garnet structure contg. one or more among lanthanides and Cr is made of a sintered compact having ≥99% relative density and 5-1, 000μm grain diameter. A sample of this ceramics having 1mm thickness has ≥75% linear transmissivity in the wavelength region of 0.4-5μm.

公开（公告）号：[JP06211563A](https://www.incopat.com/detail/init2?formerQuery=E8uAjqsDDy11BX4pjid17vR0OjOTHMZL&local=zh)

公开（公告）日：1994-08-02

申请号：JP05006145

申请日：1993-01-18

申请人：KUROSAKI REFRACT CO LTD

**469、LASER FUSION REACTOR AND ITS CONTROL MEMBERS; SOURCE PRODUCT FOR PRODUCING ACTIVE MEDIUM AND ITS PRODUCTION PROCESS; LASER FUSION REACTOR CONTROL PROCEDURE; SUPERCONDUCTING NUCLEAR CONDENSATE AND ITS PRODUCTION IN LASER FUSION REACTOR; SOLID PRODUCT OF CONTROLLED NUCLEAR FUSION**

摘要：FIELD : nuclear power engineering; development of environmentally friendly power supplies and superhigh-power laser plants using new functioning principle; experimental nuclear physics; production of new materials including separation of chemical elements in controlled low-temperature nuclear fusion process. SUBSTANCE : laser fusion reactor has vacuum chamber accommodating tank holding active medium (liquid metal or its alloys), two control members in the form of metal blanks of active medium material, accelerated electron source, and control-members operating mechanisms. Active medium production process is characterized in that mass of metal or its alloy in liquid state is raised during its irradiation by accelerated electrons and brought to critical value. Laser fusion reactor is controlled by varying distance between control members and/or between them and active medium surface. Liquid metal product obtained in laser fusion reactor is, essentially, superconducting nuclear liquid-metal plasma. It is produced by bringing mass of liquid metal or its alloy to critical value during its heating by accelerated electrons and shifting control members closer to each other and/or to molten metal or its alloy surface. Solid product obtained is, essentially, solidified liquid-metal ingot containing in its volume chemical elements formed in the course of nuclear fusion. Reactor uses known electronic oven as its structural element. EFFECT : discovery of new properties of metal in liquid state when heated by accelerated electrons. 14 cl, 5 dwg

公开（公告）号：[RU2087951C1](https://www.incopat.com/detail/init2?formerQuery=s2X3lnyRF4KEfXstxLHi%2FfR0OjOTHMZL&local=zh)

公开（公告）日：1997-08-20

申请号：RU92014793

申请日：1992-12-28

申请人：Solin Mikhail Ivanovich

法律状态：法律状态公告日：20051127;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2087951C1Effective Date:;20041229法律状态公告日：20080220;?

状态效果：+;?

状态代码：NF4A;?

法律状态：REINSTATEMENT OF PATENT描述信息：Docdb Publication Number:; RU 2087951C1Effective Date:;20080220法律状态公告日：20111227;?

状态效果：-;?

状态代码：MM4A;?

法律状态：THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES描述信息：Docdb Publication Number:; RU 2087951C1Effective Date:;20081229

**470、ASYMPTOTIC COMPENSATION TYPE ANALOG INTEGRATOR**

摘要：The analog integrator, used for various testers in laser measurement, analysis and development of nuclear fusion reactors, improves the integration signal processing function of the conventional lossy integrator. It comprises a plurality of passive integrators sequentially connected to the conventional lossy integrator(1). It can obtain asymtotically compensated integration signal by performing cascade integration in the passive integrators, and adding the output values generated from each passive integrator.Copyright 1998 KIPO

公开（公告）号：[KR19960006330B1](https://www.incopat.com/detail/init2?formerQuery=04y2CKtGEVgLNOzmqLxu4gf%2BrlDJsMGX&local=zh)

公开（公告）日：1996-05-13

申请号：KR1019920023049

申请日：1992-12-02

申请人：KOREA ATOMIC ENERGY RESEARCH INSTITUTE

**471、METHOD AND APPARATUS FOR GENERATING NUCLEAR FUSION ENERGY BY COHERENT BOSONS**

摘要：With an extremely short laser pulse with not too high an intensity it is possible to ionize deuterium, or helium into coherent bosons such as coherent deuterons and coherent alpha particles. To achieve this coherence it is important that certain critical conditions are satisfied so that plasma instabilities such as stimulated Raman scattering, stimulated Brillouin scattering, parametric instability have not enough time to grow to destroy the coherence. The electrons created during the multiphoton ionization process also must not recombine with the ions or to destroy the coherence of the ions by electromagnetic scattering. With the creation of coherent deuterons and coherent alpha particles together, the fusion rate of coherent deuterons into coherent alpha particles will be greatly enhanced. The nuclear fusion energy thus released can be utilized.

公开（公告）号：[AU3232993A](https://www.incopat.com/detail/init2?formerQuery=Q1btebmu5KLL6fUbJRFraw%3D%3D&local=zh)

公开（公告）日：1993-06-28

申请号：AU3232993

申请日：1992-12-01

申请人：SHUI YIN LO

法律状态：法律状态公告日：20020704;?

状态效果：-;?

状态代码：MK14;?

法律状态：PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED描述信息：Docdb Publication Number:; AU 674133B2

**472、METHOD AND APPARATUS FOR GENERATING NUCLEAR FUSION ENERGY BY COHERENT BOSONS**

摘要：With an extremely short laser pulse with not too high an intensity it is possible to ionize deuterium, or helium into coherent bosons such as coherent deuterons and coherent alpha particles. To achieve this coherence it is important that certain critical conditions are satisfied so that plasma instabilities such as stimulated Raman scattering, stimulated Brillouin scattering, parametric instability have not enough time to grow to destroy the coherence. The electrons created during the multiphoton ionization process also must not recombine with the ions or to destroy the coherence of the ions by electromagnetic scattering. With the creation of coherent deuterons and coherent alpha particles together, the fusion rate of coherent deuterons into coherent alpha particles will be greatly enhanced. The nuclear fusion energy thus released can be utilized.

公开（公告）号：[CA2124931A1](https://www.incopat.com/detail/init2?formerQuery=NWNA8ctg9Kwj9SNoD3PlOfR0OjOTHMZL&local=zh)

公开（公告）日：1993-06-10

申请号：CA2124931

申请日：1992-12-01

申请人：LO SHUI YIN

法律状态：法律状态公告日：19980216;?

状态效果：+;?

状态代码：EEER;?

法律状态：EXAMINATION REQUEST描述信息：Docdb Publication Number:; CA 2124931A1法律状态公告日：20031201;?

状态效果：-;?

状态代码：FZDE;?

法律状态：DEAD描述信息：Docdb Publication Number:; CA 2124931A1

**473、METHOD AND APPARATUS FOR GENERATING NUCLEAR FUSION ENERGY BY COHERENT BOSONS.**

摘要：With an extremely short laser pulse with not too high an intensity it is possible to ionize deuterium, or helium into coherent bosons such as coherent deuterons and coherent alpha particles. To achieve this coherence it is important that certain critical conditions are satisfied so that plasma instabilities such as stimulated Raman scattering, stimulated Brillouin scattering, parametric instability have not enough time to grow to destroy the coherence. The electrons created during the multiphoton ionization process also must not recombine with the ions or to destroy the coherence of the ions by electromagnetic scattering. With the creation of coherent deuterons and coherent alpha particles together, the fusion rate of coherent deuterons into coherent alpha particles will be greatly enhanced. The nuclear fusion energy thus released can be utilized.

公开（公告）号：[EP615650A1](https://www.incopat.com/detail/init2?formerQuery=JMWUK2MKlFBzyB4vxKW6Sw%3D%3D&local=zh)

公开（公告）日：1994-09-21

申请号：EP93900794

申请日：1992-12-01

申请人：LO SHUI YIN

法律状态：法律状态公告日：19940921;?

状态效果：+;?

状态代码：17P;?

法律状态：REQUEST FOR EXAMINATION FILED描述信息：Docdb Publication Number:; EP 0615650A1Effective Date:;19940627法律状态公告日：19940921;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0615650A1Corresponding Kind:;A1Legal Designated States:;DE;FR;GB;IT;NL;SE;法律状态公告日：19941214;?

状态效果：+;?

状态代码：A4;?

法律状态：SUPPLEMENTARY SEARCH REPORT描述信息：Docdb Publication Number:; EP 0615650A1Effective Date:;19941025法律状态公告日：19941214;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED CONTRACTING STATES:描述信息：Docdb Publication Number:; EP 0615650A1Corresponding Kind:;A4Legal Designated States:;DE;FR;GB;IT;NL;SE;法律状态公告日：19960228;?

状态效果：+;?

状态代码：17Q;?

法律状态：FIRST EXAMINATION REPORT描述信息：Docdb Publication Number:; EP 0615650A1Effective Date:;19960112法律状态公告日：20020313;?

状态代码：RAP1;?

法律状态：TRANSFER OF RIGHTS OF AN EP APPLICATION描述信息：Docdb Publication Number:; EP 0615650A1New Owner:;LO, SHUI-YIN, DR.法律状态公告日：20020313;?

状态代码：RIN1;?

法律状态：INVENTOR (CORRECTION)描述信息：Docdb Publication Number:; EP 0615650A1Inventor Name:;LO, SHUI-YIN, DR.法律状态公告日：20030129;?

状态效果：-;?

状态代码：18D;?

法律状态：DEEMED TO BE WITHDRAWN描述信息：Docdb Publication Number:; EP 0615650A1Effective Date:;20020129

**474、Method and device for generating energy by coherent Bose particle fusion**

摘要：With an extremely short laser pulse with not too high an intensity it is possible to ionize deuterium, or helium into coherent bosons such as coherent deuterons and coherent alpha particles. To achieve this coherence it is important that certain critical conditions are satisfied so that plasma instabilities such as stimulated Raman scattering, stimulated Brillouin scattering, parametric instability have not enough time to grow to destroy the coherence. The electrons created during the multiphoton ionization process also must not recombine with the ions or to destroy the coherence of the ions by electromagnetic scattering. With the creation of coherent deuterons and coherent alpha particles together, the fusion rate of coherent deuterons into coherent alpha particles will be greatly enhanced. The nuclear fusion energy thus released can be utilized.

公开（公告）号：[JP07502117A](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvYVuzi%2FbcCA7vR0OjOTHMZL&local=zh)

公开（公告）日：1995-03-02

申请号：JP05510310

申请日：1992-12-01

申请人：ロウ シュイ イン

**475、**

摘要：With an extremely short laser pulse with not too high an intensity it is possible to ionize deuterium, or helium into coherent bosons such as coherent deuterons and coherent alpha particles. To achieve this coherence it is important that certain critical conditions are satisfied so that plasma instabilities such as stimulated Raman scattering, stimulated Brillouin scattering, parametric instability have not enough time to grow to destroy the coherence. The electrons created during the multiphoton ionization process also must not recombine with the ions or to destroy the coherence of the ions by electromagnetic scattering. With the creation of coherent deuterons and coherent alpha particles together, the fusion rate of coherent deuterons into coherent alpha particles will be greatly enhanced. The nuclear fusion energy thus released can be utilized.

公开（公告）号：[JP07502117T](https://www.incopat.com/detail/init2?formerQuery=MgkVpfgXcvZb5SPTUXMEXvR0OjOTHMZL&local=zh)

公开（公告）日：1995-03-02

申请号：JP51031092

申请日：1992-12-01

**476、METHOD AND APPARATUS FOR GENERATING NUCLEAR FUSION ENERGY BY COHERENT BOSONS**

摘要：With an extremely short laser pulse with not too high an intensity it is possible to ionize deuterium, or helium into coherent bosons such as coherent deuterons and coherent alpha particles. To achieve this coherence it is important that certain critical conditions are satisfied so that plasma instabilities such as stimulated Raman scattering, stimulated Brillouin scattering, parametric instability have not enough time to grow to destroy the coherence. The electrons created during the multiphoton ionization process also must not recombine with the ions or to destroy the coherence of the ions by electromagnetic scattering. With the creation of coherent deuterons and coherent alpha particles together, the fusion rate of coherent deuterons into coherent alpha particles will be greatly enhanced. The nuclear fusion energy thus released can be utilized.

公开（公告）号：[WO9311543A1](https://www.incopat.com/detail/init2?formerQuery=%2F8FDVI3WN7YY5HiJToAJQfR0OjOTHMZL&local=zh)

公开（公告）日：1993-06-10

申请号：WOUS92010361

申请日：1992-12-01

申请人：LO SHUI YIN

法律状态：法律状态公告日：19930610;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 9311543A1Corresponding Kind:;A1Legal Designated States:;AU;CA;JP;法律状态公告日：19930610;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 9311543A1Corresponding Kind:;A1Legal Designated States:;AT;BE;CH;DE;DK;ES;FR;GB;GR;IE;IT;LU;MC;NL;PT;SE;法律状态公告日：19930916;?

状态代码：DFPE;?

法律状态：REQUEST FOR PRELIMINARY EXAMINATION FILED PRIOR TO EXPIRATION OF 19TH MONTH FROM PRIORITY DATE (PCT APPLICATION FILED BEFORE 20040101)描述信息：Docdb Publication Number:; WO 9311543A1法律状态公告日：19940601;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 9311543A1Corresponding Publication Number:;2124931Corresponding Authority:;CA法律状态公告日：19940601;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 9311543A1Corresponding Publication Number:;1993900794Corresponding Authority:;EP法律状态公告日：19940921;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9311543A1Corresponding Publication Number:;1993900794Corresponding Authority:;EP法律状态公告日：20020129;?

状态效果：-;?

状态代码：WWW;?

法律状态：WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 9311543A1Corresponding Publication Number:;1993900794Corresponding Authority:;EP

**477、Process and device of repair of a defective zone of the wall of a metal part and enparticulier of a tubular part**

摘要：The metal of the wall of the piece (13a) is melted and then solidified in a zone which includes defects, such as cracks, over a defined depth, by sweeping over the surface of the piece with the aid of a melting device (21). Next, a surface layer of the metal of the wall of the piece (13a), which has been melted and then solidified, is put into compression by repeated impacts from solid particles. Preferably, the melting is performed by a transferred-arc plasma (22) and the putting into compression by balls set into movement by a vibrating piece. The invention applies in particular to the repair of a tubular adaptor (13a) penetrating the head (1) of a nuclear reactor vessel.

公开（公告）号：[FR2698576A1](https://www.incopat.com/detail/init2?formerQuery=mmTmuF6K761wkhumzNnfMfR0OjOTHMZL&local=zh)

公开（公告）日：1994-06-03

申请号：FR92014407

申请日：1992-11-30

申请人：FRAMATOME SA

法律状态：法律状态公告日：19990827;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2698576A1

**478、MEASURING DEVICE FOR MOMENTUM OF ATOMIC BEAM AND MOLECULAR BEAM**

摘要：PURPOSE : To measure a mean momentum of an atomic beam or a molecular beam by a comparatively simple device structure and without relation to a charged condition of an atom or a molecule. CONSTITUTION : There are arranged a collision face 1 where an atomic beam or a molecular beam executes collision, a mechanism 3 that displaces the collision face 1 by a proportional quantity to a power which the collision face 1 received through a collision of an atom or a molecule, and a mechanism that executes measurement by an optical position detecting device 6 through detecting a displacement of a reflection position of an irradiating laser light 4. As a composition is comparatively simple, an atomic beam or a molecular beam can be measured at an actually moving state and an usage as an acting state monitor of a semiconductor device or a nuclear fusion reaction reactor is possible.

公开（公告）号：[JP06109856A](https://www.incopat.com/detail/init2?formerQuery=E8uAjqsDDy3Y7JMhUcrhWPR0OjOTHMZL&local=zh)

公开（公告）日：1994-04-22

申请号：JP04257760

申请日：1992-09-28

申请人：HITACHI LTD

**479、1.03MUM LIGHT-EMISSION ND-YD DOPED PHOSPHATE LASER GLASS**

摘要：PURPOSE : To provide a laser glass relatively small in induced emission coeffi cient, long in fluorescent life, small in expansion coefficient and non-linear refraction factor and useful as a glass for amplifier of nuclear fusion large output laser. CONSTITUTION : The laser glass is composed of a low expansion phosphate glass containing 1-2mol% Nd3+ and 4-10mol% Yb3+. The low expansion phosphate glass has 80×10-7-130×10-7/°C expansion coefficient. The laser glass generates 1.03μm laser beam by irradiating with 0.8μm wavelength semiconductor laser.

公开（公告）号：[JP06107431A](https://www.incopat.com/detail/init2?formerQuery=E8uAjqsDDy3pZ68t4uDaL%2FR0OjOTHMZL&local=zh)

公开（公告）日：1994-04-19

申请号：JP04279336

申请日：1992-09-24

申请人：HOYA CORP

**480、LASER MEASURING DEVICE**

摘要：PURPOSE : To measure electron density by low output laser beam by repeatedly irradiating an object to be measured by the laser beam reciprocating between first and second reflecting mirrors. CONSTITUTION : Laser beam L is reflected by a polarizing element 23 to be incident on a polarization control element 24. This beam is circularly polarized to transmit through the element 24 and reflected by a first reflecting mirror 26 to be again incident on the element 24 to become linear polarized beam rotated by 90°. The polarized beam is reflected to be incident on a vacuum container 29 from a window 30 to scatter the electron of an object to be measured. This scattered beam S is incident on a spectroscope 32. The residual beam L is reflected by a second reflecting mirror 33 and this reflected beam is reflected by the first reflecting mirror 6 to be again incident on the container 29 to generate new beam S. That is, the beam L repeatedly reciprocates between the mirrors 26, 33 to generate the beam S incident on the container 29. The beam S is spectrally diffracted by the spectroscope 32 and the respective spectrum components are integrated corresponding to the number of the generated beams S. Therefore, even the weak beam S becomes measurable intensity and electron density can be measured without enhancing the output of the beam L.

公开（公告）号：[JP06102086A](https://www.incopat.com/detail/init2?formerQuery=E8uAjqsDDy13vXui04EFOvR0OjOTHMZL&local=zh)

公开（公告）日：1994-04-12

申请号：JP04247800

申请日：1992-09-17

申请人：TOSHIBA CORP

**481、LASER MEASURING DEVICE**

摘要：PURPOSE : To accurately measure the electron temp. even of nuclear fusion plasma largely changing in the Doppler expansion of scattered beam by detecting the max. intensity spectrum, detection light and wavelength difference. CONSTITUTION : A half mirror 22 divides laser beam L into transmitted irradiation beam L1 and reflected detection beam L2. The irradiation beam L1 is reflected by a reflecting mirror 23 to be incident on a vacuum container 24 to emit the electron of an object to be measured to seatter the same. The scattered beam S is incident on a diffraction lattice 26 to be spectrally diffracted at every spectra. The spectra S1-n of the spectrally diffracted scattered beam S are amplified by an amplifier 28 to be converted to the electric signals corresponding to the intensities thereof by a solid-state imaging element 29. An operation device 31 receives said electric signals to detect the spectrum with the max. intensity among the respective spectra, that is, the wavelength thereof. A detector 32 detects the wavelength of the laser beam L from the detection beam L2 to input the detection signal thereof to the device 31. The device 31 calculates the wavelength difference between the spectrum with the max. intensity and the laser beam L and detects the electron temp. due to the irradiation with the scattered beam S from the wavelength difference on the basis of a specific formula.

公开（公告）号：[JP06102095A](https://www.incopat.com/detail/init2?formerQuery=E8uAjqsDDy2ZbkkHLD4lq%2FR0OjOTHMZL&local=zh)

公开（公告）日：1994-04-12

申请号：JP04247801

申请日：1992-09-17

申请人：TOSHIBA CORP

**482、Reference sample for testing a laser welding installation - for welding sleeves in tubes and its method of application**

摘要：A reference assembly is claimed for testing a laser welding installation for welding sleeves inside tubes, the sleeves being arranged in a welding position coaxial to the tubes and in contact with their inner surfaces. It comprises a sample tube (12) in which is lodged a sample sleeve (14). The sample tube (12) has at least three grooves (16, 18, 20) cut axially in its outer surface and having differing depths. The bottoms (16A, 18A, 20A) of the three grooves corresp. to three acceptable reference levels found, minimum, medium and max., for the penetration of a weld ribbon in the thickness of the wall of a sleeved tubed equivalent to the reference assembly. Also claimed is the method used to apply this reference assembly to the testing of a laser welding installation by estimating the depth of penetration of weld ribbons. USE/ADVANTAGE - The reference assembly is used to test a laser welding installation for welding sleeves inside tubes, notably repair sleeves in steam generator tubes for nuclear reactors. It allows the global and certain detection fo the untimely ageing of the welding installation whilst ensuring that a series of wleds are correctly executed by satisfatory functioning conditions in the welding installation. The grooves cut in the outer surface of the reference sample allow the visual examination and very rapid testing of the welding installation by allowing the penetration of the weld ribbons to be estimated with very high precision.

公开（公告）号：[FR2692670A1](https://www.incopat.com/detail/init2?formerQuery=mmTmuF6K7614SptL%2BIephPR0OjOTHMZL&local=zh)

公开（公告）日：1993-12-24

申请号：FR92007434

申请日：1992-06-18

申请人：FRAMATOME SA; ELECTRICITE DE FRANCE

法律状态：法律状态公告日：19980417;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2692670A1法律状态公告日：19980430;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2692670A1

**483、Bonded silicon@ wafer-glass or silicon@-silicon@ joint prodn. - comprises using laser light radiation to initially fix materials at spot(s) and/or lines and conventional high temp. bonding for pressure and acceleration sensors or micro-system elements**

摘要：Prodn. involves (a) using laser or other intense light radiation to bond the materials at spot(s) and/or lines; and (b) using conventional high temp. bonding to bond the materials solidly. Irradiation is pref. at room temp. when silicon is bonded to glass, a voltage is applied between the materials so that local bonding comprises a combination of local heating and ion migration, and high temp. bonding is by anodic bonding at high temp.. When silicon is bonded to silicon, local bonding comprises local heating with IR (laser) radiation and high temp. bonding comprises fusion bonding at above 1000 deg.C.. When two silicon layers are bonded via a thin glass layer, local bonding comprises IR (laser) radiation and high temp. bonding comprises by anodic bonding. USE/ADVANTAGE - The prodn. is useful for bonding silicon wafers to each other or to glass sheets prior to dicing into chips e.g. for pressure and acceleration sensors or elements for microsystems e.g. pumps of ink jet printers. The initial localised bonding reliably fixes the materials, may be carried out rapidly and easily at roomp temp. and bonds nuclei for growth of the high temp. bond.

公开（公告）号：[DE4219132A1](https://www.incopat.com/detail/init2?formerQuery=nxpyVKjEu0F6aHi8sEM1MPR0OjOTHMZL&local=zh)

公开（公告）日：1993-12-16

申请号：DE4219132

申请日：1992-06-11

申请人：SUESS KG KARL

法律状态：法律状态公告日：19931216;?

状态效果：+;?

状态代码：OM8;?

法律状态：SEARCH REPORT AVAILABLE AS TO PARAGRAPH 43 LIT. 1 SENTENCE 1 PATENT LAW描述信息：Docdb Publication Number:; DE 4219132A1法律状态公告日：19990909;?

状态效果：-;?

状态代码：8141;?

法律状态：DISPOSAL/NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; DE 4219132A1

**484、FARADAY ROTATION GLASS**

摘要：PURPOSE : To obtain the glass having a sufficient large Verdet' s constant for practical use and having high homogeneity required by the nuclear-fusion laser optical system, etc., by specifying the contents of P2O5, Tb2O3, and K2O and substantially excluding a platinum inclusion. CONSTITUTION : This glass contains 60-75mol% P2O5, 10-20mol% Tb2O3 and 10-20mol% K2O and does not substantially contain a platinum inclusion. Namely, the glass contains no inclusions or contains the inclusion to the extent that the glass is not damaged even when irradiated by a strong laser beam. In this case, a part of the K2O is replaced by 0-15% of Li2O, Na2O or Cs2O the total amt. of K2O and those is controlled to 10-25%, or a part of the K2O is substituted by 0-15% of Li2O, Na2O and Cs2O, 0-5% of MgO, CaO, SrO, BaO, PbO, WO3 and Nb2O3, and 0-1% of SiO2, GeO2 and B2O3, and the total amt. of K2O and those is controlled to 10-25%.

公开（公告）号：[JP05178638A](https://www.incopat.com/detail/init2?formerQuery=tITf5UzKN%2Bvmrv%2F%2Fm4vA5PR0OjOTHMZL&local=zh)

公开（公告）日：1993-07-20

申请号：JP04145830

申请日：1992-06-05

申请人：HOYA CORP

法律状态：法律状态公告日：19990831;?

状态效果：-;?

状态代码：A300;?

法律状态：WITHDRAWAL OF APPLICATION BECAUSE OF NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; JP H05178638A Free Text Description:;JAPANESE INTERMEDIATE CODE: A300Effective Date:;19990831

**485、Thermonuclear micro : fusion of deuterium at medium temp. - using two lasers propagating in circularly polarised mode to aid plasma constraint**

摘要：Thermonuclear fusion is provoked by impulses of coherent electromagnetic waves generated by 2 assemblies of lasers : one a circularly polarised carbon dioxide laser propagating as a sum of 2TE2 or TM2 modes which is focused by the mirrors onto a point where the target material is ionised to form a plasma. The impulses are modulated to keep the target temperature as low as possible to aid the second laser, a pumped neodymium laser, which provokes the plasma explosion when also propagating in the same circularly polarised mode. ADVANTAGE - Method creates good constraining conditions for the plasma and reduces thermal radiation losses.

公开（公告）号：[FR2690778A1](https://www.incopat.com/detail/init2?formerQuery=mmTmuF6K762m2vMJsOse3%2FR0OjOTHMZL&local=zh)

公开（公告）日：1993-11-05

申请号：FR92004574

申请日：1992-04-14

申请人：MARIE PIERRE

法律状态：法律状态公告日：19970124;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2690778A1

**486、METHOD OF REASSEMBLING NUCLEAR FUSION DEVICE VACUUM WALL**

摘要：PURPOSE : To make possible reassembly of a vacuum wall completely filling a beveling gap as thermal deformation of a welded joint part is constrained to the utmost in regard to reassembly of a nuclear fusion device vacuum wall in which the gap and a dislocation are produced in the welded joint part thereof. CONSTITUTION : A laser beam LB is irradiated on at least two parts of a position a little away from both beveling edges E of a minute beveling gap G between a plurality of segments 15, 16 constituting a vacuum wall 3 in regard to reassembly after disassembly of a nuclear fusion device vacuum wall. With the gap G filled up with molten metal, the segments 15, 16 are welded for the purpose of integration and the vacuum wall 3 for forming a vacuum boundary around a plasma is constituted.

公开（公告）号：[JP05066281A](https://www.incopat.com/detail/init2?formerQuery=tITf5UzKN%2BuexFQtp7rTDfR0OjOTHMZL&local=zh)

公开（公告）日：1993-03-19

申请号：JP03095787

申请日：1991-04-25

申请人：TOSHIBA CORP

**487、LASER FUSION DEVICE**

摘要：PURPOSE : To realize efficient fusion reaction by raising simultaneously plasma temperature and density above specified values. CONSTITUTION : By constituting the title system with a means 2 to irradiate a fuel target 7 with short wave length laser beam and a means 3 to irradiate with long wave length laser beam following the irradiation with the short wave length laser beam, it becomes possible to raise plasma temperature and density. By producing plasma at the temperature of 40million°C and density of 5×l0-25 cm3(ca. 1000 times of solid density), more efficient fusion reaction is realized.

公开（公告）号：[JP04320991A](https://www.incopat.com/detail/init2?formerQuery=HurNLS9KpukbDpUb66piWfR0OjOTHMZL&local=zh)

公开（公告）日：1992-11-11

申请号：JP03003960

申请日：1991-01-17

申请人：TOSHIBA CORP

**488、具高饱和感应及在高磁化率下具优越柔铁磁性之富铁金属玻璃**

摘要：本发明系关於磁性金属玻璃合金，此在结合物中，具有高饱和感应及低磁性异向性能。此合金具有由式 FeaCob; BcSidCe 所说明之组合物，其中〞ａ〞－〞ｅ〞系以原子百分比，〞ａ〞范围从约72至约84，〞ｂ〞范围从约２至约８，〞ｃ〞范围从约11至约16，〞ｄ〞范围从约１至约４，且〞ｅ〞为零或范围从约３至约４，在合金中选用存在Mn至高达约１原子百分比，其限制条件为(i)若〞ｅ〞系零且〞ａ〞系大於或等於80，则〞ｂ〞不可能超过４，(ii)若〞ｅ〞系零且〞ａ〞系比80小ｘ之数值，则〞ｂ〞不能超过(４＋4x )且(iii)(〞ａ〞＋〞ｂ〞＋〞ｃ〞＋〞ｄ〞＋〞ｅ〞)之总和等於100。此种合金尤其适用於大磁性核而此系有关於需要高磁化率之脉冲功率应有关。此种应用之实例包括用於线感应粒加速器之高功率脉冲源，从脉冲源至这些加速器束而用於偶合能之感应模数，在惯性限制融合研究而在电子发电机中之磁性开关，磁性调制器以驱动准分子雷射等。

公开（公告）号：[TW172764B](https://www.incopat.com/detail/init2?formerQuery=ZPv4riC1ij0p8%2FQcwoTvHQ%3D%3D&local=zh)

公开（公告）日：1991-11-11

申请号：TW079110369

申请日：1990-12-10

申请人：联合标志公司

**489、DEVICE FOR MEASURING SHAPE OF PRIMARY WALL OF NUCLEAR FUSION REACTOR**

摘要：PURPOSE : To quickly locate damaged or worn portion and quantitatively determine the condition by holding a visual sensor in the direction at right angles to a slit laser beam receiving section and moving the sensor in parallel with a wall to be measured. CONSTITUTION : The image of the surface of a tile 1 is taken for a slit to obtain the coordinates (P11, P12) of both edges of the tile 1. The attitude of a hand is then changed so that the z axis in which a visual sensor is directed is perpendicular to the straight lines P11, P12. Taking the image of the surface of the tile 1 for a slit again, the edge points P11, P12 are measured. Then a hand is moved to a point without changing attitude by a certain distance in the direction x in the sensor coordinate system to take the image of the tile 1 surface for a slit to measure the tile 1 edge points P21, P22. The attitude of the hand is then changed so that the line P11, P12 is the y axis and the direction of P21 is the x axis. Movement in the x axis direction with the hand attitude unchanged enables calculation of all the measured data by the difference only in the z axis.

公开（公告）号：[JP04175602A](https://www.incopat.com/detail/init2?formerQuery=HurNLS9Kpuk5%2BnpSdJEqw%2FR0OjOTHMZL&local=zh)

公开（公告）日：1992-06-23

申请号：JP02301132

申请日：1990-11-08

申请人：KAWASAKI HEAVY IND LTD; JAPAN ATOM ENERGY RES INST

**490、Cold fusion of neutron-contg. hydrogen nuclei - by contact with micro-clusters of subordinate gp. element atoms.**

摘要：Hydrogen nuclear fusion is effected by contacting pairs of neutron-contg. hydrogen nuclei with microclusters of 3-100000 subordinated gp. element atoms produced from high temp. ultra-finely divided particles by cooling using a carrier medium. Pref. the microclusters pref. contain 5-200, esp. a magic number of atoms and pref. consist of Pd and/or Ti, opt. alloyed with Ag. The ultra-finely divided particles are formed by evapn., pref. by laser beams or by using particle beams contg. the hydrogen nuclei. Microclusters may be applied to a substrate layer contg. Si, Ti, Gd, Sm or other rare earth which is electrically conductive or which is converted to insulating form pref. by oxidising or nitriding. ADVANTAGE - Process provides reproducible supply of energy for peaceful use by cold fusion of deuterons and/or tritons.

公开（公告）号：[DE4024515A1](https://www.incopat.com/detail/init2?formerQuery=D1VJzXsc8lKToP9m%2BGaGxPR0OjOTHMZL&local=zh)

公开（公告）日：1992-02-20

申请号：DE4024515

申请日：1990-08-02

申请人：PHILBERTH KARL DR; PHILBERTH BERNHARD 8039 PUCHHEIM DE; PhilberthKarl Dr

法律状态：法律状态公告日：19920730;?

状态效果：+;?

状态代码：8110;?

法律状态：REQUEST FOR EXAMINATION PARAGRAPH 44描述信息：Docdb Publication Number:; DE 4024515A1法律状态公告日：19950427;?

状态代码：8120;?

法律状态：WILLINGNESS TO GRANT LICENCES PARAGRAPH 23描述信息：Docdb Publication Number:; DE 4024515A1法律状态公告日：19960201;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 4024515A1

**491、NUCLEAR FUEL REPROCESSING PLANT**

摘要：PURPOSE : To improve the extent of anticorrosion against a nitric acid solution in a weld part by radiating a laser beam to the weld part of a plant member used with austenitic stainless steel with molybdenum added, and heating a surface layer. CONSTITUTION : When molybdenum is added, a boundary part of the cell or arborescent dendritic structure of a weld metal is selectively corroded so markedly but this corrosive deterioration goes out if it is subjected to heat treatment at a temperature of more than 1000°C after welding. Accordingly, a laser beam is radiated on a weld part 3 of the member formed by Mo added stainless steel, and a surface layer is heated. The laser beam shifts its focal point to some extent in order to heat is uniformly, and an area to be irradiated is set to be area sufficiently covering the weld part 3. In order to shorten a span of processing time, a temperature for heat treatment is heightened in a range where fusion will not occur. It is desirable that depth of an effective heat treatment layer 17 is more than 0.5 mm from the surface. With this constitution, the corrosive deterioration in the weld part is eliminable, while heating is limited to the surface alone, thus harmful thermal deformation is preventable.

公开（公告）号：[JP04093699A](https://www.incopat.com/detail/init2?formerQuery=HurNLS9KpumWDawRg0SSm%2FR0OjOTHMZL&local=zh)

公开（公告）日：1992-03-26

申请号：JP02205768

申请日：1990-08-02

申请人：TOSHIBA CORP

**492、MANUFACTURE OF SEMICONDUCTOR DEVICE**

摘要：PURPOSE : To enable nucleuses to be controlled in internuclear distance and generation density by a method wherein an amorphous semiconductor film is locally formed on protrusions dispersedly provided on a substrate through a plasma gas decomposition method, and a silicon layer is made to grow in solid phase making the amorphous semiconductor films serve as nucleuses to form a semiconductor film. CONSTITUTION : Protrusions 2 are formed on a substrate 1 through the fusion of the substrate 1 by irradiation with laser. Silicon compound gas is decomposed by plasma on the substrate 1 to locally form amorphous silicon films 3 on the protrusions 2, where the amorphous silicon film 3 serves as a nucleus of a polycrystalline grain. Thereafter, a polycrystalline silicon 4 formed of the aggregate of polycrystalline grains is formed through a hot CVD method centering on the amorphous silicon films 3. By this setup, polycrystalline grains can be optionally set in growth position and size as required, and they can be formed uniform in size by controlling the distance between protrusions.

公开（公告）号：[JP03266476A](https://www.incopat.com/detail/init2?formerQuery=H15aK4SQzfDe2w%2FAX5R%2F0PR0OjOTHMZL&local=zh)

公开（公告）日：1991-11-27

申请号：JP02065225

申请日：1990-03-15

申请人：SANYO ELECTRIC CO

法律状态：法律状态公告日：20070417;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H03266476A

**493、Solar-laser plant - having concave mirror, laser and computer control unit**

摘要：The arrangement includes a combination of a concave mirror and a laser, which focuses and intensifies the sunlight. The combination produces extremely high temperatures. The system can be computer controlled and follows the sun' s trajectory in order to continuously attain a precise incidence aperture for the sun rays. USE/ADVANTAGE - The system can be used to provide a sufficiently stable plasma for nuclear fusion and can serve as a heat source for boilers of turbo-generator plants or to melt/cut different types of material.

公开（公告）号：[DE4008574A1](https://www.incopat.com/detail/init2?formerQuery=D1VJzXsc8lLgbgYjoi3j0vR0OjOTHMZL&local=zh)

公开（公告）日：1990-08-02

申请号：DE4008574

申请日：1990-03-14

申请人：BOCIAN MANFRED

法律状态：法律状态公告日：19900802;?

状态效果：+;?

状态代码：OAV;?

法律状态：APPLICANT AGREED TO THE PUBLICATION OF THE UNEXAMINED APPLICATION AS TO PARAGRAPH 31 LIT. 2 Z1描述信息：Docdb Publication Number:; DE 4008574A1法律状态公告日：19900802;?

状态代码：OR8;?

法律状态：REQUEST FOR SEARCH AS TO PARAGRAPH 43 LIT. 1 SENTENCE 1 PATENT LAW描述信息：Docdb Publication Number:; DE 4008574A1法律状态公告日：19900906;?

状态代码：8122;?

法律状态：NONBINDING INTEREST IN GRANTING LICENCES DECLARED描述信息：Docdb Publication Number:; DE 4008574A1法律状态公告日：19910207;?

状态效果：+;?

状态代码：8105;?

法律状态：SEARCH REPORT AVAILABLE描述信息：Docdb Publication Number:; DE 4008574A1法律状态公告日：19950420;?

状态效果：+;?

状态代码：8110;?

法律状态：REQUEST FOR EXAMINATION PARAGRAPH 44描述信息：Docdb Publication Number:; DE 4008574A1法律状态公告日：19951102;?

状态代码：8127;?

法律状态：NEW PERSON/NAME/ADDRESS OF THE APPLICANT描述信息：Docdb Publication Number:; DE 4008574A1New Owner:;BOCIAN, MANFRED, 32457 PORTA WESTFALICA, DE法律状态公告日：19960523;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 4008574A1

**494、MEASURING INSTRUMENT FOR FIRST WALL SHAPE OF NUCLEAR FUSION REACTOR**

摘要：PURPOSE : To measure the state of the wall surface in the reactor in a short time with high accuracy by inserting a sensor head whose angle between the line connecting laser light and a subject and the line connecting the subject and a photodetection part is fixed into the nuclear fusion reactor, and adjusting the distance between the sensor head and subject. CONSTITUTION : A fixed light projector is fitted to a light projection part 1, a fixed TV camera is fitted directly to the photodetection part 2, and the distance to the subject 3 is adjusted by a moving link 6. A driving device 7 and a moving cylinder 5 are operated according to a signal from a personal computer 10 and the moving link 6 is operated to align the position of the point where the laser light 4 and the center line of the photodetection part 2 intersect each other to the subject 3 with the level of the surface of the subject 3, so that the photodetection part 2 measures the surface state of the subject 3 continuously. Measurement data when the subject is assembled completely is inputted to the personal computer 10 and the surface state of the subject 3 in the reactor is measured similarly after the nuclear fusion reactor is used for a certain time and compared with measurement data when the reactor is in a sound state to find a worn part and its wear quantity.

公开（公告）号：[JP03249504A](https://www.incopat.com/detail/init2?formerQuery=H15aK4SQzfAugyew1FGiSfR0OjOTHMZL&local=zh)

公开（公告）日：1991-11-07

申请号：JP02045488

申请日：1990-02-28

申请人：KAWASAKI HEAVY IND LTD; JAPAN ATOM ENERGY RES INST

法律状态：法律状态公告日：20040427;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H03249504A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20050426;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H03249504A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20060223;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP H03249504A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20060303;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP H03249504A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20070129;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H03249504A

**495、ROOM TEMPERATURE NUCLEAR FUSION APPARATUS**

摘要：PURPOSE : To enhance the efficiency of nuclear fusion reaction and to generate electric power by room temp. nuclear fusion by irradiating the specific solid nuclear fusion fuel having deuterium infiltrated therein or adsorbed thereon and placed in a high pressure container with an electromagnetic wave. CONSTITUTION : In a nuclear fusion reactor, the path 2 of the circulation of a cooling material of a liquid metal is formed to the inner wall of a high pressure tank 1 and a window 3 for the irradiation with a laser beam is provided to the tank 1. The high pressure tank 1 is filled with high pressure deuterium gas 5 and the palladium globules 7 received in a cooling storage housing 4 can be supplied at any time. The palladium globules 7 have a diameter of several mm. By using palladium globules, the surface area thereof is increased to enhance the adsorption efficiency of the deuterium gas 5. The palladium globules 7 are received in the cooling storage housing 4 to accelerate the adsorption of deuterium. The palladium globules 7 are allowed to fall from a charging port 6 to be irradiated with a laser beam from the window at a predetermined position.

公开（公告）号：[JP03238394A](https://www.incopat.com/detail/init2?formerQuery=H15aK4SQzfDo93%2F8wGUvSfR0OjOTHMZL&local=zh)

公开（公告）日：1991-10-24

申请号：JP02033902

申请日：1990-02-16

申请人：SUMITOMO HEAVY INDUSTRIES

**496、SOURCE OF LIGHT HAS PUMPING BY FUSION**

摘要：PURPOSE : To provide a light source, which emits light through the direct mutual operation of a nuclear fusion neutron and a laser medium, by composing this light source of a system for generating light radiation with the neutron from a high-energy neutron source inside the prescribed laser medium. CONSTITUTION : The neutron source is a nuclear fusion reactor 10 for generating pulse-shaped high-energy neutrons at long pulse intervals, and such a neutron flux 14 is fused directly inside a laser medium 18. As a laser medium 18, the 1st component liquid selected out of O group in an element periodic table is included. Such selected liquid has a high non-elastic scattering cut area with the high-energy nuclear fusion neutron and under excitation generated through mutual operation with gamma rays from this non-elastic collision, the light of 1st output wavelength is generated.

公开（公告）号：[FR2635923A1](https://www.incopat.com/detail/init2?formerQuery=mmTmuF6K763hijkLAeR%2BqvR0OjOTHMZL&local=zh)

公开（公告）日：1990-03-02

申请号：FR89011498

申请日：1989-09-01

申请人：UNITED STATES DEPARTMENT ENERGY

**497、LIGHT SOURCE PUMPED BY NUCLEAR FUSION**

摘要：PURPOSE : To provide a light source, which emits light through the direct mutual operation of a nuclear fusion neutron and a laser medium, by composing this light source of a system for generating light radiation with the neutron from a high-energy neutron source inside the prescribed laser medium. CONSTITUTION : The neutron source is a nuclear fusion reactor 10 for generating pulse-shaped high-energy neutrons at long pulse intervals, and such a neutron flux 14 is fused directly inside a laser medium 18. As a laser medium 18, the 1st component liquid selected out of O group in an element periodic table is included. Such selected liquid has a high non-elastic scattering cut area with the high-energy nuclear fusion neutron and under excitation generated through mutual operation with gamma rays from this non-elastic collision, the light of 1st output wavelength is generated.

公开（公告）号：[JP02142192A](https://www.incopat.com/detail/init2?formerQuery=aFI6YYoNy5IHVEeGxHX78fR0OjOTHMZL&local=zh)

公开（公告）日：1990-05-31

申请号：JP01227305

申请日：1989-09-01

申请人：US GOVERNMENT

**498、FUSION PUMPED LIGHT SOURCE**

摘要：Apparatus is provided for generating energy in the form of light radiation. A fusion reactor is provided for generating a long, or continuous, pulse of high-energy neutrons. The neutron flux is coupled directly with the lasing medium. The lasing medium includes a first component selected from Group O of the periodic table of the elements and having a high inelastic scattering cross section. Gamma radiation from the inelastic scattering reactions interacts with the first component to excite the first component, which decays by photon emission at a first output wavelength. The first output wavelength may be shifted to a second output wavelength using a second liquid component responsive to the first output wavelength. The light outputs may be converted to a coherent laser output by incorporating conventional optics adjacent the laser medium.

公开（公告）号：[GB8919023D0](https://www.incopat.com/detail/init2?formerQuery=Qq4JXg6txHS6m6q4gEcHj%2FR0OjOTHMZL&local=zh)

公开（公告）日：1989-10-04

申请号：GB8919023

申请日：1989-08-21

申请人：UNITED STATES DEPARTMENT OF ENERGY

法律状态：法律状态公告日：19940420;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 2223122AEffective Date:;19930821

**499、GENERATING A COHERENT BEAM OF BOSONS**

摘要：In a process for producing energy by fusing two nuclei at least one of said nuclei is provided in a coherent nuclei beam directed at the other of the nuclei. A nuclear fusion reactor can be provided to produce energy by this process, the reactor comprising a macroscopic baser effective to produce at least one beam of coherent nuclei, and means for positioning further nuclei for incidence thereon of said beam. The beam can be of deuterium nuclei, and the other nuclei can be deuterium atoms of a deuterium compound pellet. In the macroscopic baser (boson equivalent of laser) bosons (e.g. deuterium) move in a path affected by bending magnets 3, 4 and a coherent light beam induces scattering to cause development of a coherent beam of bosons which is deflected outwardly. Instead of moving in a path the bosons may be reflected linearly.

公开（公告）号：[GB8918134D0](https://www.incopat.com/detail/init2?formerQuery=Qq4JXg6txHQqAcfFevKiLfR0OjOTHMZL&local=zh)

公开（公告）日：1989-09-20

申请号：GB8918134

申请日：1989-08-09

申请人：APRICOT S A

法律状态：法律状态公告日：19930324;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 2220294AEffective Date:;19920725

**500、Light nuclei fusion reactor with electrolytic deposition of fuel - has decreased laser energy input by embedded fuel gathering chamber in cathode**

摘要：A cathode for a fusion reactor has electrolytic deposition oflight nuclei. Hydrodynamic compression of the electrloyte constrains it to pass to an expansion chamber (2) formed within the cathode (3). The fusion area within the (3) may take form of a capillary. A window (4), radially oriented the expansion chamber (2), is provided for a laser to have foci within the chamber (2). Pref. the cathode (3) with anode (5) are assembled, with gps. one above the other and switched in parallel. Pref. a common cooling jacket (6) has inside wall which functions as the containment for the electrolyte. USE/ADVANTAGE - For light nuclei fusion using deut and/or m. Less laser energy requirement is needed from using a closed expansion chamber rather than open one.

公开（公告）号：[DE3923468A1](https://www.incopat.com/detail/init2?formerQuery=BhD8xWZQQZGYeHLNnHZnIfR0OjOTHMZL&local=zh)

公开（公告）日：1991-01-24

申请号：DE3923468

申请日：1989-07-15

申请人：STEINERT CHRISTOPH DIPL PHYS DR RER NAT

法律状态：法律状态公告日：19910124;?

状态代码：AF;?

法律状态：IS ADDITION TO NO.描述信息：Docdb Publication Number:; DE 3923468A1Corresponding Publication Number:;3913074Corresponding Authority:;DE法律状态公告日：19920917;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 3923468A1

**501、MEASURING METHOD FOR WEAR QUANTITY OF FIRST WALL PROTECTIVE MATERIAL OF NUCLEAR FUSION REACTOR**

摘要：PURPOSE : To shorten the wall thickness measuring time by measuring a relative position of the surface of a protective material, based on a position of a substrate by a measuring instrument provided on a through-hole of the protective material which reaches the surface of the substrate of a first wall or on a gap between the protective materials. CONSTITUTION : First of all, a light source is moved to the upper part in the vertical direction of a protective material 8 by a driving device 6 and stopped. Subsequently, a laser light 7 is radiated onto the protective material 8 and its reflected light is caught by a television camera 2, and converted to an electric signal. This signal is sent to an image processor 3, and also, analyzed by a personal computer 5. Its result is displayed on a screen of the computer 5 and a monitor television 4. After the measurement of one piece of the protective material 8 is completed, the light source 1 and the camera 2 are moved by a prescribed distance in parallel to the surface of the protective material 8 by the device 6, and the measurement is executed again. At the time of moving the light source 1 and the camera 2, they are moved in the horizontal two-dimensional direction in the case a laser beam 7 radiated from the light source 1 is a spot-like light, and in only in one direction of the plane in the direction vertical to a slit-like light in the case the laser light is a slit-like light, and the measurement is executed.

公开（公告）号：[JP03012586A](https://www.incopat.com/detail/init2?formerQuery=H15aK4SQzfDN22jmy7cA9PR0OjOTHMZL&local=zh)

公开（公告）日：1991-01-21

申请号：JP01145119

申请日：1989-06-09

申请人：JAPAN ATOMIC ENERGY RES INST; KAWASAKI HEAVY IND LTD

法律状态：法律状态公告日：20040427;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H0312586A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20050426;?

状态效果：+;?

状态代码：R250;?

法律状态：RECEIPT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H0312586A Free Text Description:;JAPANESE INTERMEDIATE CODE: R250法律状态公告日：20060223;?

状态代码：S111;?

法律状态：REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP描述信息：Docdb Publication Number:; JP H0312586A Free Text Description:;JAPANESE INTERMEDIATE CODE: R313115法律状态公告日：20060303;?

状态代码：R350;?

法律状态：WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER描述信息：Docdb Publication Number:; JP H0312586A Free Text Description:;JAPANESE INTERMEDIATE CODE: R350法律状态公告日：20060710;?

状态效果：-;?

状态代码：LAPS;?

法律状态：CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES描述信息：Docdb Publication Number:; JP H0312586A

**502、Procedure for the production of thermal energy and neutrons for nuclear fusion**

摘要：This is the procedure for the production of thermal energy and neutrons for nuclear fusion of deuterium in the presence of titanium, palladium and other metals with a high affinity and for its isotopes. In these isotopes the metals, preferably in a finely granulated form, are put into close contact with a deuterated compound that can be decomposed thermally(for example LIA1D4) or by photolysis (for example DC1 with laser light) and are set up in a reactor equipped with a heating system (for the cases of thermal decomposition) or a clear radiation window (used for cases of photolysis). There is a temperature detection system and the entrance and exit connections for a gas pump. The reactor is put in a vacuum and then put under the deutorium pressure, and, subsequently, the heating system is started to cause the thermal decomposition of the deuterated compound or the photolysis radiation is started to disassociate the deuterated gas with nuclear photolysis to elevate the development of heat.

公开（公告）号：[IT1235485B](https://www.incopat.com/detail/init2?formerQuery=Ge1rz6e5UQRrUiILoglEZA%3D%3D&local=zh)

公开（公告）日：1992-08-19

申请号：IT9048947

申请日：1989-05-02

申请人：SERGIO ALLULLI

法律状态：法律状态公告日：19991027;?

状态代码：TA;?

法律状态：FEE PAYMENT DATE (SITUATION AS OF EVENT DATE), DATA COLLECTED SINCE 19931001描述信息：Docdb Publication Number:; IT 8947904D0Effective Date:;19940526

**503、Fusion reactor - using notched cathode for electrolysis and focused laser beams fo initiation**

摘要：A fusion reactor for the fusion of hydrogen or deuterium by electrolysis and concentration on the cathode uses for the latter a metal which is resistant to high temperatures e.g. palladium with a notch-shaped cross-section. Cooling coils are embedded in the carrier material of the cathode and contact the rear of the cathode in a welded joint, to carry away the heat produced by the fusion energy. Several laser guns are positioned to merge their beams in several foci all in the same plane passing through teh apex of the notch. Insulation covers the outside. The lasers are ignited intermittently, but simultaneously. ADVANTAGE - The cathode is beneficial for fusion. The focused laser beams contribute local energy to the initiation of the fusion reaction.

公开（公告）号：[DE3913074A1](https://www.incopat.com/detail/init2?formerQuery=BhD8xWZQQZGoLbJet3ct5PR0OjOTHMZL&local=zh)

公开（公告）日：1990-10-25

申请号：DE3913074

申请日：1989-04-21

申请人：STEINERT CHRISTOPH DIPL PHYS DR RER NAT

法律状态：法律状态公告日：19910124;?

状态代码：AG;?

法律状态：HAS ADDITION NO.描述信息：Docdb Publication Number:; DE 3913074A1Corresponding Publication Number:;3923468Corresponding Authority:;DE法律状态公告日：19920507;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 3913074A1

**504、SEPARATING, FIXING AND SUPPLYING DEVICE FOR HYDROGEN ISOTOPE**

摘要：PURPOSE : To separate tritium from other isotopes in a gaseous state to reduce tritium inventory and to continuously supply by selectively exciting and ionizing tritium and continuously taking out for storage and supply. CONSTITUTION : The waste gas of nuclear fusion reactor plasma is supplied into an ionizing unit 1, heated by a high-frequency heating unit 5, and changed into atomic state. The atomic group in the device is irradiated by a laser beam 12 and the tritium atoms are selectively excited and ionized, and tritium ions (T+) is recovered in a recovery unit 3 by the action of drawing-out electrode 13 and an electro-magnet 14 of an ion drawing-out unit 2. By lowering the voltage to be impressed to the electrode 13 or the electric power to be supplied to the electro-magnet 14, the moving radius of tritium ion is made smaller to project tritium ions into the inner side of a hydrogen occlusion packing layer 20, and, at the same time, a hydrogen occlusion packing layer 19 with a value 17 opened is heated by a heater 21 to discharge tritium, which is supplied into plasma through a fuel injection system.

公开（公告）号：[JP02207825A](https://www.incopat.com/detail/init2?formerQuery=aFI6YYoNy5ISQDBzOm5iIfR0OjOTHMZL&local=zh)

公开（公告）日：1990-08-17

申请号：JP01027456

申请日：1989-02-08

申请人：HITACHI LTD

**505、Procedure for the proof of a purposeful nucleic acid sequence.**

摘要：Target nucleic acid is detected by reorganizing an excess of two complementary pairs of single stranded probes, which hybridize to contiguous target sequences. Nucleic acid in the sample is annealed to the probes, and contiguous sequences are ligated to form complementary detectable fused probes complementary to the original target, and the fused probes serve as a template for further fusions. The reorganized species being detected is increased at a geometric rate by cycles of annealing probes to the target, ligating the annealed probes in a template-dependent manner, and separating the fused probes from the template to form new templates.

公开（公告）号：[DE3885422D1](https://www.incopat.com/detail/init2?formerQuery=uM6QR5%2FJEdEllktPN1laCfR0OjOTHMZL&local=zh)

公开（公告）日：1993-12-09

申请号：DE3885422

申请日：1988-12-12

申请人：ABBOTT LAB

法律状态：法律状态公告日：19941201;?

状态效果：+;?

状态代码：8364;?

法律状态：NO OPPOSITION DURING TERM OF OPPOSITION描述信息：Docdb Publication Number:; DE 3885422D1法律状态公告日：20061012;?

状态效果：-;?

状态代码：8339;?

法律状态：CEASED/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 3885422D1

**506、强流惯性约束，振荡的受控核聚变方法**

摘要：本方法是应用激光、磁压缩、反射的受控核聚变 (专利申请号：87103025)产生的强离子流，经加速、 聚焦(或分流)，再打特置的靶。应用‘惯性约束’原 理、进行热核反应。再打靶时，同样使用磁压缩、反射 和电极输出强离子流。这样往返进行打靶。使磁压 缩线圈、贮能电容、离子流感应线圈、贮能平衡电机实 现谐振和电能的输入与输出。

公开（公告）号：[CN1035383A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2ieT3L0YFIEGg%3D%3D&local=zh)

公开（公告）日：1989-09-06

申请号：CN88109752.7

申请日：1988-12-05

申请人：陈达远

法律状态：法律状态公告日：19890906;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：19890705;?

法律状态：实质审查请求;?

描述信息：;?

法律状态公告日：19930414;?

法律状态：专利申请的视为撤回;?

描述信息：;?

**507、METHOD AND APPARATUS TO FORM A COHERENT BOSON BEAM WITH MASS, REACTOR OF FUSION AND METHOD TO GENERATE ENERGY BY MEANS OF NUCLEAR FUSION.**

摘要：The method of producing a coherent boson beam causing a coherent light to be incident on dense matter.

公开（公告）号：[ES2011870A6](https://www.incopat.com/detail/init2?formerQuery=JOa6HmwkZp%2F9NLOCP8QjUfR0OjOTHMZL&local=zh)

公开（公告）日：1990-02-16

申请号：ES8803214

申请日：1988-10-21

申请人：APRICOT S A

法律状态：法律状态公告日：20010501;?

状态效果：-;?

状态代码：FD1A;?

法律状态：PATENT LAPSED描述信息：Docdb Publication Number:; ES 2011870A6Effective Date:;20010301

**508、METHOD AND APPARATUS FOR FORMING A COHERENT BEAM OF BOSONS HAVING MASS**

摘要：Coherent light from a pulsed laser (5) is focused by a lens (4) onto a liquid helium film (21) formed by capillary action on bent wire (29) in a vacuum chamber (31). A coherent boson beam is produced by the interaction of the laser light with the liquid helium. The boson beam is extracted through a vacuum transport system (17). A fusion reactor using a coherent boson beam so produced is also disclosed.

公开（公告）号：[WO8904112A1](https://www.incopat.com/detail/init2?formerQuery=rTjPc0mR9CbYTgRkpVtiu%2FR0OjOTHMZL&local=zh)

公开（公告）日：1989-05-05

申请号：WOAU88000411

申请日：1988-10-20

申请人：APRICOT SA

法律状态：法律状态公告日：19890505;?

状态效果：+;?

状态代码：AK;?

法律状态：DESIGNATED STATES描述信息：Docdb Publication Number:; WO 8904112A1Corresponding Kind:;A1Legal Designated States:;AT;AU;BB;BG;BR;CH;DE;DK;FI;GB;HU;JP;KP;KR;LK;LU;MC;MG;MW;NL;NO;RO;SD;SE;SU;US;法律状态公告日：19890505;?

状态效果：+;?

状态代码：AL;?

法律状态：DESIGNATED COUNTRIES FOR REGIONAL PATENTS描述信息：Docdb Publication Number:; WO 8904112A1Corresponding Kind:;A1Legal Designated States:;AT;BE;BJ;CF;CG;CH;CM;DE;FR;GA;GB;IT;LU;ML;MR;NL;SE;SN;TD;TG;法律状态公告日：19900417;?

状态效果：+;?

状态代码：WWE;?

法律状态：WIPO INFORMATION: ENTRY INTO NATIONAL PHASE描述信息：Docdb Publication Number:; WO 8904112A1Corresponding Publication Number:;1988909963Corresponding Authority:;EP法律状态公告日：19900802;?

状态代码：REG;?

法律状态：REFERENCE TO NATIONAL CODE描述信息：Docdb Publication Number:; WO 8904112A1Designated State Authority:;DEDesignated State Event Code:;8642Designated State Description:;IMPACT ABOLISHED FOR DE - I.E. PCT APPL. NOT ENT. GERMAN PHASE法律状态公告日：19900926;?

状态效果：+;?

状态代码：WWP;?

法律状态：WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 8904112A1Corresponding Publication Number:;1988909963Corresponding Authority:;EP法律状态公告日：19960918;?

状态效果：+;?

状态代码：WWG;?

法律状态：WIPO INFORMATION: GRANT IN NATIONAL OFFICE描述信息：Docdb Publication Number:; WO 8904112A1Corresponding Publication Number:;1988909963Corresponding Authority:;EP

**509、FUEL FILLING METHOD AND DEVICE OF CRYOGENIC FOAM TARGET FOR LASER NUCLEAR FUSION**

摘要：PURPOSE : To control a filling amount of a fuel precisely and to fill the fuel solely to a foam structure by heating a hollow foam sphere which is completely soaked into a liquid fuel containing a deuterium, by taking out the hollow foam sphere out of the liquid fuel after confirming spouting of a gasified liquid fuel from the hollow foam sphere. CONSTITUTION : After a hollow foam sphere 3 is set to a device, the whole device is vacuumized and is cooled down to 20K. Thereafter, a deuterium gas is supplied to a quartz glass test tube 11 at a pressure of 600Torrs through a gas induction guide 5 of an upper cryostat 1. The deuterium gas is liquefied and settled at a bottom of the quarts glass test tube 11. Then the hollow foam sphere 3 is soaked into a liquid deuterium and within one minute after, is heated by a heater 12. When a deuterium gas sprouts from the hollow foam sphere 3 in the liquid, the hollow foam sphere 3 is held up above a liquid surface and, at the same time, the heater 12 is disconnected. With this procedure, the liquid deuterium can permeate solely into a wall part of the hollow foam sphere 3.

公开（公告）号：[JP02074895A](https://www.incopat.com/detail/init2?formerQuery=aFI6YYoNy5LTGO%2BLcOwibfR0OjOTHMZL&local=zh)

公开（公告）日：1990-03-14

申请号：JP63226241

申请日：1988-09-09

申请人：UNIV OSAKA

法律状态：法律状态公告日：20080909;?

状态效果：-;?

状态代码：EXPY;?

法律状态：CANCELLATION BECAUSE OF COMPLETION OF TERM描述信息：Docdb Publication Number:; JP H0274895A

**510、Fusion pumped light source**

摘要：Apparatus is provided for generating energy in the form of light radiation. A fusion reactor is provided for generating a long, or continuous, pulse of high-energy neutrons. The neutron flux is coupled directly with the lasing medium. The lasing medium includes a first component selected from Group O of the periodic table of the elements and having a high inelastic scattering cross section. Gamma radiation from the inelastic scattering reactions interacts with the first component to excite the first component, which decays by photon emission at a first output wavelength. The first output wavelength may be shifted to a second output wavelength using a second liquid component responsive to the first output wavelength. The light outputs may be converted to a coherent laser output by incorporating conventional optics adjacent the laser medium.

公开（公告）号：[US4835787A](https://www.incopat.com/detail/init2?formerQuery=KBX6Q%2BeVC2Gv500oSl9DFg%3D%3D&local=zh)

公开（公告）日：1989-05-30

申请号：US07239584

申请日：1988-09-01

申请人：THE UNITED STATES OF AMERICA AS REPRESENTED BY THE UNITED STATES DEPARTMENT OF ENERGY

法律状态：法律状态公告日：19921229;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4835787A 法律状态公告日：19930530;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4835787A 法律状态公告日：19930817;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4835787A Effective Date:;19930530

**511、ETCHING APPARATUS**

摘要：PURPOSE : To increase an etching speed, to enhance the selectivity of an etching region and to make an element minute and highly reliable by a method wherein a strong laser beam is condensed to an optical scatterer on a wafer by utilizing an amplification and phase conjugate reflection system and a pretreatment and a selective etching operation are executed. CONSTITUTION : A primary scattered beam 7 of a laser is incident on amplification and phase conjugate reflection systems 1W4 by means of a mirror 5, an incident beam is amplified by the amplifier 2 and reflected by the phase conjugate mirror 1, an amplification and phase conjugate reflected beam 8 which has been amplified and time-reversed by means of the amplifier 2 is incident on a wafer 6 via the mirror 5 and, the wafer is pretreated and etched. Since a completely conjugate reflected wave traces the completely same route as the incident beam, a strain of a wave front due to a medium in a halfway part is removed completely and the wave front is returned accurately to an original pattern, a signal strain of an optical transmission line can be removed and a strong laser beam can be applied to a minute fuel element (optical scatterer) of laser nuclear fusion. By this setup, etching speed can be increased, the selectivity of etching region can be enhanced and an element can be made minute and highly reliable.

公开（公告）号：[JP01289253A](https://www.incopat.com/detail/init2?formerQuery=rezGq5EOKJ8wr3SUdyLCWPR0OjOTHMZL&local=zh)

公开（公告）日：1989-11-21

申请号：JP63119875

申请日：1988-05-17

申请人：FUJITSU LTD

**512、光磁受控核聚变理论**

摘要：光磁受控核聚变理论：是一种使氘的等离子体在 激光导体螺旋形电磁感应下加温、加速从而达到核聚 变的理论。在激光发射器与螺旋形感应电机之间加设氘的 等离子体高速注入装置。这套发射装置开动后产生 具有强力场的由激光射束，光载氘的等离子体射束， 螺旋形磁力射线射束三种射束组合而成的混合射 束。混合射束在达到热核点火速度时一旦受阻，因氘 核碰撞而发生核聚变。

公开（公告）号：[CN1036476A](https://www.incopat.com/detail/init2?formerQuery=wE2KAomDT2g41bEbBVL0yg%3D%3D&local=zh)

公开（公告）日：1989-10-18

申请号：CN88101950.X

申请日：1988-04-09

申请人：尚铁钢; 江常

法律状态：法律状态公告日：19891018;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：19890301;?

法律状态：实质审查请求;?

描述信息：;?

法律状态公告日：19911211;?

法律状态：视为撤回的专利申请;?

描述信息：;?

**513、LASER THERMONUCLEAR INSTALLATION FOR OBTAINING ELECTRIC POWER**

摘要：The invention relates to the field of invention relates to a thermonuclear technology, in particular to devices thermonuclear synthesis, and may be used at creation of power reactors.. for invention is diffusion lu efficiency due to the use of closed fuel cycle. On figs, 1 has unit-circuit laser fusion power plant for producing electric power; on Figure 2-circuit pulse of reactor-laser; on figs. 3-the same, incision along a-and on Figure 2. Laser thermonuclear plant for producing electric energy has chamber i, blanket 2, termoyadernuyu target 3, master generator 4, preliminary amplifier 5, members 6 transportation of beam, amplifiers 7 power, focusing eletermoyadernoi technology, in particular to devices thermonuclear synthesis, and may be used at creation of power reactors. For invention is diffusion lu efficiency due to use of tamknutogo fuel cycle, in thermonuclear reactor laser with. shteea as power amplifiers of the driver used nuclear and reactors-lasers with direct pumping fragments of division, fuel which is plutonium, protvodimym in uransoderzha -future blanksts of reactor. Diffusion lu efficiency is achieved organization closed fuel cycle. 3 dwg. have before it 8, unit 9 control, , circuit 10 heat carrier, steam generator 11, elektroturboelektrogenerator 12. Amplifier 7 has cylindrical body 13, active zone 14, modulator 15 reactivity of, reflector 16 neutrons, optical windows 17. Device operates as follows. In chamber, surrounded by blanketom 2, synchronously are introduced termoyadernye target 3 and pulses of laser radiation. Pulses of laser radiation are generated by driver, consisting of master generator 4, preliminary amplifier 5, elements 6 transportation of beam, of amplifiers 7 power and focusing elements 8. Synchronousness of operation of all units of the driver unit 9 5 ib № another layer is made polymeric and laminar to

公开（公告）号：[SU1626954A1](https://www.incopat.com/detail/init2?formerQuery=AkiX3BfKOoOsHbUKs%2FX7f%2FR0OjOTHMZL&local=zh)

公开（公告）日：1992-06-23

申请号：SU4398557

申请日：1988-03-28

申请人：PREDPRIYATIE P/YA V 2679; INSTITUT OBSHCHEJ FIZIKI AN SSSR

**514、LASER NUCLEAR FUSION DEVICE**

摘要：PURPOSE : To enable supplying of energy by nuclear fusion by causing implosion of nuclear fuel by means of a laser light condensing system solar light tracking mechanism and the laser beam of a laser medium excited by solar light. CONSTITUTION : The condensing optical system 1 is driven by a tracking mechanism 2 to efficiently condense the solar light 14 and to guide the solar light 14 through a fiber 3 for optical transmission to a laser generating part 4. The laser medium 15 in the generating part 4 generates the powerful laser beam 13 by the solar light 14 transmitted by the fiber 3. The beam 13 is condensed by a suitable optical system to the prescribed position in a nuclear fusion reactor 6. The nuclear fuel pellets from a nuclear fuel supplying device 5 are supplied into this fusion reactor 6. The nuclear fuel is subjected to implosion in the fusion reactor 6 to induce the laser beam nuclear reaction.

公开（公告）号：[JP01161190A](https://www.incopat.com/detail/init2?formerQuery=rezGq5EOKJ8RJXJlzb2Y9vR0OjOTHMZL&local=zh)

公开（公告）日：1989-06-23

申请号：JP62317504

申请日：1987-12-17

申请人：NEC CORP

**515、SPACER OF GRID AND METHOD TO MAKE IT.**

摘要：A REDUCTION MARKED IN THE FALL OF PRESSURE OF A COOLING LIQUID THROUGH A SEPARATOR OF GRID OF A COMBUSTIBLE ASSEMBLY NUCLEAR THIS OBTAINED BY CONVEX OUTLINING OF THE EDGES TOWARDS ARIBA (NORMALMENTE LOS INFERIORES) (32) OF THE MEMBERS OF GRID. PREFERABLY ESTAN DONE CYLINDRICAL OR AIR THROPLE. THEY CAN BE MAKE BEVEL AND FIRST THEN, PICKLINGS TO DIRECT TO A CURRENT OF A POLYMERIC ABRASIVE MIXTURE AND AN ORGANIC ONE AGAINST THEM, OR BY TRANSPORT OF AN O-ELECTRON LASER BEAMS THROUGHOUT THEM IN A POWER AND SPEED LIKE CAUSE A ZONE MELTING. A SMALLER IMPROVEMENT IS ASSURED BY BEVELLING IN ALL THE LENGTH. AN ADDITIONAL IMPROVEMENT CAN BE OBTAINED ALSO TO SHARPEN THE EDGES DOWNWARDS (NORMALLY SUPERIORS) (34).

公开（公告）号：[ES2026171T3](https://www.incopat.com/detail/init2?formerQuery=JOa6HmwkZp%2B9q%2B4fTheVc%2FR0OjOTHMZL&local=zh)

公开（公告）日：1992-04-16

申请号：ES198787117113

申请日：1987-11-19

申请人：SIEMENS AKTIENGESELLSCHAFT

法律状态：法律状态公告日：19920416;?

状态效果：+;?

状态代码：FG2A;?

法律状态：DEFINITIVE PROTECTION描述信息：Docdb Publication Number:; ES 2026171T3Corresponding Publication Number:;273183Corresponding Authority:;ES

**516、Hybrid-drive implosion system for ICF targets**

摘要：Hybrid-drive implosion systems (20, 40) for ICF targets (10, 22, 42) are described which permit a significant increase in target gain at fixed total driver energy. The ICF target is compressed in two phases, an initial compression phase and a final peak power phase, with each phase driven by a separate, optimized driver. The targets comprise a hollow spherical ablator (12) surroundingly disposed around fusion fuel (14). The ablator is first compressed to higher density by a laser system (24), or by an ion beam system (44), that in each case is optimized for this initial phase of compression of the target. Then, following compression of the ablator, energy is directly delivered into the compressed ablator by an ion beam driver system (30, 48) that is optimized for this second phase of operation of the target. The fusion fuel (14) is driven, at high gain, to conditions wherein fusion reactions occur. This phase separation allows hydrodynamic efficiency and energy deposition uniformity to be individually optimized, thereby securing significant advantages in energy gain. In additional embodiments, the same or separate drivers supply energy for ICF target implosion. -GOVT PAR The U.S. Government has rights to this invention pursuant to Contract No. W-7405-ENG-48 between the U.S. Department of Energy and the University of California, for the operation of Lawrence Livermore National Laboratory.

公开（公告）号：[USH0000508H](https://www.incopat.com/detail/init2?formerQuery=ZHiPEPHmcoVhImpdqLCcTvR0OjOTHMZL&local=zh)

公开（公告）日：1988-08-02

申请号：US07108183

申请日：1987-10-14

申请人：The United States of America as represented by the United States Department of Energy

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状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US H508HNew Owner:;UNITED STATES OF AMERICA, THE, AS REPRESENTED BY TFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNOR:MARK, JAMES W.;REEL/FRAME:004832/0152Effective Date:;19870925

**517、Fusion reactor pumped laser**

摘要：A nuclear pumped laser capable of producing long pulses of very high power laser radiation is provided. A toroidal fusion reactor provides energetic neutrons which are slowed down by a moderator. The moderated neutrons are converted to energetic particles capable of pumping a lasing medium. The lasing medium is housed in an annular cell surrounding the reactor. The cell includes an annular reflecting mirror at the bottom and an annular output window at the top. A neutron reflector is disposed around the cell to reflect escaping neutrons back into the cell. The laser radiation from the annular window is focused onto a beam compactor which generates a single coherent output laser beam. -GOVT PAC CONTRACTUAL ORIGIN OF THE INVENTION PAR The United States Government has rights in this invention pursuant to Contract No. DE-AC02-76CH03073 between the U.S. Department of Energy and Princeton University.

公开（公告）号：[US4746484A](https://www.incopat.com/detail/init2?formerQuery=MwPi0E7tQrAGucfXGdqSfQ%3D%3D&local=zh)

公开（公告）日：1988-05-24

申请号：US07092987

申请日：1987-09-04

申请人：The United States of America as represented by the Department of Energy

法律状态：法律状态公告日：19871106;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4746484A New Owner:;UNITED STATES OF AMERICA, THE, AS REPRESENTED BY TFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:JASSBY, DANIEL L.;REEL/FRAME:004783/0605Effective Date:;19870826法律状态公告日：19920107;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4746484A 法律状态公告日：19920123;?

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法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4746484A 法律状态公告日：19920524;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4746484A 法律状态公告日：19920728;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4746484A Effective Date:;19920524

**518、应用激光、磁压缩、反射的受控核聚变方案**

摘要：本方案是在大功率激光(1010～12瓦·10ns)对热 核燃料作用的条件下，用‘角向快收缩’原理，对激光 产生的等离子体进行较长时间约束(最大磁强为82 千高斯，最大电流为1640千安，约束时间约为12微 秒)。并且用激光反射层，‘弯晶体’和石墨等组成的 特殊反射层来进行的热核反应。核燃料总的转化率 为1～4％。

公开（公告）号：[CN87103025A](https://www.incopat.com/detail/init2?formerQuery=WtqdGMMWrpyBU8pXDQuxG%2FR0OjOTHMZL&local=zh)

公开（公告）日：1988-05-11

申请号：CN87103025.X

申请日：1987-08-01

申请人：陈达远

法律状态：法律状态公告日：19880511;?

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法律状态公告日：19890412;?

法律状态：审定;?

描述信息：审定;?

法律状态公告日：19900103;?

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描述信息：授权;?

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描述信息：;?

法律状态公告日：19930609;?

法律状态：专利权的终止未缴年费专利权终止;?

描述信息：;?

**519、Fusion pumped laser**

摘要：Apparatus is provided for generating energy in the form of laser radiation. A tokamak fusion reactor is provided for generating a long, or continuous, pulse of high-energy neutrons. The tokamak design provides a temperature and a magnetic field which is effective to generate a neutron flux of at least 10.sup.15 neutrons/cm.sup.2.s. A conversion medium receives neutrons from the tokamak and converts the high-energy neutrons to an energy source with an intensity and an energy effective to excite a preselected lasing medium. The energy source typically comprises fission fragments, alpha particles, and radiation from a fission event. A lasing medium is provided which is responsive to the energy source to generate a population inversion which is effective to support laser oscillations for generating output radiation. -GOVT PAC BACKGROUND OF THE INVENTION PAR This invention relates to neutron pumped lasers and, more particularly, to neutron pumped lasers having a fusion reactor as a source of high-energy neutrons. This invention is the result of a contract with the Department of Energy (Contract No. W-7405-ENG-36).

公开（公告）号：[US4800566A](https://www.incopat.com/detail/init2?formerQuery=KBX6Q%2BeVC2G0SVluTy%2BcqQ%3D%3D&local=zh)

公开（公告）日：1989-01-24

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申请日：1987-07-31

申请人：The United States of America as represented by the United States Department of Energy

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状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4800566A New Owner:;UNITED STATES OF AMERICA, THE, AS REPRESENTED BY TFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:PAPPAS, DANIEL S.;REEL/FRAME:004782/0259Effective Date:;19870729法律状态公告日：19920825;?

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法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4800566A 法律状态公告日：19930124;?

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状态代码：LAPS;?

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状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4800566A Effective Date:;19930124

**520、FUEL PELLET INJECTOR**

摘要：PURPOSE : To apply a large acceleration to a fuel pellet consisting of plasma fuel and metallic support and to miniaturize a fuel pellet injector by accelerating the fuel pellet, then projecting laser light on the fuel pellet to separate the plasma fuel and the metallic support. CONSTITUTION : After the pellet consisting of the metallic support 4 and the fuel 3 is accelerated to 10km/s in a fuel pellet accelerating part 16, the fuel pellet is injected to a part 17 for checking the passage of the fuel pellet. The fuel pellet is irradiated with the laser of a laser oscillator 5 for irradiation of the fuel pellet by a control signal sent from the checking part 17, by which the support 4 and the fuel are disconnected. Only the support 4 is decelerated by the magnetic field generated by a solenoid coil 8 and is recovered in a metallic support recovering part 19. On the other hand, the fuel 3 does not sense the magnetic field generated by the coil 8 and is, therefore, injected into a nuclear fusion device 21 without being decelerated.

公开（公告）号：[JP63304191A](https://www.incopat.com/detail/init2?formerQuery=rFv9HsWAtTDPBzOmxhJBs%2FR0OjOTHMZL&local=zh)

公开（公告）日：1988-12-12

申请号：JP62139417

申请日：1987-06-03

申请人：HITACHI LTD

**521、Laser or charged-particle-beam fusion reactor with direct electric generation by magnetic flux compression**

摘要：A high-power-density laser or charged-particle-beam fusion reactor system maximizes the directed kinetic energy imparted to a large mass of liquid lithium by a centrally located fusion target. A fusion target is embedded in a large mass of lithium, of sufficient radius to act as a tritium breeding blanket, and provided with ports for the access of beam energy to implode the target. The directed kinetic energy is converted directly to electricity with high efficiency by work done against a pulsed magnetic field applied exterior to the lithium. Because the system maximizes the blanket thickness per unit volume of lithium, neutron-induced radioactivities in the reaction chamber wall are several orders of magnitude less than is typical of other fusion reactor systems. -GOVT PAC BACKGROUND OF THE INVENTION PAR The U.S. Government has righgts in this invention pursuant to Contract No. W-7405-ENG-48 between the U.S. Department of Energy and the University of California, for the operation of Lawrence Livermore National Laboratory.

公开（公告）号：[US4735762A](https://www.incopat.com/detail/init2?formerQuery=MwPi0E7tQrCco%2BZGbM0kyg%3D%3D&local=zh)

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申请日：1987-02-20

申请人：The United States of America as represented by the United States Department of Energy

法律状态：法律状态公告日：19870602;?

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法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4735762A New Owner:;UNITED STATES OF AMERICA, THE, AS REPRESENTED BY TFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:LASCHE, GEORGE P.;REEL/FRAME:004719/0806Effective Date:;19870219法律状态公告日：19911105;?

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法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4735762A 法律状态公告日：19920405;?

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状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4735762A 法律状态公告日：19920609;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4735762A Effective Date:;19920405

**522、METHOD FOR DISSOLVING FLUOROPHOSPHATE GLASS**

摘要：PURPOSE : To obtain the titled glass available for a laser amplifier, etc., used for laser nuclear fusion without coloring resulting from platinum foreign materials and platinum by dissolving specified fluorophosphate glass in a vessel made of carbon under the gaseous atomosphere free from oxygen. CONSTITUTION : Fluorophosphate glass consisting of by cationic percentage 5W30% total amount of oxide, 1/2P2O5 and metallic fluoride or the like is introduced into a vessel made of carbon which is manufactured by black glassy carbon material having properties such as 1W5% porosity, about 3, 000°C heat resistance, 70W80 Shore hardness and 500W1, 200kgf/cm2 flexural strength, etc., Then fluorophosphate glass is melted by heating this vessel at about 900°C for about 2hr under the atmosphere of gas free from oxygen such as gaseous N2 or of a gaseous mixture obtained by mixing gaseous halide such as ≤30vol.% CF4 with this inert gas. Thereafter it is slowly cooled at about 25°C to collect glass.

公开（公告）号：[JP63182220A](https://www.incopat.com/detail/init2?formerQuery=rFv9HsWAtTDACsF5jjRJ3PR0OjOTHMZL&local=zh)

公开（公告）日：1988-07-27

申请号：JP62014953

申请日：1987-01-24

申请人：HOYA CORP

**523、OPTICAL INFORMATION RECORDING MEDIUM**

摘要：PURPOSE : To prevent deterioration in CN ratio and to improve recording sensitivity by forming a recording layer of a low melting alloy essentially consisting of tellurium and forming a trigger layer of an org. material having a purine deriv. as a nucleus. CONSTITUTION : The recording layer 5 is formed of a low m.p. alloy essentially consisting of tellurium, and the trigger layer 4 is formed of at least one kind of org. material selected from an org. material having the purine deriv. as the nucleus, fluorine-contained org. compd., silicon-contained org. compd., hydrocarbon, and organometallic compd. More specifically, the trigger layer 4 is formed of a light transmittable material which melts, decomposes or sublimates at a temp. lower than the m.p. of the recording layer 5. Deformation of the pregrooves and prepits transferred to the substrate 1 is thereby prevented in spite of the repeated projection of the laser light for reproduction to the recording layer and the recording sensitivity is improved.

公开（公告）号：[JP63076123A](https://www.incopat.com/detail/init2?formerQuery=rFv9HsWAtTBXJ783LHMg1PR0OjOTHMZL&local=zh)

公开（公告）日：1988-04-06

申请号：JP61219748

申请日：1986-09-19

申请人：HITACHI MAXELL

**524、APPARATUS FOR GENERATING OF eLECTRICITY AND sHORTER-WAVE RADIATION**

摘要：Neutron radiation n reacts with Li in wall 13a to produce energetic ions which interact with inert gas 17 to produce a UV emitting plasma. The UV interacts with wall 13a to produce photo-electrons captured by an anode 15 to produce an electrical output voltage. There may also be an exit for UV radiation. In an alternative electrical generator, fusion is induced in a pellet at the centre of a sphere by means of laser radiation, the neutrons emitted induce a UV emitting plasma in an inert gas within the sphere, and the UV either causes emission of photo-electrons at the sphere wall to be collected by an anode adjacent the walls to produce an output voltage, or produces an output voltage by means of photo- voltaic arrays adjacent the sphere wall.

公开（公告）号：[DE3628919A1](https://www.incopat.com/detail/init2?formerQuery=0B0iiXN2bXbzYLBdjOr6ffR0OjOTHMZL&local=zh)

公开（公告）日：1987-02-26

申请号：DE3628919

申请日：1986-08-26

申请人：UNITED STATES DEPARTMENT OF ENERGY

法律状态：法律状态公告日：19900809;?

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状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 3628919A1

**525、Electricity and short wavelength radiation generator**

摘要：Neutron radiation n reacts with Li in wall 13a to produce energetic ions which interact with inert gas 17 to produce a UV emitting plasma. The UV interacts with wall 13a to produce photo-electrons captured by an anode 15 to produce an electrical output voltage. There may also be an exit for UV radiation. In an alternative electrical generator, fusion is induced in a pellet at the centre of a sphere by means of laser radiation, the neutrons emitted induce a UV emitting plasma in an inert gas within the sphere, and the UV either causes emission of photo-electrons at the sphere wall to be collected by an anode adjacent the walls to produce an output voltage, or produces an output voltage by means of photo- voltaic arrays adjacent the sphere wall.

公开（公告）号：[GB2179780A](https://www.incopat.com/detail/init2?formerQuery=cXm5s9VIqcwdAmb5JsDNPQ%3D%3D&local=zh)

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申请号：GB8620112

申请日：1986-08-19

申请人：UNITED STATES DEPARTMENT OF ENERGY

法律状态：法律状态公告日：19900725;?

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法律状态：APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED \*\* AFTER PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 8620112D0

**526、MACROCOSPIC BASER, METHOD TO FORM COHERENT BOSON BEAMS, AND PROCEDURE AND FUSION REACTOR.**

摘要：A MACROCOSPIC BASER IS DESCRIBED (EQUIVALENT TO A BOSON LASER), IN WHICH BOSONS SUCH AS DEUTERIUM PARTICLES, GENERATED BY AN ION SOURCE (2), BECOME CONGESTED IN AN EMPTINESS TUBE (1), TO EXECUTE MOVEMENT IN A CIRCULATORY TRAJECTORY. THIS MOVEMENT CAN TAKE PLACE BY MEANS OF THE FLEXION MAGNET USE (3) AND (4), AND THE APPROACH OF BOSONS IN A CIRCULATING CURRENT IS FACILITATED BY MAGNETS CUADRIPOLARES (5) AND (6). A BEAM OF COHERENT LIGHT OF A LASER IS DIRECTED TO THE BOSON CURRENT WITHIN THE EMPTINESS CHAMBER TO CARRY OUT INDUCED SCATTERING OF BOSONS WITHIN THAT CURRENT AND TO DO SO THE CURRENT IS DEVELOPED SINCE A COHERENT BOSON BEAM OUTWARDS DIRECTED FROM BASER CUVPOR ADAPTED DEFLECTION OF THE CIRCULATING CURRENT, AS BY DE-EXCITATION OF FLEXION MAGNETS. ALSO, THE BOSONS CAN BE REFLECTED OF LINEAR WAY.

公开（公告）号：[ES2000736A6](https://www.incopat.com/detail/init2?formerQuery=JOa6HmwkZp9o0Vn5clFmv%2FR0OjOTHMZL&local=zh)

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申请日：1986-07-24

申请人：APRICOT S A

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状态代码：FD1A;?

法律状态：PATENT LAPSED描述信息：Docdb Publication Number:; ES 2000736A6Effective Date:;20000201

**527、MACROSCOPIC LASER, FURTHER METHOD FOR GETTING BOSON BEAM, AS WELL AS EQUIPMENT AND METHOD FOR OBTAINING ENERGY BY MEANS OF NUCLEAR FUSION**

摘要：A macroscopic baser (boson equivalent of a laser). Bosons such as deuterium particles generated by an ion source (2) are injected into a vacuum tube (1), so as to execute motion on a circulatory path therein. Movement of the bosons in this path may be effected by the use of bending magnets (3) and (4) and focusing of the bosons into a circulating stream is assisted by quatropole magnets (5) and (6). A coherent light beam from a laser is directed into the stream of bosons within the vacuum chamber to effect induced scattering of the bosons within that stream whereby to cause the stream to develop as a coherent beam of bosons which is directed outwardly from the baser by suitable deflection of the circulating stream, such as de-energization of the bending magnets. In other embodiments, the bosons may be reflected in linear fashion.

公开（公告）号：[HU203165B](https://www.incopat.com/detail/init2?formerQuery=K4FjS%2Ft1AfO0eOvdRf2aIQ%3D%3D&local=zh)

公开（公告）日：1991-05-28

申请号：HU86 3073

申请日：1986-07-24

申请人：APRICOT S A LU

**528、FUEL PELLET FOR LASER NUCLEAR FUSION**

摘要：The present Publication SUMMARY data for electronic application before the application data recorded on the oxygen in air.

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公开（公告）日：1987-12-05

申请号：JP61122181

申请日：1986-05-29

申请人：TOSHIBA CORP

**529、Apparatus for plasma diagnostics**

摘要：A system for measuring the density of certain ions or neutrals within a plasma without probe intervention. When cylindrical symmetry is present, the system also provides measurement of spatial distribution of excited ionic states within the plasma. The system allows spatial distribution of contaminant ions in magnetic confinement thermonuclear fusion devices to be monitored. These functions are accomplished by directing two laser beams through a region containing a plasma. The laser means are at respective wavelengths chosen to be in and closely adjacent to a spectral region near the electronic transition frequency of the ionic species of interest in the plasma. The intensities of the two wavelengths are then measured and compared to obtain the desired data and characterization. -GOVT PAC DEDICATORY CLAUSE PAR The invention described herein may be manufactured, used, and licensed by or for the Government for governmental purposes without the payment to us of any royalties thereon.

公开（公告）号：[US4707133A](https://www.incopat.com/detail/init2?formerQuery=MwPi0E7tQrD4F3ckqEfzJA%3D%3D&local=zh)

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申请日：1986-03-06

申请人：The United States of America as represented by the Secretary of the Army

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状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4707133A 法律状态公告日：19911117;?

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状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4707133A 法律状态公告日：19920128;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4707133A Effective Date:;19911117

**530、FUEL PELLET FOR LASER NUCLEAR FUSION**

摘要：The present Publication SUMMARY data for electronic application before the application data recorded on the oxygen in air.

公开（公告）号：[JP62110187A](https://www.incopat.com/detail/init2?formerQuery=OLHOgNeZKk0PqYiejYODXPR0OjOTHMZL&local=zh)

公开（公告）日：1987-05-21

申请号：JP60248893

申请日：1985-11-08

申请人：TOSHIBA CORP

**531、Electricity and short wavelength radiation generator**

摘要：Methods and associated apparati for use of collisions of high energy atoms and ions of He, Ne or Ar with themselves or with high energy neutrons to produce short wavelength radiation (.lambda..apprxeq.840-1300 .ANG.) that may be utilized to produce cathode-anode currents or photovoltaic currents.

公开（公告）号：[USH0000407H](https://www.incopat.com/detail/init2?formerQuery=ZHiPEPHmcoWo87QjPaObQ%2FR0OjOTHMZL&local=zh)

公开（公告）日：1988-01-05

申请号：US06769518

申请日：1985-08-26

申请人：The United States of America as represented by the United States Department of Energy

法律状态：法律状态公告日：19860221;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US H407H New Owner:;UNITED STATES OF AMERICA, AS REPRESENTED BY THE DEFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:GEORGE, E. VICTOR;REEL/FRAME:004512/0008Effective Date:;19850813

**532、Ultrafast neutron detector**

摘要：The invention comprises a neutron detector (50) of very high temporal resolution that is particularly well suited for measuring the fusion reaction neutrons produced by laser-driven inertial confinement fusion targets. The detector comprises a biased two-conductor traveling-wave transmission line (54, 56, 58, 68) having a uranium cathode (60) and a phosphor anode (62) as respective parts of the two conductors. A charge line and Auston switch assembly (70, 72, 74) launch an electric field pulse along the transmission line. Neutrons striking the uranium cathode at a location where the field pulse is passing, are enabled to strike the phosphor anode and produce light that is recorded on photographic film (64). The transmission line may be variously configured to achieve specific experimental goals. -GOVT PAR The U.S. Government has rights in this invention pursuant to Contract No. W-7405-ENG-48 between the U.S. Department of Energy and the University of California for the operation of the Lawrence Livermore National Laboratory .

公开（公告）号：[US4667107A](https://www.incopat.com/detail/init2?formerQuery=Q7tq1T2lyJyeSGhbIoNHlQ%3D%3D&local=zh)

公开（公告）日：1987-05-19

申请号：US06746496

申请日：1985-06-19

申请人：The United States of America as represented by the United States Department of Energy

法律状态：法律状态公告日：19850828;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4667107A New Owner:;UNITED STATES OF AMERICA SA REPRESENTED BY THE UNIFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:WANG, CHING L.;REEL/FRAME:004446/0256Effective Date:;19850521法律状态公告日：19901002;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4667107A Fee Payment-year:;4法律状态公告日：19941227;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4667107A 法律状态公告日：19950521;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4667107A 法律状态公告日：19950801;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4667107A Effective Date:;19950524

**533、大容量场畸变火花开关**

摘要：大容量场畸变火花开关，属高压电器技术领 域，是快速脉冲高电压大电流装置的关键部件。 它由两个主电极，一个触发极和三个绝缘套筒组 成。开关触发前电场均匀分布，触发时局部电场 强烈畸变，使之在小于100毫微秒的时间内迅速 导通，可流过十几万安培的脉冲电流。但开关的 同步性能好，时延分散性不大于20毫微秒。可用 于等离子体及核聚变研究、粒子加速器、激光技 术，海底探矿设备及冲击大电流等装置。使用时， 可多个开关并联。也可一个开关单独使用。

公开（公告）号：[CN85201717U](https://www.incopat.com/detail/init2?formerQuery=ud0h%2F4vdSH0QLACI7z1uxfR0OjOTHMZL&local=zh)

公开（公告）日：1986-03-05

申请号：CN85201717.0

申请日：1985-04-28

申请人：清华大学

法律状态：法律状态公告日：19860305;?

法律状态：公开;?

描述信息：公开;?

法律状态公告日：19860917;?

法律状态：授权;?

描述信息：授权;?

法律状态公告日：19900704;?

法律状态：专利权有效期续展;?

描述信息：;?

法律状态公告日：19920819;?

法律状态：专利权的终止未缴纳年费专利权终止;?

描述信息：;?

**534、LASER WELDING METHOD FOR THIN SHEET**

摘要：PURPOSE : To decrease the generation of the cracks in a weld zone by specifying the ratio between the melting diameter and fusion width of the nugget in the weld zone at a specific value or below thereby setting welding conditions. CONSTITUTION : The nugget is welded to the sealing part of a gimbal 2 of a thin sheet spring and a spacer 5 by laser beam welding to form the weld zone 1. The irradiation energy density of laser light is so controlled in this stage that the ratio between the melting diameter B on the surface of the gimbal 2 and the fusion width A of the spacer 5 attains ≤1.4. The cracks D generated in the laser weld zone 1 increase sharply when the ratio B/A of the diameter B and the width A exceeds 1.4. The generation of the cracks D in the weld zone 1 is thus prevented by adopting the laser welding condition under which the value of the B/A is specified at ≤1.4.

公开（公告）号：[JP61242775A](https://www.incopat.com/detail/init2?formerQuery=QxXbEhq7BPP6%2BlPw6Fb%2BxvR0OjOTHMZL&local=zh)

公开（公告）日：1986-10-29

申请号：JP60082326

申请日：1985-04-19

申请人：HITACHI LTD

**535、Process for producing porous antireflective coatings**

摘要：An antireflective coating and a process for producing the same are described. This antireflective coating has the difference in refractive index between the glass interface and the outer surface of the antireflected coating of 0.15 or less. This antireflective coating can be formed by treating a glass with an aqueous solution containing specified amounts of an acidic salt, Al3+ and Si4+. The antireflective coating has a high mechanical strength and optical elements having such an antireflective coating are useful for use in the laser nuclear fusion system.

公开（公告）号：[US4693910A](https://www.incopat.com/detail/init2?formerQuery=Q7tq1T2lyJz8s4zqaaxyaQ%3D%3D&local=zh)

公开（公告）日：1987-09-15

申请号：US06724319

申请日：1985-04-17

申请人：HOYA CORP

法律状态：法律状态公告日：19850417;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4693910A New Owner:;HOYA CORPORATION 1-13-12, NISHI-SHINJUKU, SHINJUKFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNORS:NAKAJIMA, SADAHIRO;TORATANI, HISAYOSHI;REEL/FRAME:004396/0887Effective Date:;19850311法律状态公告日：19910201;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4693910A Fee Payment-year:;4法律状态公告日：19950425;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4693910A 法律状态公告日：19950917;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4693910A 法律状态公告日：19951128;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4693910A Effective Date:;19950920

**536、SEPARATION OF ISOTOPE BY LASER AND WORKING SUBSTANCE**

摘要：PURPOSE : To efficiently separate the isotope of Fe, Cr, Ni or Mo, by combining CO2 laser excited hydrogen Raman laser with a specific working substance. CONSTITUTION : A working substance represented by M(CO)n wherein M is one of Fe, Cr, Ni and Mo and (n) is a positive integer determined stoichiometrically, which is supplied from a working substance container 6 and allowed to fill a reaction vessel 5, is irradiated with hydrogen Raman laser beam 4 emitted from hydrogen Raman laser 3 which is excited by CO2-laser beam 2 emitted from CO2-laser 1. As a result, 56, 57, 58Fe, 53Cr, 61Ni and 96, 97Mo suitable for use as the stock material of the structural material of a nuclear fusion reactor can be efficiently separated.

公开（公告）号：[JP61008119A](https://www.incopat.com/detail/init2?formerQuery=QxXbEhq7BPMbC3V99uMo5fR0OjOTHMZL&local=zh)

公开（公告）日：1986-01-14

申请号：JP59126767

申请日：1984-06-20

申请人：RIKAGAKU KENKYUSHO

**537、Pulsed nuclear power plant**

摘要：A spherical underground cavity is filled with saturated steam or a mixture of saturated steam and coal dust in which a nuclear device is detonated to provide the source of energy. The energy thus released heats the saturated steam to produce superheated steam used to generate power. If coal dust is mixed with the saturated steam in the correct ratio, the rise in temperature caused by the nuclear explosion initiates a chemical reaction between the steam and the coal to produce carbon monoxide and hydrogen. The mixture of carbon monoxide and hydrogen can be used as fuel in an external power plant. The carbon monoxide and the hydrogen gases can also be separated for use as fuels or for industrial applications. The wall of the spherical underground cavity is isolated from the shock wave created by the nuclear explosion in the ambient saturated steam by a segmented steel shell. Each segments is supported by a shock absorbing mechanism attached to the rocks in which the cavity is embedded. After the explosion, the steel shell segments move outward, are slowed down and stopped by the shock absorbing system. No shock is transmitted to the surrounding rocks. The shell segments are eventually returned to their initial position and readied for the next explosion. After enough superheated steam has been extracted out of the cavity, water and saturated steam are again injected inside the cavity, to restore the initial ambient conditions that existed prior to the preceding explosion. When the conditions inside the cavity are right, another nuclear device is introduced, then detonated and another cycle is started. The explosion cycle frequency is established by the size of the cavity and the yield of the nuclear device. Most, and possibly even all, of the energy thus generated is produced by a nuclear reaction of the fusion type. Means is thereby provided to produce energy and possibly more fuels by utilizing the inexpensive and plentiful fuel deuterium. If a fission reaction is not used to trigger the fusion reaction, tritium may need to be added to the deuterium so that a powerful laser beam can be used to provide the triggering means.

公开（公告）号：[US4569819A](https://www.incopat.com/detail/init2?formerQuery=1I0lkhO%2BX%2BVKAnBLacU7IQ%3D%3D&local=zh)

公开（公告）日：1986-02-11

申请号：US06586830

申请日：1984-03-06

申请人：DAVID; CONSTANT V

法律状态：法律状态公告日：19890912;?

状态代码：REMI;?

法律状态：MAINTENANCE FEE REMINDER MAILED描述信息：Docdb Publication Number:; US 4569819A 法律状态公告日：19900211;?

状态效果：-;?

状态代码：LAPS;?

法律状态：LAPSE FOR FAILURE TO PAY MAINTENANCE FEES描述信息：Docdb Publication Number:; US 4569819A 法律状态公告日：19900501;?

状态效果：-;?

状态代码：FP;?

法律状态：EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE描述信息：Docdb Publication Number:; US 4569819A Effective Date:;19900211

**538、MANUFACTURE OF GOLD OR PLATINUM BY THERMAL NUCLEAR FUSION**

摘要：PURPOSE : To manufacture gold or platinum by heating each such element as the total number of protons in two or more kinds of atoms is a specified value to an extremely high temp. to cause thermal nuclear fusion. CONSTITUTION : Each such element as the total number of protons in two or more kinds of atoms in 79 (gold) or 78 (platinum) is heated to an extremely high temp. such as 100 millionW1, 000 million°C absolute temp. with a thermal nuclear reaction apparatus such as a heavy ion corpuscule accelerator, an electron beam accelerator, a light ion beam accelerator, a superconductive magnetic projector accelerator, an explosive or small-sized atomic bomb nuclear fusion apparatus, a laser apparatus or tokamak. Said element may be pressurized to an extremely high pressure. Thus, gold or platinum is manufactured.

公开（公告）号：[JP60070131A](https://www.incopat.com/detail/init2?formerQuery=580r4UGtO0O4lRirinOt2vR0OjOTHMZL&local=zh)

公开（公告）日：1985-04-20

申请号：JP58180032

申请日：1983-09-28

申请人：YOSHIDA KINGO

**539、Laser nuclear decontamination method**

摘要：Using laser [aim] nuclear power plant of contaminants, in canceling radioactive to nuclear power plant device during operation of the exposed region is fixed within such a range that is not laser reduces provides nuclear decontamination method. [Configured] steam generator (20) during operation of operator space (28) and (32) through the nuclear reactor have radioactive refrigerant to remove the power source mechanism for optical method (40) using optics (34) the reflective mechanism (36) through want to for the decontamination of the light is allowed to reflect off a laser radiation onto a surface, the marking device, having pulse length of microseconds about 1 a radiation emits a pulse in a power laser (46) the laser (40) capable of moving the substrate support a coalescer (30), a generator platform arranged in opening vicinity of (50) provided is a carrying water (48) which is arranged to, steam generator (20) with the outer peripheral surface of the space (28) for shielded from shielding plate (56) is provided with, shielding plate (56) is attached to radioactive spent filtration device (62) extending suction instrument (60) the oxide layer by signal is passed through optics (34) space (28) inner surface of the upon scanning a can be removed from.

公开（公告）号：[KR19840004610A](https://www.incopat.com/detail/init2?formerQuery=04y2CKtGEVjNNxpB%2FCPvZ6TEeGaW3%2BTM&local=zh)

公开（公告）日：1984-10-22

申请号：KR1019830001506

申请日：1983-04-11

申请人：RCA Co

**540、LASER ATOMIC FUSION FUEL TARGET MONITOR DEVICE**

摘要：The present Publication SUMMARY data for electronic application before the application data recorded on the oxygen in air.

公开（公告）号：[JP58195183A](https://www.incopat.com/detail/init2?formerQuery=H5FeZpD188BPOHoBnvpmN%2FR0OjOTHMZL&local=zh)

公开（公告）日：1983-11-14

申请号：JP57077907

申请日：1982-05-10

申请人：NIPPON DENKI KK

**541、High zone of receiver power source**

摘要：During operation of the power supply present in an hrom core saturation within a temperature range that linear region operation core stage than the material of as less matter change magnetic flux density saturation, magnetic saturation magnetization of stage core by selecting a fusion-promoting material and temperature stabilized whose outputs a relay driving signal. the capacitor. AC source (11) a soundboard excited by transformer (20) of secondary winding 1 (20a) have a magnetization core (120) of steel crossarm [...] or [...] 1 (120a).. 2 difference output winding wound around the stator wound around a (20b-20f) [...] steel crossarm the opposite legs or 2 (120b). wound around a. Input voltage (Va) and with the change of a load on output winding wound around the stator output of the winding is in order to provide the second lower voltage 2, [...] steel crossarm 2 (120b) of output voltage polarity alternating light between the laser beam and each polar group is magnetic saturation. 2 winding (120b) decodes a both ends and other adjusted 23V supply voltage DC output voltage polarity made of a television receiver load activate circuitry to. In particular, magnetic saturation [...] steel crossarm 2 (120b) 1 material magnetization of [...] steel crossarm (120a) relatively than the material magnetization of lithium provides a higher resistance temperature cutinases ferrite. include.

公开（公告）号：[KR19840000131A](https://www.incopat.com/detail/init2?formerQuery=04y2CKtGEVjL0cEtFIoUKC34vJL4GBl3&local=zh)

公开（公告）日：1984-01-30

申请号：KR1019820001460

申请日：1982-04-02

申请人：R C A Co

**542、Pressure sensor and method of producing same**

摘要：A fluid pressure sensing device for a fluid-containing vessel, and a method of assembling said device, is disclosed. A metallic diaphragm is preferably laser-fused to one end of the sensing device to define the end surface thereof. The sensing device is preferably mounted and sealed with the wall of the vessel such that the diaphragm and such sealing engagement is substantially flush or coplanar with the inside surface of the wall. A passageway extending through the sensing device admits an indicator fluid to one side of the diaphragm for measuring the pressure of the fluid in the vessel. The passageway also includes an adjustable nozzle for pre-calibrating the sensing device.

公开（公告）号：[US4462258A](https://www.incopat.com/detail/init2?formerQuery=HR%2BiVB1GYB600p9fnttUuw%3D%3D&local=zh)

公开（公告）日：1984-07-31

申请号：US06359581

申请日：1982-03-18

申请人：KING ENG CORP

法律状态：法律状态公告日：19820318;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4462258A New Owner:;KING ENGINEERING CORPORATION, 3201 SOUTH STATE ST.Free Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:BODDY, RONALD L;REEL/FRAME:003980/0034Effective Date:;19820311法律状态公告日：19870824;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4462258A Fee Payment-year:;4法律状态公告日：19911127;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4462258A Fee Payment-year:;8法律状态公告日：19951020;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4462258A Fee Payment-year:;12

**543、LASER-ASSISTED ISOTOPE SEPARATION OF TRITIUM**

摘要：LASER-ASSISTED ISOTOPE SEPARATION OF TRITIUM Methods for laser-assisted isotope separation of tritium, using infrared multiple photon dissociation of tritium-bearing products in the gas phase. One such process involves the steps of (1) catalytic exchange of a deuterium-bearing molecule XYD with tritiated water DTO from sources such as a heavy water fission reactor, to produce the tritium-bearing working molecules XYT and (2) photoselective dissociation of XYT to form a tritiumrich product. By an analogous procedure, tritium is separated from tritium-bearing materials that contain a large amount of hydrogen such as a light water coolant from fission or fusion reactors.

公开（公告）号：[CA1184876A1](https://www.incopat.com/detail/init2?formerQuery=dvxWSoLrWw7XqP0wcZmq%2B%2FR0OjOTHMZL&local=zh)

公开（公告）日：1985-04-02

申请号：CA388917

申请日：1981-10-28

申请人：US GOV SEC ARMY

法律状态：法律状态公告日：20020402;?

状态效果：-;?

状态代码：MKEX;?

法律状态：EXPIRY描述信息：Docdb Publication Number:; CA 1184876A1

**544、" tHERMONUCLEAR ONEfUSION REACTOR"**

摘要：An inertial confinement fusion method in which target pellets are imploded in sequence by laser light beams or other energy beams at an implosion site which is variable between pellet implosions along a line. The effect of the variability in position of the implosion site along a line is to distribute the radiation fluence in surrounding reactor components as a line source of radiation would do, thereby permitting the utilization of cylindrical geometry in the design of the reactor and internal components.

公开（公告）号：[DE3138693A1](https://www.incopat.com/detail/init2?formerQuery=EtQVnaHMPNEXNIf7M2v9avR0OjOTHMZL&local=zh)

公开（公告）日：1982-10-21

申请号：DE3138693

申请日：1981-09-29

申请人：WESTINGHOUSE ELECTRIC CORP

法律状态：法律状态公告日：19850905;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 3138693A1

**545、THERMONUCLEAR FUSION REACTOR**

摘要：An inertial confinement fusion method in which target pellets are imploded in sequence by laser light beams or other energy beams at an implosion site which is variable between pellet implosions along a line. The effect of the variability in position of the implosion site along a line is to distribute the radiation fluence in surrounding reactor components as a line source of radiation would do, thereby permitting the utilization of cylindrical geometry in the design of the reactor and internal components.

公开（公告）号：[JP57125878A](https://www.incopat.com/detail/init2?formerQuery=%2BEZOlbecIbSf9vvISFaTyPR0OjOTHMZL&local=zh)

公开（公告）日：1982-08-05

申请号：JP56153098

申请日：1981-09-29

申请人：WESTINGHOUSE ELECTRIC CORP

**546、PROCEEDED OF FUSION PLASMA HAS CONFINES BY INERTIA, PRODUCING a FLUENCE OF RADIATION HAS SOURCE LINEAR**

摘要：PROCEDE OF FUSION HAS PLASMA CONFINES BY INERTIA, PRODUCING a FLUENCE OF RADIATION SOURCE LINEAIRE.DANS THIS PROCESS OF the PASTILLES OF FUEL HAS ARE IMPLOSEES SUCCESSIVELY BY Laser beams 16 OR OTHER ENERGY BEAMS CONCENTRATE ON a SITE Of IMPLOSION 11, 12, 13 WHOSE POSITION CAN VARY IN an INTERVAL B-B ALONG an AXIS A-A BETWEEN the IMPLOSIONS OF PASTILLES. THIS VARIATION OF POSITION OF the SITE Of IMPLOSION ALONG an AXIS, CAUSES TO SET OUT AGAIN the FLUENCE OF RADIATION ON the SURROUNDING ELEMENTS OF the ENGINE AS a LINEAR SOURCE OF RADIATION WOULD DO IT. IT IS THUS POSSIBLE TO GIVE TO THE ENGINE AND HAS ITS INTERNAL ELEMENTS A GEOMETRICAL FORM CYLINDRIQUE.APPLICATIONS IN PARTICULAR WITH FUSION REACTORS THERMONUCLEAIRE.

公开（公告）号：[FR2498799A1](https://www.incopat.com/detail/init2?formerQuery=jUr85%2FkNNq464Fk4z%2FWA2fR0OjOTHMZL&local=zh)

公开（公告）日：1982-07-30

申请号：FR81018254

申请日：1981-09-28

申请人：WESTINGHOUSE ELECTRIC CORP

法律状态：法律状态公告日：19850726;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2498799A1

**547、MANUFACTURE OF SEMICONDUCTOR SUBSTRATE**

摘要：PURPOSE : To obtain an insular single crystal region of high quality by a method wherein an SiO2 layer and then Si3N4 films are attached to an Si substrate whereon a polycrystalline or amorphous Si layer is buried surrounded with said SiO2 layer and application of an optical or electron beam is effected for the monocrystallization of the buried Si layers. CONSTITUTION : An SiO2 layer 2 is formed on an Si substrate 1 by means of heat oxidation, wherein a plurality of recesses is provided and Si3O4 films 4 are laid down on the bottoms thereof. Polycrystalline or amorphous Si 3 is buried in the recesses with their bottoms composed of Si3N4 and side walls composed of SiO2. The island-shaped Si layers 3 are flooded with a laser beam for fusion. When the laser application is over, the Si layers 3 are allowed to recrystallize, this time into single crystals. The bottoms of Si3N4 layers 4 prevent Si from disappearance, and high quality single crystals are obtained because the Si layers 3 in contact with the Si3N4 films 4 are provide with a high concentration of crystal-gathering nuclei.

公开（公告）号：[JP58025220A](https://www.incopat.com/detail/init2?formerQuery=H5FeZpD188Akse9jPUch0vR0OjOTHMZL&local=zh)

公开（公告）日：1983-02-15

申请号：JP56124898

申请日：1981-08-07

申请人：MITSUBISHI ELECTRIC CORP

**548、METHOD AND DEVICE FOR METALLIC VAPOR DEPOSITION ON INSIDE SURFACE OF VACUUM VESSEL**

摘要：PURPOSE : To vapor deposit different metals approximately uniformly on the inside surface of an evacuated vessel with simple construction in heating the metallic vapor depositing source in said vessel and vapor depositing the metals on the inside surface of the vessel by using irradiation of laser in this heating. CONSTITUTION : In the stage of vapor depositing Ti, Mo, etc. on the inside surface of a vacuum vessel, particularly a vacuum vessel 1 for nuclear fusion devices, a metallic body 11 of any of these metals is secured and disposed in the vessel 1. An observation port 2 is sealed with a glass window 10, and the laser 15 of large output from a laser generator 13 is irradiated onto the body 11 via a lens 12. Then, only the part cast by the light 15 of the body 11 is heated and the metal melts, evaporates and can be vapor-deposited on the inside surface of the vessel 1. It is possible to vapor deposit dissimilar metals easily by using plural dissimilar metallic bodies 11, disposing these in suitable positions and casting the light 15 to these through optical paths.

公开（公告）号：[JP57198260A](https://www.incopat.com/detail/init2?formerQuery=%2BEZOlbecIbRkuBjvggMdSvR0OjOTHMZL&local=zh)

公开（公告）日：1982-12-04

申请号：JP56080967

申请日：1981-05-29

申请人：HITACHI LTD

**549、Production and utilization of ion cluster acceleration by means of potential well**

摘要：An intense high current, high voltage pulsed beam comprising bursts of electrons of about 40 nanoseconds duration each, having a beam radius of about 1 mm is projected through an anode consisting of a hollow tube with much smaller diameter than that of the diode tube surrounding the cathode. By appropriate selection of combinations of materials, sizes, shapes, and surface treatments surrounding the beam in its travel through the anode, or by means such as ion beams directed back along the beam, or by laser pulses on selected areas inside the anode or on the cathode tip, or by controlling supply of appropriate gases or vapors through a small diameter tubular cathode, either metallic or dielectric, and separately into the tubular anode near the end farthest from the cathode and nearer the target, the beam is made to pinch down to a radius of about 0.1 mm, whereupon the beam can strike a solid state target producing nuclear fusion and many useful applications including energy production by fusion, space craft propulsion, and production of new heavy transuranic elements. By introducing bunching of ions in the finely pinched beam, tiny clusters of the order of 10.sup.8 or 10.sup. 9 ions of various elements including ions of the heaviest elements can be accelerated to energies of up to more than 10.sup.12 electron-volts per ion which upon impact upon a suitable solid state target produces clusters of showers of particles at such high densities in space and time that they overlap and produce useful energy and many important new kinds of applications.

公开（公告）号：[US4428901A](https://www.incopat.com/detail/init2?formerQuery=HR%2BiVB1GYB49g9Nr%2Fl%2FxHw%3D%3D&local=zh)

公开（公告）日：1984-01-31

申请号：US06219619

申请日：1980-12-24

申请人：BENNETT; WILLARD H

法律状态：法律状态公告日：19870519;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4428901AFee Payment-year:;4法律状态公告日：19910618;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4428901AFee Payment-year:;8法律状态公告日：19950717;?

状态效果：+;?

状态代码：FPAY;?

法律状态：FEE PAYMENT描述信息：Docdb Publication Number:; US 4428901AFee Payment-year:;12

**550、Laser-assisted isotope separation of tritium**

摘要：Methods for laser-assisted isotope separation of tritium, using infrared multiple photon dissociation of tritium-bearing products in the gas phase. One such process involves the steps of (1) catalytic exchange of a deuterium-bearing molecule XYD with tritiated water DTO from sources such as a heavy water fission reactor, to produce the tritium-bearing working molecules XYT and (2) photoselective dissociation of XYT to form a tritium-rich product. By an analogous procedure, tritium is separated from tritium-bearing materials that contain predominately hydrogen such as a light water coolant from fission or fusion reactors. -GOVT PAR The U.S. Government has rights in this invention pursuant to Contract No. W-7405-ENG-48 between the U.S. Department of Energy and the University of California Lawrence Livermore Laboratory.

公开（公告）号：[US4411755A](https://www.incopat.com/detail/init2?formerQuery=HR%2BiVB1GYB4C9Z91xAOvOg%3D%3D&local=zh)

公开（公告）日：1983-10-25

申请号：US06210716

申请日：1980-11-28

申请人：HERMAN; IRVING P; MARLING; JACK B

法律状态：法律状态公告日：19810320;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4411755A New Owner:;UNITED STATES OF AMERICA , THE, AS REPRESENTED BYFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNORS:HERMAN IRVING P.;MARLING JACK B.;REEL/FRAME:003840/0846Effective Date:;19801121

**551、Method for the release of thermonuclear energy combining impact, magnetic and inertial confinement fusion**

摘要：In the invention, first a relatively large mass is accelerated to a few 10 km/sec and then used to implode and compress a dense magnetized plasma confined inside a small cavity. In the proposed invention the dense plasma shall consist of thermonuclear material, as for example DT, and shall reach upon compression the temperature for thermonuclear ignition. The magnetized plasma is thereby permitted to be preheated by a laser or particle beam or a gas discharge to reduce the required compression to reach thermonuclear ignition. After having reached the ignition temperature the plasma undergoes a thermonuclear burn excursion, greatly increasing its energy content. During this excursion a small window in the wall of the chamber confining the burning plasma breaks open releasing a large amount of the energy within the cavity in the form of black body radiation and shock waves. The energy flux from both the black body radiation and the shock wave is then used to ablatively implode a second stage high density high yield thermonuclear target. The importance of this two stage arrangement is that it permits much higher yields than would be possible with a one stage magnetized target.

公开（公告）号：[US4435354A](https://www.incopat.com/detail/init2?formerQuery=HR%2BiVB1GYB5TpdT2nws7Wg%3D%3D&local=zh)

公开（公告）日：1984-03-06

申请号：US06196928

申请日：1980-10-14

申请人：WINTERBERG; F

**552、LASER BEAM-STEAM ENGINE FOR CAR**

摘要：PURPOSE : To generate power by irradiating laser beam into the mixed air with the water which is injected into a cylinder, in proportion to the amount of step-in of an accelerating pedal and exploding the mixed air in plasma fusion, in the captioned engine which uses laser beam as priming madium. CONSTITUTION : A high voltage is generated in a transmission coil 6A through distributors 7A and 7B. The high voltage generated is input into laser beam transformers 1A and 1B. The laser beam transformers 1A dnd 1B are gas lasers which use plutonium, helium, or. The laser beam is radiated into the mixed air with the water which is pressurized in each cylinder, through optical fibers 9. Thus, plasma fusion reaction is generated, and power can be obtained.

公开（公告）号：[JP57065869A](https://www.incopat.com/detail/init2?formerQuery=%2BEZOlbecIbTGQ%2BjhAUkNhfR0OjOTHMZL&local=zh)

公开（公告）日：1982-04-21

申请号：JP55138669

申请日：1980-10-06

申请人：AIUCHI NOBUNAO

**553、Production and utilization of ion cluster acceleration**

摘要：An intense high current, high voltage pulsed beam comprising bursts of electrons of less than 200 nanoseconds duration each, having a beam radius of about 0.5 mm. is projected through an anode consisting of a hollow tube with much smaller diameter than that of the diode tube surrounding the cathode and with diameter diminishing with deeper penetration into the tubular anode. By appropriate selections of combinations of materials, sizes, shapes, and surface treatments surrounding the beam in its travel through the anode, or by means such as ion beams directed back along the beam, or by laser pulses on selected spots inside the anode or on the cathode tip, or by controlled supply of appropriate gases or vapors through a small diameter tubular cathode, either metallic or dielectric, and separately into the tubular anode near the end farthest from the cathode and nearer the target, the beam is made to pinch down to a radius of 0.1 mm. or less, whereupon the beam can strike a solid state target producing nuclear fusion and many useful applications including energy production by fusion, space craft propulsion, and production of new heavy transuranic elements. By introducing selected and controlled local bunching of ions in the finely pinched beam, tiny clusters of the order of 10.sup.8 to 10.sup. ions of various elements including ions of the heaviest elements can be accelerated to energies of up to more than 10.sup.12 electron-volts per ion which upon impact upon a suitable solid state target produces clusters of showers of particles at such high densities in space and time that they overlap and produce useful energy and many important new kinds of applications.

公开（公告）号：[US4363774A](https://www.incopat.com/detail/init2?formerQuery=%2B4Cz3%2FEpcY%2BNK%2FSXxz2WdQ%3D%3D&local=zh)

公开（公告）日：1982-12-14

申请号：US06149613

申请日：1980-05-14

申请人：BENNETT; WILLARD H

法律状态：法律状态公告日：19840731;?

状态代码：CC;?

法律状态：CERTIFICATE OF CORRECTION描述信息：Docdb Publication Number:; US 4363774A法律状态公告日：19851105;?

状态代码：CC;?

法律状态：CERTIFICATE OF CORRECTION描述信息：Docdb Publication Number:; US 4363774A

**554、Method for the initiation of fusion reactions for the controlled release of energy**

摘要：The invention relates to a novel method for the controlled release of thermonuclear energy by inertial confinement. The essential feature of the invention is that is uses for the achievement of this goal high temperature black body radiation. The black body radiation is generated by hypervelocity impact onto a tenuous gas trapped inside a small cavity. The tenuous gas is shock-heated to high temperatures and thereby becomes a source of intense photon radiation, which after reaching thermodynamic equilibrium becomes a black body radiation. The thusly generated black body radiation is the furthermore amplified by adiabatic compression through the implosion of the cavity. During the implosion process the photons inside the cavity must be sufficiently well confined by the opacity of the cavity wall which sets a lower limit for the implosion velocity. The thusly created and amplified black body radiation is then used to ablatively implode and ignite a thermonuclear target placed inside the cavity. Because the attainable black body radiation temperatures typically reach values of .apprxeq. 1 keV, the corresponding short photon wave length should with much greater ease permit high density target compression than with other proposed drivers. The cavity implosion itself can be driven by any one of the available sources hitherto proposed for inertial confinement fusion, including laser beams, beams of charged particles and hypervelocity projectiles, but unlike in case of direct pellet fusion with a greatly reduced power and power density.

公开（公告）号：[US4328070A](https://www.incopat.com/detail/init2?formerQuery=%2B4Cz3%2FEpcY8cjM3hhfXC2w%3D%3D&local=zh)

公开（公告）日：1982-05-04

申请号：US06126332

申请日：1980-03-03

申请人：WINTERBERG; FRIEDWARDT M

**555、Method for filling hollow shells with gas for use as laser fusion targets**

摘要：Hollow shell laser fusion targets, such as glass microballoons, are filled with gases of the type which do not permeate through the wall of the balloon. A hole is laser-drilled in the balloon, a plug is placed over the hole and gas is introduced into the balloon through the loosely plugged hole. Thereafter the plug is melted to form a seal over the hole, entrapping the gas within the target. The plug is, for example, a polymer such as highly crystalline polystyrene, or glass.

公开（公告）号：[US4380855A](https://www.incopat.com/detail/init2?formerQuery=%2B4Cz3%2FEpcY93QorqcC9jUw%3D%3D&local=zh)

公开（公告）日：1983-04-26

申请号：US06113146

申请日：1980-01-18

申请人：UNIV ROCHESTER

**556、Particle-induced Thermonuclear Fusion**

摘要：A nuclear fusion process for igniting a nuclear fusion pellet in a manner similar to that proposed for laser beams uses, an array of pulsed high energy combined particle beams 14, focused to bombard the pellet P for isentropically compressing it to a Fermi-degenerate state by thermal blow-off and balanced beam momentum transfer. Each combined particle beam is arranged to produce electric charge neutrality in a volume around the target so that space charge induced expansion is avoided. Each high energy combined beam may be produced by merging in neutralizing proportion at least one convergently focused stream of positive particles and at least one convergently focused stream of negative particles to form an electrically neutralized combined beam having a deBroglie wavelength focal pattern at the region R of pellet collision.

公开（公告）号：[GB2047945A](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FNY5QhivXj1dw%3D%3D&local=zh)

公开（公告）日：1980-12-03

申请号：GB8001110

申请日：1980-01-14

申请人：OCCIDENTAL RESEARCH CORP

法律状态：法律状态公告日：19850904;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 2047945A

**557、Nuclear fusion reaction for power generation - initiated by firing capsule and maintained by electron ion or laser beams focussed onto fuel**

摘要：The parent patent describes a method of initiating and maintaining a nuclear fusion reaction for power generation. A battery of condensers is provided for igniting the reaction. In this addition, axially symmetrically distributed recesses in the upper dome of the reactor are provided, and electron radiation devices, ion accelerators and laser beam generators, all focused towards the centre of the reactor, are switched on for continual operation and cause the fuel strand above the fusion plasma to evaporate.

公开（公告）号：[DE2946788A1](https://www.incopat.com/detail/init2?formerQuery=x1AvT73qrYUdwLIUvitg3fR0OjOTHMZL&local=zh)

公开（公告）日：1981-05-27

申请号：DE2946788

申请日：1979-11-20

申请人：KNAPP WILHELM

法律状态：法律状态公告日：19830616;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 2946788A1

**558、FLUOROPHOSPHATE TYPE LASER GLASS**

摘要：PURPOSE : To provide very stable fluorophosphate type laser glass having a low non- linear refractive index coefficient and useful as laser glass for nuclear fusion, etc. by introducing Nd2O3 into glass consisting of P2O5 and metal fluorides. CONSTITUTION : 0.01W3 Cationic % of 1/2Nd2O3 is introduced into glass consisting of 1/2P2O5 5W25 cationic % and the balance metal fluorides to obtain fluorophos- phate type laser glass. This laser glass has a low non-linear refractive index coefficient and is very favorable as laser glass for nuclear fusion in performance. In order to further enhance the stability, etc., 0.01W3% of 1/2Nd2O3 is introduced into glass consisting of 1/2P2O5 5W25%, AlF3 20W35%, YF3 0W5%, BaF2+SrF2+CaF2+ MgF2 22W55% and NaF+LiF+KF 0W25%.

公开（公告）号：[JP55047243A](https://www.incopat.com/detail/init2?formerQuery=GKnRc7mMozBHTYMbJlP6O%2FR0OjOTHMZL&local=zh)

公开（公告）日：1980-04-03

申请号：JP54120544

申请日：1979-09-19

申请人：HOYA CORP

**559、Particle-induced thermonuclear fusion**

摘要：A nuclear fusion process for igniting a nuclear fusion pellet in a manner similar to that proposed for laser beams uses, an array of pulsed high energy combined particle beams focused to bombard the pellet for isentropically compressing it to a Fermi-degenerate state by thermal blow-off and balanced beam momentum transfer. Each combined particle beam is arranged to produce electric charge neutrality in a volume around the target so that space charge induced expansion is avoided. Each high energy combined beam is produced by merging in neutralizing proportion a convergently focused stream of positive particles and at least one convergently focused stream of negative particles to form an electrically neutralized combined beam having a deBroglie wavelength focal pattern at the region of pellet collision. The momentum and fusible mass of the particle beams reduce the ablation loss and result in a larger fraction of the pellet being available for fusion reaction. Existing particle beam technology makes high energies and high production efficiencies feasible for reducing the power input and reactor size necessary for practical nuclear fusion power.

公开（公告）号：[US4401618A](https://www.incopat.com/detail/init2?formerQuery=HR%2BiVB1GYB7gPCQwltUSVw%3D%3D&local=zh)

公开（公告）日：1983-08-30

申请号：US06024314

申请日：1979-03-27

申请人：OCCIDENTAL RESEARCH CORPORATION

**560、CHOPPER DEVICE USED FOR NUCLEAR FUSION DEVICE BY LASER**

公开（公告）号：[JP55071986A](https://www.incopat.com/detail/init2?formerQuery=GKnRc7mMozALfLtltQryGPR0OjOTHMZL&local=zh)

公开（公告）日：1980-05-30

申请号：JP53146367

申请日：1978-11-25

申请人：KUSANO MASAAKI

**561、Weapon laser for defence against aircraft and missiles - has secondary laser which converts full beam into hollow beam using fusion wire**

摘要：The field of application of the weapon laser is extended to include dealing with the hollow folded beam lithium laser of the two-frame disintegrated type. A known folded beam lithium nuclear laser amplifier is started at its back as a secondary amplifier for a full-beam L5 optically pumped, known polycyclic primary light amplifier with 50 to 1000 kJ light energy. A converter changes the beam to a hollow beam which is converted in the secondary laser into a hollow folded beam by fusion of lithium hydride or deuteride wire or other fusion wire, which delivers plasma for pumping the inversion in the laser gas. The primary laser is therefore developed to assist the secondary nuclear as a starting laser and primary amplifier at the starting ramp.

公开（公告）号：[DE2845724A1](https://www.incopat.com/detail/init2?formerQuery=kl7X2X65YOnuopxAr%2BweufR0OjOTHMZL&local=zh)

公开（公告）日：1980-04-30

申请号：DE2845724

申请日：1978-10-20

申请人：STROBEL CHRISTIAN

法律状态：法律状态公告日：19860123;?

状态效果：-;?

状态代码：8141;?

法律状态：DISPOSAL/NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; DE 2845724A1

**562、Expandable chamber fusion reactor system**

摘要：A piston is moved by a laser incited fusion reaction such as deuterium-tritium (D-T) to thereby produce an expandable fusion chamber. When a gaseous substance such as CO.sub.2 is presented in the presence of the fusion reaction, it is dissociated into CO and O.sub.2 component mixture and the expansion of the chamber rapidly cools the mixture and quenches the back reaction thereby producing a greater CO yield. Also the piston produces peripheral power from the fusion reaction in the form of mechanical energy.

公开（公告）号：[US4304627A](https://www.incopat.com/detail/init2?formerQuery=%2B4Cz3%2FEpcY%2BLoF5TkvZ8OA%3D%3D&local=zh)

公开（公告）日：1981-12-08

申请号：US05946519

申请日：1978-09-28

申请人：Texas Gas Transmission Corporation

法律状态：法律状态公告日：19820819;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4304627A New Owner:;RADSYN, INC. 3621 SOUTH STATE ROAD, P.O. BOX 1567,Free Text Description:;ASSIGNS THE ENTIRE INTEREST, SUBJECT TO CONDITIONS RECITED.;ASSIGNOR:TEXAS GAS TRANSMISSSION CORPORATION;REEL/FRAME:004029/0464Effective Date:;19820520

**563、Solenoidal fusion system**

摘要：This invention discloses apparatus and methods to produce nuclear fusion utilizing fusible material in the form of high energy ion beams confined in magnetic fields. For example, beams of deuterons and tritons are injected in the same direction relative to the axis of a vacuum chamber. The ion beams are confined by the magnetic fields of long solenoids. The products of the fusion reactions, such as neutrons and alpha particles, escape to the wall surrounding the vacuum chamber, producing heat. The momentum of the deuterons is approximately equal to the momentum of the tritons, so that both types of ions follow the same path in the confining magnetic field. The velocity of the deuteron is sufficiently greater than the velocity of the triton so that overtaking collisions occur at a relative velocity which produces a high fusion reaction cross section. Electrons for space charge neutralization are obtained by ionization of residual gas in the vacuum chamber, and additionally from solid material (irradiated with ultra-violet light or other energetic radiation) adjacent to the confinement region. For start-up operation, injected high-energy molecular ions can be dissociated by intense laser beam, producing trapping via change of charge state. When sufficiently intense deuteron and triton beams have been produced, the laser beam can be removed, and subsequent change of charge state can be achieved by collisions (circulating and injected beams).

公开（公告）号：[US4240873A](https://www.incopat.com/detail/init2?formerQuery=Z0HpEndtapCs%2B%2Fy2v3PgHw%3D%3D&local=zh)

公开（公告）日：1980-12-23

申请号：US05945011

申请日：1978-09-22

申请人：LINLOR WILLIAM I

**564、Atomic fusion, Gerrard atomic fusion**

摘要：The heat produced in a fusion reaction, which is induced in a chamber E by the interaction of laser beams and U.H.F. electromagnetic beams with atom streams, is transferred to a heat exchanger for electricity generation by a coolant flowing through a jacket U surrounding the chamber.

公开（公告）号：[GB2038530A](https://www.incopat.com/detail/init2?formerQuery=m43VNe234%2FPmUJdpFpp%2FKA%3D%3D&local=zh)

公开（公告）日：1980-07-23

申请号：GB7835925

申请日：1978-09-07

申请人：GERRARD T

法律状态：法律状态公告日：19810429;?

状态效果：-;?

状态代码：WAP;?

法律状态：APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED \*\* AFTER PUBLICATION UNDER SECTION 16(1)描述信息：Docdb Publication Number:; GB 2038530A

**565、Method for the non-destructive assaying of laser fusion targets**

摘要：In order to assay the tritium fuel content in laser fusion targets and/or to measure the pressurization of laser fusion targets of the type which use deuterium and tritium (DT) gas mixtures, without destroying the targets, the flux of beta particles which emerges from the target is measured with the aid of a gas flow proportional counter. The count rates are related to the tritium content and the pressurization. The tritium content in terms of the mass of the tritium in the target can be derived from the counting rate.

公开（公告）号：[US4188532A](https://www.incopat.com/detail/init2?formerQuery=kK47vCz71YNUFzO9bwMK%2FQ%3D%3D&local=zh)

公开（公告）日：1980-02-12

申请号：US05873567

申请日：1978-01-30

申请人：The University of Rochester

**566、Nuclear fusion reactor**

摘要：A rapidly pulsed nuclear fusion reaction system including a firing chamber into which synchronized opposing beams of ionized gas such as deuterium/tritium are injected in the form of ion pulses which are adapted to collide at the mid point of the chamber. The pulsed ion beams are fed through respective orifices across which is applied a relatively high DC voltage. External to the firing chamber is means for generating a pulsed magnetic field interiorally of the chamber along the ion travel path and in synchronism therewith to provide a guiding effect of the two opposing ion beams to the precise center of the firing chamber. At the moment the leading edges of the ion beams meet, an electric arc is developed due to the voltage applied across the orifice. The arc strips electrons from the ions and an electron sheath acting to increase the packing fractions of the beams is formed between the orifices leaving bare nuclei to accumulate in density which are further confined by the action of the electron sheath itself. A fuel gas ball is thus formed at the center of the firing chamber which is then ignited to fusion temperature by a pair of lasers or a pair of high energy electron beams. The resulting release of energy is collected as heat at the outer surface of the firing chamber by means of the structure comprising the magnetic field generating means which is also adapted to capture neutrons.

公开（公告）号：[US4172008A](https://www.incopat.com/detail/init2?formerQuery=kK47vCz71YMEg%2Bk05MtrcA%3D%3D&local=zh)

公开（公告）日：1979-10-23

申请号：US05827069

申请日：1977-08-23

申请人：DUBBLE WHAMMY INC

**567、High energy anti-rocket, anti-aircraft beam - obtd. from thermonuclear reaction by pumped laser in cryogenic low temp. chamber**

摘要：A weapons laser for antiaircraft and antirocket defence, operates by nuclear pumping with plasma components of a nuclear-thermonuclear reaction pellet. The laser beam strikes the pellet and generates plasma which expands to pass into the pump chamber. At the same time some plasma passes the supersonic head of the nozzle into the vacuum chamber of a vacuum pump with high redn. of pressure accompanied by expansion cooling. The vacuum in the pump chamber is 5-500 torr. The double-walled container surrounding the pump chamber, together with cavities in the head of the nozzle and its support arms, all contain circulating liquified gas, esp. a mixture of CO and N2. This gas escapes and vaporises through valves to constitute laser-active gas in the pump chamber. The gas forms a central axial laser gas column at low pressure between end reflectors, which is surrounded by the plasma flowing in at the head. Interchange takes place between the plasma vortex and the central laser gas column the pumping time of 5-10 milliseconds gives the central laser gas no opportunity to form temp. and/or pressure gradients, so that a laser beam is pumped along the gas column at 80-150 K and 10-250 torr pressure. At the partially transparent mirror at the end of the chamber, this beam is split, resulting in up to 30%, of the plasma energy being converted into light energy.

公开（公告）号：[DE2731145A1](https://www.incopat.com/detail/init2?formerQuery=lIJiD4gu6BQO2mPicTdCjvR0OjOTHMZL&local=zh)

公开（公告）日：1979-01-25

申请号：DE2731145

申请日：1977-07-09

申请人：STROBEL CHRISTIAN

法律状态：法律状态公告日：19820616;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 2731145A1

**568、Thermonuclear pump for large scale fusion - has highly conducting tubular casing to improve electromagnetic pinch**

摘要：The parent patent describes a thermonuclear pump for large scale fusion, utilising either the thermal energy or the neutron avalanche produced by microfusion of the Los Alamos fusion test type. This enables a subcritical mass to be detonated. In this patent of addition, the plasma guide tube is of electrically conducting material (such as Cu, al or Ti) and is equipped with external electrodes at its ends, connected to a HF source. A HF short-circuit current flows along the tube, producing magnetic field lines, surrounding the tube and interacting with the magnetic field lines of the negatively and positively charged particles of the plasma flowing in a continuous direction along the tube. The effect is to produce an electromagnetic pinch upon the charged particles, forcing them with an alternate but very high frequency action towards the core of the tube, the hotter components being towards the centre of the cooler around the periphery. Collectors mounted insulated inside the tube near the external electrodes are connected to a DC or AC circuit which is thus supplied with the energy from the kinetic inertia of the plasma. The pump can be used as a reinforcing cartridge in plasma reservoirs, fusion reactors and plasma lasers. By substituting Cu, Al or Ti for the ferromagnetic pole change reinforcement of the parent patent, a much higher frequency is obtd. of the pole change relative to the fast-flowing plasma.

公开（公告）号：[DE2717409A1](https://www.incopat.com/detail/init2?formerQuery=lIJiD4gu6BQ0EDTYxzfO3PR0OjOTHMZL&local=zh)

公开（公告）日：1978-10-26

申请号：DE2717409

申请日：1977-04-20

申请人：STROBEL CHRISTIAN

法律状态：法律状态公告日：19811203;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 2717409A1

**569、Nuclear fusion reactor in water cooled vessel - with laser beams oriented towards centre onto frozen deuterium sphere**

摘要：Nuclear fusion reactor is a spherical, metal vessel equipped with a cooling water jacket. Pref., laser beams are projected at acute angles from all sides towards the centre of the reactor, producing there a heated zone of hour-glass shape; this zone is open at the top, to receive a frozen deuterium sphere with sufficient accuracy for it to become heated up and fused to helium. The medium used for projecting the deuterium sphere into the hot zone is cold helium gas, the temp. being close to the critical point for liquefying it. Pref. also, large quantities of helium gas of 30-40 degrees C are also blown into the path of the projected deuterium sphere, mixing with the cold helium gas.

公开（公告）号：[DE2702665A1](https://www.incopat.com/detail/init2?formerQuery=lIJiD4gu6BR24URMYO%2Bo0vR0OjOTHMZL&local=zh)

公开（公告）日：1978-07-27

申请号：DE2702665

申请日：1977-01-24

申请人：HEES ADRIAN VAN

法律状态：法律状态公告日：19791031;?

状态效果：-;?

状态代码：OHJ;?

法律状态：NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2702665A1

**570、System for amplifying laser beams**

摘要：This invention relates to a laser amplifier system for amplifying a diverged laser beam to very high power levels, at constant flux density, over a very long optical path folded into a compact arrangement consisting of two rows of amplifier segments of progressively increasing diameter, the wide separation between each segment along the optical path being utilized to increase the self-oscillation of the system as a whole. The invention can also utilize only one row of amplifier segments with one or two rows of passive reflectors replacing the other row of amplifier segments, without changing its basic character. The invention is useful in thermonuclear reaction studies and optics studies.

公开（公告）号：[US4132955A](https://www.incopat.com/detail/init2?formerQuery=kK47vCz71YPVbQZQ3BQ%2BFw%3D%3D&local=zh)

公开（公告）日：1979-01-02

申请号：US05748316

申请日：1976-12-07

申请人：Helen Hughes

**571、Method and apparatus for nuclear thermochemical water cracking**

摘要：A method and apparatus for dissociating steam in a fusion reaction central chamber. The charged particle energy from an ignited fusion fuel pellet is directed to and distributed in a suitable volume of steam, bringing the steam to temperature and pressure conditions leading to dissociation into hydrogen and oxygen. The resulting atomic and molecular velocities are sufficiently high to allow egress of the separated products through a suitable shaped nozzle prior to recombination, making it practical to separate and capture the dissociated products.

公开（公告）号：[US4370297A](https://www.incopat.com/detail/init2?formerQuery=%2B4Cz3%2FEpcY%2FtVWGKQ1koWg%3D%3D&local=zh)

公开（公告）日：1983-01-25

申请号：US05703197

申请日：1976-07-07

申请人：Texas Gas Transmission Corporation

**572、Laser gun for military and civil purposes - has turret head on muzzle with emitter crystal inserts**

摘要：A laser for use as a weapon for defence against aircrafts, rockets or tanks and also for laser welding and cutting or metals, uses the light of a thermonuclear reaction to pump a solid or gaseous emitter of the ruby or CO2/iodine type. The turret head has four inserts, each with a solid emitter crystal which is tubular, in case the intended purpose is for a weapon. A protective optical system surrounds each crystal which has an outside dia. d2z and an inside dia. d1. The weapon resembles a maching gun and carries on its muzzle a turret head with four compression ignition inserts, each with an emitter crystal of tubular or cylindrical shape. This combines a fast automatic operation with a light energy which is several orders of magnitude greater than that or ordinary flash tubes.

公开（公告）号：[DE2628630A1](https://www.incopat.com/detail/init2?formerQuery=ax%2BP7iTjyREfzSaAHu1IdPR0OjOTHMZL&local=zh)

公开（公告）日：1978-01-26

申请号：DE2628630

申请日：1976-06-25

申请人：STROBEL CHRISTIAN

法律状态：法律状态公告日：19820527;?

状态效果：-;?

状态代码：8131;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 2628630A1

**573、Laser weapon for aircraft or rocket - is pumped by thermonuclear miniature reaction by deuterium or lithium process**

摘要：The solid or gas laser is pumped by the intensive energy emitted from a controllable, doses thermonuclear miniature reaction. This reaction is produced by a pyrotechnic-ballistic "pump" according to a (D+T) process or a (D+D) process or a (Li7 + H1) process without electromagnetic plasma containment; alternatively with electromagnetic plasma containment for the firing of a nuclear fusion reactor.

公开（公告）号：[DE2624862A1](https://www.incopat.com/detail/init2?formerQuery=ax%2BP7iTjyRH58Vh1JRpoHvR0OjOTHMZL&local=zh)

公开（公告）日：1977-12-15

申请号：DE2624862

申请日：1976-06-03

申请人：STROBEL CHRISTIAN

法律状态：法律状态公告日：19820107;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2624862A1

**574、A METHOD TO FORM A CONFIGURATION OF COMBUSTIBLE NUCLEAR THERMUS FOR USE IN A FUSION PROCESS BY LASER.**

公开（公告）号：[ES447296A1](https://www.incopat.com/detail/init2?formerQuery=scBVvw93kirzamN2Wxa6LQ%3D%3D&local=zh)

公开（公告）日：1977-12-01

申请号：ES44729676

申请日：1976-04-23

申请人：KMS FUSION INC

**575、Process for the fabrication of thermonuclear fuel pellets and the product thereof**

摘要：In processes utilizing a source of laser energy for achieving a thermonuclear fusion reaction, it is necessary to have fusion fuel prepared in a configuration with minute dimensions and the present invention contemplates preparing this fuel by introducing into hollow microspheres (typically comprised of glass) of predetermined size, in the range of 250 to 2, 000 micrometers, a gaseous thermonuclear fuel. One way of accomplishing this is to cause diffusion of gaseous thermonuclear fuel through the walls of the microsphere under conditions of suitable temperature and pressure so that it may be achieved in a reasonable time, after which the fuel can be frozen out on the walls of the microsphere to provide a fusion fuel in a hollow spherical shape. Suitable coatings of additional materials may be applied to the fueled microsphere by appropriate coating methods to complete complex thermonuclear fuel pellet configurations.

公开（公告）号：[US4432933A](https://www.incopat.com/detail/init2?formerQuery=HR%2BiVB1GYB5Ca%2FfiHSex6Q%3D%3D&local=zh)

公开（公告）日：1984-02-21

申请号：US05675530

申请日：1976-04-09

申请人：KMS FUSION INC

法律状态：法律状态公告日：19860819;?

状态代码：RF;?

法律状态：REISSUE APPLICATION FILED描述信息：Docdb Publication Number:; US 4432933A Effective Date:;19860529

**576、Frozen gas pellets esp. for nuclear fusion experiments - produced without initial movement to permit accurate projection towards target**

摘要：A method of making pallets of gases which solidify at very low temps. is intended for use where the pellets are to be supplied in a controlled manner to a predetermined position. A rod of the solidified gas is produced and particles are then cut in succession from the end of this rod without contact by means of thermal radiation. Pref. the thermal radiation is produced by heated wires. Used for the production and transmission of pellets of materials which solidify at =-80 degrees C. Specifically, the method is used for the prodn. of solidified pellets of gas which are to be propelled into the focal point of laser and electron beams to produce make-up fuel in experimental investigations of controlled nuclear fusion and also in fusion reactors of the future. By cutting off the pellets from the rod without any contact with mechanical parts, sideways displacement of pellets and other disturbing movements are avoided, so that they can be directly accurately to the desired location.

公开（公告）号：[DE2611314A1](https://www.incopat.com/detail/init2?formerQuery=ax%2BP7iTjyRF30tSnzKgKtPR0OjOTHMZL&local=zh)

公开（公告）日：1977-09-29

申请号：DE2611314

申请日：1976-03-17

申请人：RIEDMUELLER WOLFGANG DIPL PHYS; BAUMHACKER HORST

法律状态：法律状态公告日：19810611;?

状态效果：+;?

状态代码：C3;?

法律状态：GRANT AFTER TWO PUBLICATION STEPS (3RD PUBLICATION)描述信息：Docdb Publication Number:; DE 2611314A1法律状态公告日：19830414;?

状态代码：8327;?

法律状态：CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER描述信息：Docdb Publication Number:; DE 2611314A1New Owner:;LEYBOLD-HERAEUS GMBH, 5000 KOELN, DE法律状态公告日：19830414;?

状态代码：8381;?

法律状态：INVENTOR (NEW SITUATION)描述信息：Docdb Publication Number:; DE 2611314A1Free Text Description:;BAUMHACKER, HORST, 8060 DACHAU, DE RIEDMUELLER, WOLFGANG, DIPL.-PHYS.DR., 8000 MUENCHEN, DE法律状态公告日：19880317;?

状态效果：-;?

状态代码：8339;?

法律状态：CEASED/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2611314A1法律状态公告日：19880519;?

状态代码：8327;?

法律状态：CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER描述信息：Docdb Publication Number:; DE 2611314A1New Owner:;LEYBOLD AG, 6450 HANAU, DE

**577、Plasma energy production**

摘要：The disclosure relates to energy production by generating an ion stream by laser energy and injecting the ions within a closed loop accelerator. Numerous nodes about the path of the accelerator densify the ions at minimum cross-sections causing substantial kinetic pressure from particles which are accelerated into the nodes together with injected electrons to form a plasma. The accelerator path contains the ions preventing their escape into the atmosphere. The accelerator recycles the ions continuously within the closed loop path for repeated fusion reaction at the nodes.

公开（公告）号：[US4199402A](https://www.incopat.com/detail/init2?formerQuery=kK47vCz71YPJ8r25x6kRDw%3D%3D&local=zh)

公开（公告）日：1980-04-22

申请号：US05659681

申请日：1976-02-23

申请人：AHMED ABUL A M

**578、Method of mounting a fuel pellet in a laser-excited fusion reactor**

摘要：Laser irradiation means for irradiating a target, wherein a single laser light beam from a source and a mirror close to the target are used with aperture means for directing laser light to interact with the target over a broad area of the surface, and for protecting the laser light source.

公开（公告）号：[US4142088A](https://www.incopat.com/detail/init2?formerQuery=kK47vCz71YMfgGFDOGJgdQ%3D%3D&local=zh)

公开（公告）日：1979-02-27

申请号：US05649948

申请日：1976-01-27

申请人：The United States of America as represented by the United States Department of Energy

**579、Laser fusion pulse shape controller**

摘要：An apparatus for controlling the pulse shape, i.e., the pulse duration and intensity pattern, of a pulsed laser system, and which is particularly well adapted for controlling the pellet ignition pulse in a laser-driven fusion reaction system. The apparatus comprises a laser generator for providing an optical control pulse of the shape desired, a pulsed laser triggered by the control pulse, and a plurality of optical Kerr-effect gates serially disposed at the output of the pulsed laser and selectively triggered by the control pulse to pass only a portion of the pulsed laser output generally corresponding in shape to the control pulse.

公开（公告）号：[US4061985A](https://www.incopat.com/detail/init2?formerQuery=SpS2r2W%2BnUWLRBeH7ZWCpw%3D%3D&local=zh)

公开（公告）日：1977-12-06

申请号：US05649864

申请日：1976-01-16

申请人：KMS Fusion Inc

**580、NUCLEAR FUSION REACTOR WITH LASER**

公开（公告）号：[JP52059296A](https://www.incopat.com/detail/init2?formerQuery=fEDiTDRq%2FOMgpSJU0%2B17JvR0OjOTHMZL&local=zh)

公开（公告）日：1977-05-16

申请号：JP50134831

申请日：1975-11-08

申请人：KUSANO MASAAKI

**581、Fusion reaction by implosion of hollow droplets - of fuel carrier liquid with high viscosity and low vapour pressure**

摘要：Controlled initiation of a fusion reaction in the central region of imploding, periodically produced droplets of highly viscous liquid fuel carrier having a vacuum central region is claimed. The central space of the droplets is produced to a high level of vacuum, before the implosion commences, by the prodn. of a hollow jet of the fuel carrier liquid from an annular nozzle with central core. The liq. of the droplet is kept cold and shielded from an input of thermal energy; the complete spherical symmetry of the implosion process is stabilised by high viscosity of the imploding liquid until very high centripetal speeds are attained; in a slow phase prior to the implosion, during which slow centripetal movement of the liquid occurs under the influence of surface tension, the absolute spherical symmetry of the droplet is maintained; very short, highly intense laser bombardment evaporates the substance of the droplet in and near its surface and the water surrounding the droplet, thus producing an explosive action which initiates the energetic implosion; the droplet substance is a compound having a high content of atomic nuclei capable of fusion, and the liquid droplet substance is a material with a very low vapour pressure. Pref. the periodic prodn. of the hollow droplets is generated by an ultrasonic emitter producing high-energy ultra sound with a tuned frequency such that the jet of the liquid is periodically broken down into the hollow droplets. Used in particular for the prodn. of a fusion reaction by a travelling, centripetal shock wave in a mixt. predominantly of deuterium and tritium. By suitable selection of the droplet geometry, high viscosity and high vacuum in the central region, much higher temps. can be attained than previously. Much higher droplet densities are obtd. The supply of fuel to the reaction vessel is easily and rapidly regulated. Wall destruction and wall corrosion of the appts. disappear since the solid wall is completely protect ed by a sufficient amount of water shielding from neutral action and radiation damage. The process can be caried out using deuterium only, thus eliminating the problems of storing gaseous tritium.

公开（公告）号：[DE2544043A1](https://www.incopat.com/detail/init2?formerQuery=plvMuq3%2BJizKk65Y9fzpnPR0OjOTHMZL&local=zh)

公开（公告）日：1977-08-25

申请号：DE2544043

申请日：1975-10-02

申请人：TROMMSDORFF WOLF DIPL ING DR P

法律状态：法律状态公告日：19800430;?

状态效果：+;?

状态代码：C3;?

法律状态：GRANT AFTER TWO PUBLICATION STEPS (3RD PUBLICATION)描述信息：Docdb Publication Number:; DE 2544043A1法律状态公告日：19820422;?

状态效果：-;?

状态代码：8339;?

法律状态：CEASED/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2544043A1

**582、Foam encapsulated targets**

摘要：Foam encapsulated laser-fusion targets wherein a quantity of thermonuclear fuel is embedded in low density, microcellular foam which serves as an electron conduction channel for symmetrical implosion of the fuel by illumination of the target by one or more laser beams. The fuel, such as DT, is contained within a hollow shell constructed of glass, for example, with the foam having a cell size of preferably no greater than 2 .mu.m, a density of 0.065 to 0.6.times.10.sup.3 kg/m.sup.3, and external diameter of less than 200 .mu.m. -GOVT PAC BACKGROUND OF THE INVENTION PAR The invention described herein was made in the course of, or under, Contract No. W-7405-ENG-48 with the United States Energy Research and Development Administration.

公开（公告）号：[US4376752A](https://www.incopat.com/detail/init2?formerQuery=%2B4Cz3%2FEpcY%2Fx2qEORBnUDQ%3D%3D&local=zh)

公开（公告）日：1983-03-15

申请号：US05609639

申请日：1975-09-02

申请人：The United States of America as represented by the United States Department of Energy

**583、Laser-fusion targets for reactors**

摘要：A laser target comprising a thermonuclear fuel capsule composed of a centrally located quantity of fuel surrounded by at least one or more layers or shells of material for forming an atmosphere around the capsule by a low energy laser prepulse. The fuel may be formed as a solid core or hollow shell, and, under certain applications, a pusher-layer or shell is located intermediate the fuel and the atmosphere forming material. The fuel is ignited by symmetrical implosion via energy produced by a laser, or other energy sources such as an electron beam machine or ion beam machine, whereby thermonuclear burn of the fuel capsule creates energy for applications such as generation of electricity via a laser fusion reactor. -GOVT PAR The invention described herein was made in the course of, or under, Contract No. W-7405-ENG-48 with the United States Energy Research and Development Administration.

公开（公告）号：[US4687618A](https://www.incopat.com/detail/init2?formerQuery=Q7tq1T2lyJzWuoFQOc3BIg%3D%3D&local=zh)

公开（公告）日：1987-08-18

申请号：US05609841

申请日：1975-09-02

申请人：The United States of America as represented by the United States Department of Energy

**584、Methods and apparatus for the control and analysis of X-rays**

摘要：Fast X-ray excitation processes such as occur during nuclear fusion reactions where high energy laser pulses hit a target, as for the purpose of stimulating atomic emission, may be analyzed by interposing a crystal in the path of the X-rays. The X-rays are transmitted through this crystal by means of the anomalous transmission or Bormann effect. A periodic strain field is established in the crystal to enable or inhibit anomalous transmission. The transmitted radiation is received by a measurement system which is operated in synchronism with the strain field. A solid state shuttering mechanism is obtained which rapidly interrupts the X-rays so that they can be measured even when produced by fast X-ray excitation processes. Various methods and apparatus for producing the periodic strain field are described, particularly electrostrictive techniques, piezoelectric techniques using separate transducers mounted on the crystal or the piezoelectric properties of the crystal itself and techniques for stimulating acoustic vibration by means of an optical beam.

公开（公告）号：[US3991309A](https://www.incopat.com/detail/init2?formerQuery=Izcja9aGORGdqKupiIU%2FEQ%3D%3D&local=zh)

公开（公告）日：1976-11-09

申请号：US05594846

申请日：1975-07-09

申请人：University of Rochester

**585、Method for mounting laser fusion targets for irradiation**

摘要：Methods for preparing laser fusion targets of the ball-and-disk type are disclosed. Such targets are suitable for irradiation with one or two laser beams to produce the requisite uniform compression of the fuel material.

公开（公告）号：[US4038125A](https://www.incopat.com/detail/init2?formerQuery=SpS2r2W%2BnUW53IWEcri48A%3D%3D&local=zh)

公开（公告）日：1977-07-26

申请号：US05588119

申请日：1975-06-18

申请人：US ENERGY

**586、Laser welding high reflectivity metals**

摘要：A method of welding high reflectivity materials by laser radiation comprising cladding material in the area to be welded with a low reflectivity material and subsequently directing a coherent beam of laser radiation, pulsed or continuous, onto the clad material to form in the weld area a molten alloy of the two materials which, when cooled, forms a weld nugget which is integrally bonded with the high reflectivity material.

公开（公告）号：[US4023005A](https://www.incopat.com/detail/init2?formerQuery=SpS2r2W%2BnUUwlhCNWDXKrQ%3D%3D&local=zh)

公开（公告）日：1977-05-10

申请号：US05570104

申请日：1975-04-21

申请人：RAYTHEON CO

**587、METHODS AND APPARATUS FOR PRODUCING mICROSPHERES FROM gLASS**

摘要：A method and apparatus for making uniform pellets for laser driven fusion reactors which comprises selection of a quantity of glass frit which has been accurately classified as to size within a few micrometers and contains an occluded material, such as urea, which gasifies and expands when heated. The sized particles are introduced into an apparatus which includes a heated vertical tube with temperatures ranging from 800 DEG C to 1300 DEG C. The particles are heated during the drop through the tube to molten condition wherein the occluded material gasifies to form hollow microspheres which stabilize in shape and plunge into a collecting liquid at the bottom of the tube. The apparatus includes the vertical heat resistant tube, heaters for the various zones of the tube and means for introducing the frit and collecting the formed microspheres.

公开（公告）号：[DE2515279A1](https://www.incopat.com/detail/init2?formerQuery=plvMuq3%2BJixr7xKSPRKgufR0OjOTHMZL&local=zh)

公开（公告）日：1975-10-23

申请号：DE2515279

申请日：1975-04-08

申请人：KMS FUSION INC

法律状态：法律状态公告日：19820107;?

状态效果：+;?

状态代码：8110;?

法律状态：REQUEST FOR EXAMINATION PARAGRAPH 44描述信息：Docdb Publication Number:; DE 2515279A1法律状态公告日：19840503;?

状态效果：+;?

状态代码：D2;?

法律状态：GRANT AFTER EXAMINATION描述信息：Docdb Publication Number:; DE 2515279A1法律状态公告日：19841031;?

状态效果：+;?

状态代码：8364;?

法律状态：NO OPPOSITION DURING TERM OF OPPOSITION描述信息：Docdb Publication Number:; DE 2515279A1法律状态公告日：19880414;?

状态效果：-;?

状态代码：8339;?

法律状态：CEASED/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2515279A1

**588、Method for nondestructive fuel assay of laser fusion targets**

摘要：A method for nondestructively determining the deuterium and tritium content of laser fusion targets by counting the x rays produced by the interaction of tritium beta particles with the walls of the microballoons used to contain the deuterium and tritium gas mixture under high pressure. The x rays provide a direct measure of the tritium content and a means for calculating the deuterium content using the initial known D-T ratio and the known deuterium and tritium diffusion rates.

公开（公告）号：[US3940617A](https://www.incopat.com/detail/init2?formerQuery=Izcja9aGORGi9mhio6bjtg%3D%3D&local=zh)

公开（公告）日：1976-02-24

申请号：US05565932

申请日：1975-04-07

申请人：The United States of America as represented by the United States Energy Research and Development Adm

**589、Coating glass microspheres with metals - where microspheres are used to hold nuclear fusion fuels**

摘要：Process for coating small particles comprises (a) provision of a coating chamber in which the particles are held in a carrier; and (b) vertical vibration of the particle carrier so the particles are repeatedly thrown upwards during a prescribed time interval from the surface of the carrier so they are exposed to the coating atmos. in the chamber. The pref. device uses a lightweight carrier with a horizontal base vibrated by an electromagnetic vibrator fed by a frequency generator and an amplifier which determines the amplitude of the oscillations. Used for coating glass microspheres for holding deuterium or deuterium-tritium for nuclear fuels exposed to a pulsed laser beam. Uniform coating of the glass spheres is achieved by evapn. or sputtering using Ni, Cu or Al.

公开（公告）号：[FR2266553A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDICOSeWIEx3bPR0OjOTHMZL&local=zh)

公开（公告）日：1975-10-31

申请号：FR75010582

申请日：1975-04-04

申请人：KMS FUSION INC

法律状态：法律状态公告日：19780616;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2266553A1

**590、Hollow glass microspheres for thermonuclear fuels - made by blowing glass frit contg. blowing agent up heated shaft**

摘要：Mfr. of small glass spheres comprises (a) provision of a heat-resisting shaft with a vertical cavity; (b) heating the cavity to 1300 degrees C; (c) introducing a stream of glass frit contg. an expansion (blowing) agent into the shaft; (d) moving the frit up the hot shaft in a gas stream; and (e) collecting the resulting hollow glass spheres at the top of the shaft. The pref. device consists of a hollow vertical shaft with a burner for a combustible gas at its base and means for adding the frit to the burner tube at a location remote from the burner jet. Mfrs. hollow microspheres for use as containers for thermo-nuclear fuel, e.g. deuterium or deuterium-tritium exposed to a pulsed laser beam. Process is controllable so that where microspheres of prescribed size and wall-thickness can be obtd.

公开（公告）号：[FR2266666A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDJcQ5PGt%2BkToPR0OjOTHMZL&local=zh)

公开（公告）日：1975-10-31

申请号：FR75010585

申请日：1975-04-04

申请人：KMS FUSION INC

法律状态：法律状态公告日：19780616;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2266666A1

**591、**

摘要：A method and apparatus for making uniform pellets for laser driven fusion reactors which comprises selection of a quantity of glass frit which has been accurately classified as to size within a few micrometers and contains an occluded material, such as urea, which gasifies and expands when heated. The sized particles are introduced into an apparatus which includes a heated vertical tube with temperatures ranging from 800 DEG C to 1300 DEG C. The particles are heated during the drop through the tube to molten condition wherein the occluded material gasifies to form hollow microspheres which stabilize in shape and plunge into a collecting liquid at the bottom of the tube. The apparatus includes the vertical heat resistant tube, heaters for the various zones of the tube and means for introducing the frit and collecting the formed microspheres.

公开（公告）号：[FR2267287A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDLzSU5qzwKdUPR0OjOTHMZL&local=zh)

公开（公告）日：1975-11-07

申请号：FR75010584

申请日：1975-04-04

申请人：KMS FUSION INC US

法律状态：法律状态公告日：19880226;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2267287A1

**592、METHOD FOR MAKING UNIFORM PELLETS FOR FUSION REACTORS**

摘要：A method and apparatus for making uniform pellets for laser driven fusion reactors which comprises selection of a quantity of glass frit which has been accurately classified as to size within a few micrometers and contains an occluded material, such as urea, which gasifies and expands when heated. The sized particles are introduced into an apparatus which includes a heated vertical tube with temperatures ranging from 800.degree.C. to 1300.degree.C. The particles are heated during the drop through the tube to molten condition wherein the occluded material gasifies to form hollow microspheres which stabilize in shape and plunge into a collecting liquid at the bottom of the tube. The apparatus includes the vertical heat resistant tube, heaters for the various zones of the tube and means for introducing the frit and collecting the formed microspheres.

公开（公告）号：[CA1066896A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFge2ZEcIc0uP%2FR0OjOTHMZL&local=zh)

公开（公告）日：1979-11-27

申请号：CA223764

申请日：1975-04-03

申请人：KMS FUSION INC

**593、Non-equilibrium radiation nuclear reactor**

摘要：An externally moderated thermal nuclear reactor is disclosed which is designed to provide output power in the form of electromagnetic radiation. The reactor is a gaseous fueled nuclear cavity reactor device which can operate over wide ranges of temperature and pressure, and which includes the capability of processing and recycling waste products such as long-lived transuranium actinides. The primary output of the device may be in the form of coherent radiation, so that the reactor may be utilized as a self-critical nuclear pumped laser. -GOVT PAC ORIGIN OF THE INVENTION PAR The invention described herein was made in the performance of work under a NASA contract and is subject to the provisions of section 305 of the National Aeronautics and Space Act of 1958, public law 85-568 (72 Stat. 435; 42 U.S.C. 2457).

公开（公告）号：[US4075057A](https://www.incopat.com/detail/init2?formerQuery=SpS2r2W%2BnUX2eyMy3E18Jg%3D%3D&local=zh)

公开（公告）日：1978-02-21

申请号：US05560891

申请日：1975-03-21

申请人：FLETCHER; JAMES C ADMINISTRATOR OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION WITH RESPECT TO AN INVENTION OF; THOM; KARLHEINZ; SCHNEIDER; RICHARD T

**594、Ring laser for penetrating waves**

摘要：A ring laser for penetrating electromagnetic radiation such as X or gamma rays, using a pumping beam supplied by a primary lightwave or infrared laser. A member made of active material is illuminated by the beam, which has symmetry of revolution around its axis and whose electric lines of force are circles centered on the said axis. The pumping beam is conveyed by a mirror toward the end of a circular metal channel having a semi-toroidal cross-section and containing the active member, the mirror being formed with an aperture near the axis and transmitting the X or gamma rays emitted by the active member after they have been propagated along the end of the channel. The active member may be made of a substance which can undergo thermonuclear fusion by absorbing X or gamma rays. The active substance may also be a boron hydride or a boronate.

公开（公告）号：[US3955153A](https://www.incopat.com/detail/init2?formerQuery=Izcja9aGORGCGBcvPK1WYw%3D%3D&local=zh)

公开（公告）日：1976-05-04

申请号：US05559154

申请日：1975-03-17

申请人：MARIE G R P

**595、METHOD AND APPARATUS FOR THE MANUFACTURE OF METHANOL**

摘要：1501979 Manufacture of methanol TEXAS GAS TRANSMISSION CORP 10 March 1975 [7 June 1974] 9882/75 Heading C2C Methanol is produced by (a) exposing CO 2 to heat and radiation from a nuclear reaction to form CO, (b) reacting a portion of the CO with water to form CO 2 and H 2 , and (c) combining a residual portion of the CO with H 2 from step (b) to form methanol. The preferred method is carried out using the apparatus illustrated in Fig. 1. Carbon dioxide in containment chamber 28 is subjected to heat and radiation (step a) from laser fusion reactor chamber 52 supported by rods 53. Effluent gas is separated at 42, some of the CO being passed to reaction chamber 46, and the rest (CO, O 2 and unreacted CO 2 ) passed via line 47 to heat exchanger 26. Steam is also fed to reactor 46 where step (b) occurs; hydrogen is separated by separator 45 and passed by line 50 to reactor 34, while CO 2 is withdrawn by line 48 to join the gas mixture in line 47 and pass to the heat exchanger. Gas from the heat exchanger is separated at 36; carbon dioxide is recycled via line 32 with fresh CO 2 to chamber 28, oxygen is withdrawn by line 38, and carbon monoxide passed to reactor 34 where it reacts with hydrogen to form methanol (step c). In roasting chamber 20, heated by the heat exchanger 26, calcium carbonate is heated and the CO 2 evolved is passed via line 30 and, mixed with recycle CO 2 , via line 32 to containment chamber 28.

公开（公告）号：[GB1501979A](https://www.incopat.com/detail/init2?formerQuery=xiCGu3CmDhFOi94JTURIyw%3D%3D&local=zh)

公开（公告）日：1978-02-22

申请号：GB7509882

申请日：1975-03-10

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19780705;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1501979A法律状态公告日：19871028;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1501979A

**596、Methods of fabricating thermonuclear fuel elements**

摘要：Thermonuclear fuel elements used as targets which are radiated by pulse laser radiation of high energy level to produce laser fusion as for thermonuclear energy generation are made out of materials not heretofore available for such use. Such materials are deuterium compounds which could not be fabricated into spheres suitable for laser fusion targets by the melting or freezing methods of fabricating such fuel elements which were heretofore available, since such compounds are peritectic (viz., they decompose or sublimate before melting can occur). By grinding bodies of such deuterium compounds, laser fuel elements are provided of the requisite minute size and spherical configuration such that they are available for use in quantity as thermonuclear fuel elements in laser fusion apparatus.

公开（公告）号：[US3987590A](https://www.incopat.com/detail/init2?formerQuery=Izcja9aGORFFGL%2BnuEJa5w%3D%3D&local=zh)

公开（公告）日：1976-10-26

申请号：US05547143

申请日：1975-02-05

申请人：UNIV ROCHESTER

**597、ENCAPSULATED THERMONUCLEAR FUEL**

摘要：1466841 Thermonuclear fusion UNITED STATES ENERGY RESEARCH & DEVELOPMENT ADMINISTRATION 13 Jan 1975 [28 Jan 1974] 1309/75 Heading G6P A thermonuclear fuel particle 10 comprises a hollow, spheroidal shell 12 whose wall thickness ranges from 1 to 30 microns and made of a material whose atomic mass is 50 or above, and, within said shell 12, a fuel material selected from deuterium, tritium and mixtures thereof. The fuel material preferably exists as a coating 14 on the interior wall of the shell 12. The particle may be spherical or an oblate spheroid whose diameter ranges from 100 to 700 microns. The shell 12 may comprise nickel, gold or uranium. Various methods of making the particle are described in detail. In use, an electric charge may be placed on such fuel particles by electron bombardment to enable particle acceleration or injection by electric fields. The particles are intended for use in a laser-stimulated fusion reactor.

公开（公告）号：[GB1466841A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAtm0MucD6lASA%3D%3D&local=zh)

公开（公告）日：1977-03-09

申请号：GB7501309

申请日：1975-01-13

申请人：US ENERGY RES DEV ADMINISTRATI

法律状态：法律状态公告日：19770720;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1466841A 法律状态公告日：19790926;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1466841A

**598、Fusion reaction by three stages of laser bombardment - with increasing energy and shorter duration also reflectors for second stage**

摘要：A method of operating a thermonuclear reactor consists of introducing heated, liquid lithium from a heat exchanger tangentially into a pressure vessel, then abstracting it from the vessel back to the heat exchanger, so as to form a central cavity in the pressure vessel, thermonuclear fuel pellets are intermittently, individually fed into this central cavity and bombarded by a laser beam to initiate a fusion reaction, the fast neutrons thus produced breed tritium in the liquid lithium, this tritium being removed in the heat exchanger, the heat produced in the heat exchanger drives a steam turbine to generate electricity. The laser beam is subdivided into successive pulses, a first pulsed beam oriented directly into the cavity zone on the path of the fuel pellets and having a selected energy and duration (esp. 1-2 Joules and 10-8- 10-9 secs) to evaporate and slightly ionise the pellets and thus form a plasma, a number of second, pulsed laser beams immediately following the first pulse and reflected from surfaces below the plasma to ' tailor' the plasma, these having a higher energy and shorter duration than the first beam (esp. 200-400 J and 10-8 -10-10 secs) a third pulsed high-energy firing laser beam having a still higher energy and still shorter duration (esp. 105J and 10-9-10-11 secs) and oriented directly into the ' tailored' plasma, to cause a fusion reaction inside it. Each of these steps is repeated for each individually introduced fuel pellet to obtain an optimum energy output level. Cryogenic magnetic fields are not required. Damage to the vacuum wall of the reactor by fast neutrons is substantially eliminated. A tritium breeder ratio greater than unity is obtd.

公开（公告）号：[CH576687A5](https://www.incopat.com/detail/init2?formerQuery=Q%2FScjZ0blnUVd6%2FhKR3Ipw%3D%3D&local=zh)

公开（公告）日：1976-06-15

申请号：CH00029275

申请日：1975-01-09

申请人：US ENERGY

法律状态：法律状态公告日：19780915;?

状态效果：-;?

状态代码：PL;?

法律状态：PATENT CEASED描述信息：Docdb Publication Number:; CH 576687A5

**599、Fusion reaction by three stages of laser bombardment - with increasing energy and shorter duration also reflectors for second stage**

摘要：A method of operating a thermonuclear reactor consists of introducing heated, liquid lithium from a heat exchanger tangentially into a pressure vessel, then abstracting it from the vessel back to the heat exchanger, so as to form a central cavity in the pressure vessel, thermonuclear fuel pellets are intermittently, individually fed into this central cavity and bombarded by a laser beam to initiate a fusion reaction, the fast neutrons thus produced breed tritium in the liquid lithium, this tritium being removed in the heat exchanger, the heat produced in the heat exchanger drives a steam turbine to generate electricity. The laser beam is subdivided into successive pulses, a first pulsed beam oriented directly into the cavity zone on the path of the fuel pellets and having a selected energy and duration (esp. 1-2 Joules and 10-8- 10-9 secs) to evaporate and slightly ionise the pellets and thus form a plasma, a number of second, pulsed laser beams immediately following the first pulse and reflected from surfaces below the plasma to ' tailor' the plasma, these having a higher energy and shorter duration than the first beam (esp. 200-400 J and 10-8 -10-10 secs) a third pulsed high-energy firing laser beam having a still higher energy and still shorter duration (esp. 105J and 10-9-10-11 secs) and oriented directly into the ' tailored' plasma, to cause a fusion reaction inside it. Each of these steps is repeated for each individually introduced fuel pellet to obtain an optimum energy output level. Cryogenic magnetic fields are not required. Damage to the vacuum wall of the reactor by fast neutrons is substantially eliminated. A tritium breeder ratio greater than unity is obtd.

公开（公告）号：[DE2500429A1](https://www.incopat.com/detail/init2?formerQuery=plvMuq3%2BJiy8TKORY%2Bh2cvR0OjOTHMZL&local=zh)

公开（公告）日：1976-07-08

申请号：DE2500429

申请日：1975-01-07

申请人：ATOMIC ENERGY COMMISSION

**600、Fusion reaction by three stages of laser bombardment - with increasing energy and shorter duration also reflectors for second stage**

摘要：A method of operating a thermonuclear reactor consists of introducing heated, liquid lithium from a heat exchanger tangentially into a pressure vessel, then abstracting it from the vessel back to the heat exchanger, so as to form a central cavity in the pressure vessel, thermonuclear fuel pellets are intermittently, individually fed into this central cavity and bombarded by a laser beam to initiate a fusion reaction, the fast neutrons thus produced breed tritium in the liquid lithium, this tritium being removed in the heat exchanger, the heat produced in the heat exchanger drives a steam turbine to generate electricity. The laser beam is subdivided into successive pulses, a first pulsed beam oriented directly into the cavity zone on the path of the fuel pellets and having a selected energy and duration (esp. 1-2 Joules and 10-8- 10-9 secs) to evaporate and slightly ionise the pellets and thus form a plasma, a number of second, pulsed laser beams immediately following the first pulse and reflected from surfaces below the plasma to ' tailor' the plasma, these having a higher energy and shorter duration than the first beam (esp. 200-400 J and 10-8 -10-10 secs) a third pulsed high-energy firing laser beam having a still higher energy and still shorter duration (esp. 105J and 10-9-10-11 secs) and oriented directly into the ' tailored' plasma, to cause a fusion reaction inside it. Each of these steps is repeated for each individually introduced fuel pellet to obtain an optimum energy output level. Cryogenic magnetic fields are not required. Damage to the vacuum wall of the reactor by fast neutrons is substantially eliminated. A tritium breeder ratio greater than unity is obtd.

公开（公告）号：[FR2296917A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDKmSJDHvjfhSPR0OjOTHMZL&local=zh)

公开（公告）日：1976-07-30

申请号：FR75000262

申请日：1975-01-06

申请人：ATOMIC ENERGY COMMISSION

法律状态：法律状态公告日：19780317;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2296917A1

**601、PROGRAMMED LASER BEAMS FOR OPTIMUM PRODUCTION OF FUSION REACTIONS IN FUEL PELLETS**

公开（公告）号：[CA1014676A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFg5WPqHNUJYvfR0OjOTHMZL&local=zh)

公开（公告）日：1977-07-26

申请号：CA216691

申请日：1974-12-23

申请人：US GOVERNMENT

**602、Thermonuclear fuel prepn - by filling glass microspheres with hydrogen isotopes and refrigerating during storage**

摘要：Thermonuclear fuel. having a consign. suitable for fusion by laser beam, comprises a hollow, borosilicate glass microsphere, 60-500u dia. of wall thickness 3-6u filled with a thermonuclear fuel formed from >=1 isotopes of H2 at a pressure of 106-107 Pa at ambient temp. and is made by selecting the hollow microspheres, heating them to 300 degrees C and exposing them to thermonuclear fuel gas for about 96 hrs. so that the gas penetrates into the microsphere, then cooling to ambient for storage. Pref. the microspheres are further cooled to cryogenic temps. so that the gaseous fuel condenses on the internal sphere surfaces forming an envelope in the inner surface of the microsphere. Good control of the particle size is possible. Improved purity is obtd. due to condensation part of process.

公开（公告）号：[IT1027623B](https://www.incopat.com/detail/init2?formerQuery=JCMXxJDQNgofS0w1r3Nq1w%3D%3D&local=zh)

公开（公告）日：1978-12-20

申请号：IT3047274

申请日：1974-12-12

申请人：KMS FUSION INC

**603、FUSION NUCLEAR REACTORS**

摘要：1482526 Thermonuclear fusion UNITED KINGDOM ATOMIC ENERGY AUTHORITY 3 Dec 1974 [5 Dec 1973] 56350/73 Heading G6P A thermonuclear fusion reactor, especially. one having a toroidal configuration, is refuelled by subjecting a pellet 1 of a suitable fuel to a pulse 3 of laser energy of such intensity and duration as to vaporize a portion 4 of the pellet, and that the temperature distribution throughout the pellet remains non-uniform and of such direction that resultant forces on the pellet 1 direct it into the reactor. As a result of vaporization of material from the hotter region 4, the remainder of the pellet 1 experiences a net reaction which accelerates the pellet along the direction of travel of the laser pulse 3. Some contribution is also made by radiation pressure. Guidance of the pellet 1 is effected by an annular beam 2 of laser light; this can be simulated by a number of parallel mode-locked guiding beams disposed regularly about the circumference of a circle. The pellet may comprise solid hydrogen fuel.

公开（公告）号：[GB1482526A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAtqn25843OOsA%3D%3D&local=zh)

公开（公告）日：1977-08-10

申请号：GB7356350

申请日：1974-12-03

申请人：UNITED KINGDOM ATOMIC ENERGY AUTHORITY

法律状态：法律状态公告日：19771221;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1482526A 法律状态公告日：19820707;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1482526A

**604、THERMONUCLEAR FUEL AND PROCESS FOR ITS PREPARATION**

摘要：1492572 Thermonuclear fusion FMS FUSION Inc 21 Nov 1974 50599/74 Heading G6P A thermonuclear fuel pellet for use in a laser fusion process comprises a hollow glass, ceramic, metal, or plastics microsphere containing thermonuclear fuel in the form of at least one hydrogen isotope. Preferably the pressure in the microsphere at room temperature is from 10 to 100 atmospheres. Hollow high-silica glass microspheres may be formed by passing a gas stream containing pulverized glass through a hot zone. A selected size range of these microspheres is heated under pressure with deuterium or a mixture of deuterium and tritium. After a period during which the gas diffuses into the interior of the microspheres, the temperature is lowered and the pressure reduced. The filled microspheres may be coated with a lead or bismuth glass, a soda-lime glass, copper, or aluminium. The fuel pellets may be stored at low temperature. On cooling in liquid nitrogen, CO 2 and H 2 O impurities form a solid layer on the inner surface of the microspheres, and at a lower temperature, the hydrogen isotopes themselves solidify in the same way.

公开（公告）号：[BE822659A1](https://www.incopat.com/detail/init2?formerQuery=RHbHXa1hO8RaCTJR8XDE2w%3D%3D&local=zh)

公开（公告）日：1975-05-27

申请号：BE0150910

申请日：1974-11-27

**605、WORKING METHOD FOR THE MAKING OF THERMO- A NUCLEAR FUEL AND THIS WAY OBTAINED FIRES SUBSTANCE.**

摘要：1492572 Thermonuclear fusion FMS FUSION Inc 21 Nov 1974 50599/74 Heading G6P A thermonuclear fuel pellet for use in a laser fusion process comprises a hollow glass, ceramic, metal, or plastics microsphere containing thermonuclear fuel in the form of at least one hydrogen isotope. Preferably the pressure in the microsphere at room temperature is from 10 to 100 atmospheres. Hollow high-silica glass microspheres may be formed by passing a gas stream containing pulverized glass through a hot zone. A selected size range of these microspheres is heated under pressure with deuterium or a mixture of deuterium and tritium. After a period during which the gas diffuses into the interior of the microspheres, the temperature is lowered and the pressure reduced. The filled microspheres may be coated with a lead or bismuth glass, a soda-lime glass, copper, or aluminium. The fuel pellets may be stored at low temperature. On cooling in liquid nitrogen, CO 2 and H 2 O impurities form a solid layer on the inner surface of the microspheres, and at a lower temperature, the hydrogen isotopes themselves solidify in the same way.

公开（公告）号：[NL7415398A](https://www.incopat.com/detail/init2?formerQuery=7ekUxZCuwXloxoN8A%2FlvwQ%3D%3D&local=zh)

公开（公告）日：1976-05-31

申请号：NL7415398

申请日：1974-11-26

申请人：KMS FUSION INC TE ANN ARBOR MICHIGAN VER ST V AM

**606、NUCLEAR FUEL PELLETS AND METHODS OF MAKING THEM**

摘要：1492572 Thermonuclear fusion FMS FUSION Inc 21 Nov 1974 50599/74 Heading G6P A thermonuclear fuel pellet for use in a laser fusion process comprises a hollow glass, ceramic, metal, or plastics microsphere containing thermonuclear fuel in the form of at least one hydrogen isotope. Preferably the pressure in the microsphere at room temperature is from 10 to 100 atmospheres. Hollow high-silica glass microspheres may be formed by passing a gas stream containing pulverized glass through a hot zone. A selected size range of these microspheres is heated under pressure with deuterium or a mixture of deuterium and tritium. After a period during which the gas diffuses into the interior of the microspheres, the temperature is lowered and the pressure reduced. The filled microspheres may be coated with a lead or bismuth glass, a soda-lime glass, copper, or aluminium. The fuel pellets may be stored at low temperature. On cooling in liquid nitrogen, CO 2 and H 2 O impurities form a solid layer on the inner surface of the microspheres, and at a lower temperature, the hydrogen isotopes themselves solidify in the same way.

公开（公告）号：[GB1492572A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAvhbkoBSHP4Cw%3D%3D&local=zh)

公开（公告）日：1977-11-23

申请号：GB7450599

申请日：1974-11-21

申请人：KMS FUSION INC

法律状态：法律状态公告日：19780405;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1492572A 法律状态公告日：19880713;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1492572A

**607、PROCESS FOR THE FABRICATION OF THERMO-NUCLEAR FUEL PELLETS AND THE PRODUCT THEREOF**

摘要：In processes utilizing a source of laser energy for achieving a thermonuclear fusion reaction, it is necessary to have fusion fuel prepared in a configuration with minute dimensions and the present invention contemplates preparing this fuel by introducing into hollow microspheres (typically comprised of glass) of predetermined size, in the range of 250 to 2, 000 micrometers, a gaseous thermonuclear fuel. One way of accomplishing this is to cause permeation of gaseous thermonuclear fuel through the walls of the microsphere under conditions of suitable temperature and pressure that it may be achieved in a reasonable time, after which the fuel can be frozen out on the walls of the microsphere to provide a fusion fuel in a hollow spherical shape. Suitable coatings of additional materials may be applied to the fueled microsphere by appropriate coating methods to complete complex thermonuclear fuel pellet configuration.

公开（公告）号：[CA1095639A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFjTBBdKhdGE6fR0OjOTHMZL&local=zh)

公开（公告）日：1981-02-10

申请号：CA214049

申请日：1974-11-19

申请人：KMS FUSION INC

法律状态：法律状态公告日：19980210;?

状态效果：-;?

状态代码：MKEX;?

法律状态：EXPIRY描述信息：Docdb Publication Number:; CA 1095639A1

**608、Effective compression of plasma - for laser-pulse produced nuclear fusion**

摘要：Process and apparatus for production of exothermic nuclear fusion and fission reactions in materials of density >=1018 cm-3, (atomic or ion density), whereby >10% of the laser energy is converted into mechanical energy of compression, more especially by non-linear radiation super-pressure. On the basis of theoretical calculation it is considered that pulsed laser energy can be used to produce thermal energy by fusion/fission process in excess of the input energy.

公开（公告）号：[FR2251885A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDJDM5eShW3Z3PR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-13

申请号：FR74039933

申请日：1974-11-18

申请人：HORA HEINRICH

法律状态：法律状态公告日：19780120;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2251885A1

**609、**

摘要：Process and apparatus for production of exothermic nuclear fusion and fission reactions in materials of density >=1018 cm-3, (atomic or ion density), whereby >10% of the laser energy is converted into mechanical energy of compression, more especially by non-linear radiation super-pressure. On the basis of theoretical calculation it is considered that pulsed laser energy can be used to produce thermal energy by fusion/fission process in excess of the input energy.

公开（公告）号：[JP50088995A](https://www.incopat.com/detail/init2?formerQuery=xlHG1VJJ0W7CGtz4aObdZfR0OjOTHMZL&local=zh)

公开（公告）日：1975-07-17

申请号：JP49131249

申请日：1974-11-15

**610、**

公开（公告）号：[NO744107A](https://www.incopat.com/detail/init2?formerQuery=OY5ZJ7LZIUDJMxdbi0Ekjw%3D%3D&local=zh)

公开（公告）日：1975-06-16

申请号：NO744107

申请日：1974-11-15

申请人：HORA HEINRICH; KELLER ANTON

**611、PRODUCING PLASMA OF HIGH DENSITY FOR EXOTHERMIC NUCLEAR PRODUCING PLASMA OF HIGH DENSITY FOR EXOTHERMIC NUCLEAR FUSIONS OR NUCLEAR FISSIONS**

摘要：Process and apparatus for production of exothermic nuclear fusion and fission reactions in materials of density >=1018 cm-3, (atomic or ion density), whereby >10% of the laser energy is converted into mechanical energy of compression, more especially by non-linear radiation super-pressure. On the basis of theoretical calculation it is considered that pulsed laser energy can be used to produce thermal energy by fusion/fission process in excess of the input energy.

公开（公告）号：[AU7531974A](https://www.incopat.com/detail/init2?formerQuery=uEydXHWX%2F5WJoaq2u8Kn0g%3D%3D&local=zh)

公开（公告）日：1976-05-13

申请号：AU7531974

申请日：1974-11-13

申请人：HORA H AND KELLER A

**612、**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[CH587537A5](https://www.incopat.com/detail/init2?formerQuery=A1fHfIw9AKx%2Fn7RD09Ce6g%3D%3D&local=zh)

公开（公告）日：1977-05-13

申请号：CH01499074

申请日：1974-11-08

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19830729;?

状态效果：-;?

状态代码：PL;?

法律状态：PATENT CEASED描述信息：Docdb Publication Number:; CH 587537A5

**613、**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[DK583574A](https://www.incopat.com/detail/init2?formerQuery=yoLLGaXYKSzbouQUSOxCNw%3D%3D&local=zh)

公开（公告）日：1975-06-30

申请号：DK583574

申请日：1974-11-08

申请人：KMS FUSION INC

**614、AN IMPROVED METHOD FOR EXTRACTING ENERGY FROM A FUSION REACTION.**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[ES431774A1](https://www.incopat.com/detail/init2?formerQuery=wMMn6n3%2BjKKvp6kIFgaVlA%3D%3D&local=zh)

公开（公告）日：1977-05-16

申请号：ES431774

申请日：1974-11-08

申请人：KMS FUSION INC

**615、FUSION REACTIONS**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[GB1493358A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAvwmKpeqBra4g%3D%3D&local=zh)

公开（公告）日：1977-11-30

申请号：GB7448364

申请日：1974-11-08

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19780412;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1493358A 法律状态公告日：19830608;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1493358A

**616、PROCEDURE IN ORDER TO MAKE ALMENTARE L FUSION ENERGY NUCLEAR**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[IT1025549B](https://www.incopat.com/detail/init2?formerQuery=JCMXxJDQNgrWe0X761JxZg%3D%3D&local=zh)

公开（公告）日：1978-08-30

申请号：IT2925174

申请日：1974-11-08

申请人：KMS FUSION INC;

**617、**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[JP50078794A](https://www.incopat.com/detail/init2?formerQuery=xlHG1VJJ0W63mj0N%2B5wQWPR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-26

申请号：JP49128157

申请日：1974-11-08

**618、**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[NO744025A](https://www.incopat.com/detail/init2?formerQuery=OY5ZJ7LZIUD7cj2gZ2LyFw%3D%3D&local=zh)

公开（公告）日：1975-06-02

申请号：NO744025

申请日：1974-11-08

申请人：KMS FUSION INC

**619、**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[SE7414050A](https://www.incopat.com/detail/init2?formerQuery=kqIDP%2FUiKYZ7DihMjeOfrw%3D%3D&local=zh)

公开（公告）日：1975-05-12

申请号：SE7414050

申请日：1974-11-08

申请人：KMS FUSION INC

法律状态：法律状态公告日：19950131;?

状态效果：-;?

状态代码：NUG;?

法律状态：PATENT HAS LAPSED描述信息：Docdb Publication Number:; SE 399606BCorresponding Publication Number:;7414050-0Effective Date:;19830614

**620、WORKING METHOD FOR THE MAKING OF A GASEOUS FUEL BASED ON HYDROGEN.**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[NL7414488A](https://www.incopat.com/detail/init2?formerQuery=7ekUxZCuwXkam%2BkZoqul3g%3D%3D&local=zh)

公开（公告）日：1975-05-13

申请号：NL7414488

申请日：1974-11-06

申请人：TEXAS GAS TRANSMISSION CORPORATION TE OWENSBORO KENTUCKY VER ST V AM

法律状态：法律状态公告日：19811001;?

状态效果：+;?

状态代码：BA;?

法律状态：A REQUEST FOR SEARCH OR AN INTERNATIONAL-TYPE SEARCH HAS BEEN FILED描述信息：Docdb Publication Number:; NL 7414488A法律状态公告日：19811102;?

状态代码：BB;?

法律状态：A SEARCH REPORT HAS BEEN DRAWN UP描述信息：Docdb Publication Number:; NL 7414488A法律状态公告日：19820104;?

状态效果：+;?

状态代码：BC;?

法律状态：A REQUEST FOR EXAMINATION HAS BEEN FILED描述信息：Docdb Publication Number:; NL 7414488A法律状态公告日：19830701;?

状态效果：-;?

状态代码：BV;?

法律状态：THE PATENT APPLICATION HAS LAPSED描述信息：Docdb Publication Number:; NL 7414488A

**621、THERMOCHEMISCH CRACK WORKING METHOD AND INSTITUTION FOR USING NUCLEAR POWER OF WA**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[NL7414489A](https://www.incopat.com/detail/init2?formerQuery=7ekUxZCuwXlnswOV%2FFZqKA%3D%3D&local=zh)

公开（公告）日：1975-05-13

申请号：NL7414489

申请日：1974-11-06

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19811001;?

状态效果：+;?

状态代码：BA;?

法律状态：A REQUEST FOR SEARCH OR AN INTERNATIONAL-TYPE SEARCH HAS BEEN FILED描述信息：Docdb Publication Number:; NL 7414489A法律状态公告日：19811102;?

状态代码：BB;?

法律状态：A SEARCH REPORT HAS BEEN DRAWN UP描述信息：Docdb Publication Number:; NL 7414489A法律状态公告日：19820104;?

状态效果：+;?

状态代码：BC;?

法律状态：A REQUEST FOR EXAMINATION HAS BEEN FILED描述信息：Docdb Publication Number:; NL 7414489A法律状态公告日：19830701;?

状态效果：-;?

状态代码：BV;?

法律状态：THE PATENT APPLICATION HAS LAPSED描述信息：Docdb Publication Number:; NL 7414489A

**622、PROCESS OF RELEASING ENERGY BY NUCLEAR FUSION**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[BE821666A1](https://www.incopat.com/detail/init2?formerQuery=RHbHXa1hO8RCmcQFkm8M0w%3D%3D&local=zh)

公开（公告）日：1975-04-30

申请号：BE0150043

申请日：1974-10-30

**623、METHOD FOR INCREASING PRODUCTION OF fUSION PROCESSeNERGY OUTPUT IN AN**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[DE2451605A1](https://www.incopat.com/detail/init2?formerQuery=2j42%2Ba%2FhotXlr9PfJM3AifR0OjOTHMZL&local=zh)

公开（公告）日：1975-05-28

申请号：DE2451605

申请日：1974-10-30

申请人：KMS FUSION INC

法律状态：法律状态公告日：19820225;?

状态效果：-;?

状态代码：8141;?

法律状态：DISPOSAL/NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; DE 2451605A1

**624、**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[FR2251077A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDIiKyCgxOlGmvR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-06

申请号：FR74036356

申请日：1974-10-30

申请人：KMS FUSION INC US

法律状态：法律状态公告日：19760903;?

状态代码：TP;?

法律状态：TRANSMISSION OF PROPERTY描述信息：Docdb Publication Number:; FR 2251077A1法律状态公告日：19830819;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2251077A1

**625、**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[FR2250818A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDLGaR7iC2rMP%2FR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-06

申请号：FR74035888

申请日：1974-10-25

申请人：TEXAS GAS TRANSMISSION CORP US

法律状态：法律状态公告日：19830819;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2250818A1

**626、**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[FR2251076A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDLxEcbhM56BKfR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-06

申请号：FR74035889

申请日：1974-10-25

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19830819;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2251076A1

**627、PROCESS OF ENHANCING FUSION ENERGY**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[CA1024270A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFhfb9QbibbIAPR0OjOTHMZL&local=zh)

公开（公告）日：1978-01-10

申请号：CA212187

申请日：1974-10-24

申请人：TEXAS GAS TRANSMISSION CORP

**628、WORKING METHOD FOR ENERGY EXTRACTION CORE FUSION.**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[NL7413914A](https://www.incopat.com/detail/init2?formerQuery=7ekUxZCuwXk56nTs64OAiA%3D%3D&local=zh)

公开（公告）日：1975-05-13

申请号：NL7413914

申请日：1974-10-24

申请人：KMS FUSION INC TE ANN ARBOR MICHIGAN VER ST V AM

法律状态：法律状态公告日：19810901;?

状态效果：+;?

状态代码：BA;?

法律状态：A REQUEST FOR SEARCH OR AN INTERNATIONAL-TYPE SEARCH HAS BEEN FILED描述信息：Docdb Publication Number:; NL 7413914A法律状态公告日：19810901;?

状态代码：BB;?

法律状态：A SEARCH REPORT HAS BEEN DRAWN UP描述信息：Docdb Publication Number:; NL 7413914A法律状态公告日：19811001;?

状态效果：+;?

状态代码：BC;?

法律状态：A REQUEST FOR EXAMINATION HAS BEEN FILED描述信息：Docdb Publication Number:; NL 7413914A法律状态公告日：19830601;?

状态效果：-;?

状态代码：BV;?

法律状态：THE PATENT APPLICATION HAS LAPSED描述信息：Docdb Publication Number:; NL 7413914A

**629、PROCESS TO INCREASE THE ENERGY OF FUSING BURNING**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[BRPI7408811A](https://www.incopat.com/detail/init2?formerQuery=NtABT%2FmxwnRnUseOxezG8Gr4kAd0KKkg&local=zh)

公开（公告）日：1975-11-18

申请号：BRPI7408811

申请日：1974-10-23

申请人：KMS FUSION INC

**630、ENHANCING FUSION ENERGY**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[AU7431074A](https://www.incopat.com/detail/init2?formerQuery=jlbe2v3FYknFalolWU5qHQ%3D%3D&local=zh)

公开（公告）日：1976-04-15

申请号：AU7431074

申请日：1974-10-14

申请人：KMS FUSION INC

**631、PROCESS OF ENHANCING FUSION ENERGY**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[IL45831D0](https://www.incopat.com/detail/init2?formerQuery=5YM6A7rjc7bWJ7RVMzpPQA%3D%3D&local=zh)

公开（公告）日：1974-12-31

申请号：IL45831

申请日：1974-10-11

申请人：KMS FUSION INC

**632、PROCESS OF ENHANCING FUSION ENERGY**

摘要：1493358 Thermonuclear fusion TEXAS GAS TRANSMISSION CORP 8 Nov 1974 [9 Nov 1973] 48364/74 Heading G6P The energy of neutrons produced in a fusion reaction is converted into heat by causing the neutrons to react with material which transmutes exothermally. The material may comprise B10 or Li6 circulated through a space 20 surrounding a fusion reaction chamber 14 in which fusion of a D-T pellet is caused by pulsed laser radiation. A coolant and/or moderator is passed through the space 20, various suitable media being set forth.

公开（公告）号：[ZA7406492A](https://www.incopat.com/detail/init2?formerQuery=3UqvYhETIO4I%2BSHtYvUgrQ%3D%3D&local=zh)

公开（公告）日：1976-06-30

申请号：ZA00746492

申请日：1974-10-11

申请人：KMS FUSION INC

**633、Laser apparatus**

摘要：A multibeam laser amplifier system is disclosed wherein a plurality of laser beams may be amplified to high power with high efficiency. The beams may then be directed upon a target such as a nuclear fusion fuel element, as in a laser fusion reactor. The system is made up of an array of dual, active mirror laser amplifier units. The laser beams are reflected between successively disposed ones of these units. The units are optically pumped by flash lamps which are arranged in close proximity to the reflective sides of the laser bodies in each unit.

公开（公告）号：[US3986130A](https://www.incopat.com/detail/init2?formerQuery=Izcja9aGORFJ0UlQ6pf1ug%3D%3D&local=zh)

公开（公告）日：1976-10-12

申请号：US05513364

申请日：1974-10-09

申请人：University of Rochester

**634、METHOD AND APPARATUSES FOR THE WATER CRACKING TERMOCHIMICO NUCLEAR**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[IT1019351B](https://www.incopat.com/detail/init2?formerQuery=JCMXxJDQNgrjFkeZeSjLKg%3D%3D&local=zh)

公开（公告）日：1977-11-10

申请号：IT5313574

申请日：1974-09-20

申请人：TEXAS GAS TRANSMISSION CORP;

**635、GASEOUS FUEL PRODUCTION BASED ON HYDROGEN**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[IT1021657B](https://www.incopat.com/detail/init2?formerQuery=JCMXxJDQNgqZw6dmvd3ubA%3D%3D&local=zh)

公开（公告）日：1978-02-20

申请号：IT5313674

申请日：1974-09-20

申请人：TEXAS GAS TRANSMISSION CORP;

**636、METHOD OF MANUFACTURING fUEL TO HYDROGEN-CONCEALMENT, AND APPARATUS FOR eXECUTION OF THE PROCEEDING**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[DE2443626A1](https://www.incopat.com/detail/init2?formerQuery=2j42%2Ba%2FhotWlKQR8bok04vR0OjOTHMZL&local=zh)

公开（公告）日：1975-05-15

申请号：DE2443626

申请日：1974-09-12

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19811015;?

状态效果：+;?

状态代码：8110;?

法律状态：REQUEST FOR EXAMINATION PARAGRAPH 44描述信息：Docdb Publication Number:; DE 2443626A1法律状态公告日：19831006;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2443626A1

**637、INITIATING A CONTROLLED FUSION REACTION USING DEUTERIUM AND TRITIUM PELLETS IN IMPLODING BULLETS FED WITH POWERFUL LASER BEAM PULSES**

摘要：1439297 Initiating fusion reaction A P PEDRICK 11 Sept 1974 39566/74 Heading G6P The arrangements for initiating controlled fusion reactions described in Specifications 1, 353, 727 and 1, 361, 962 has been improved by placing double convex lenses DCL at the tips of the bullets for concentrating the laser beam energy on to the deuterium-tritium pellets DTP.

公开（公告）号：[GB1439297A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAuQjQu8m2tk7w%3D%3D&local=zh)

公开（公告）日：1976-06-16

申请号：GB7439565

申请日：1974-09-11

申请人：PEDRICK A P

法律状态：法律状态公告日：19770302;?

状态代码：CSNS;?

法律状态：APPLICATION OF WHICH COMPLETE SPECIFICATION HAVE BEEN ACCEPTED AND PUBLISHED, BUT PATENT IS NOT SEALED描述信息：Docdb Publication Number:; GB 1439297A

**638、PRODUCTION OF HYDROGEN**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[GB1492785A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAsoDZ3M6%2BvR%2Bw%3D%3D&local=zh)

公开（公告）日：1977-11-23

申请号：GB7437833

申请日：1974-08-29

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19780405;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1492785A 法律状态公告日：19830330;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1492785A

**639、METHOD AND APPARATUS FOR NUCLEAR THERMOCHEMICAL WATER CRACKING**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[GB1492786A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAv73sKQuJwnuQ%3D%3D&local=zh)

公开（公告）日：1977-11-23

申请号：GB7437834

申请日：1974-08-29

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19780405;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1492786A 法律状态公告日：19830330;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1492786A

**640、Electron beams focussed esp. to initiate fusion reaction - by pressure produced by focussed pulsed laser beam**

摘要：A method of focussing intense relativistic electron beams consists of using beams, esp. laser beams, to exert a transverse pressure on the electron beam. Pref., one or more pulsed laser beams propagating in a plasma, are focussed to a hollow conical shape around the electron beams. The plasma in which focussing of the laser beam takes place is pref. of light to heavy elements or a combination of same, selected to give maximum focussing with minimum energy loss from the electron beam. Esp. for initiating thermonuclear reactions and producing transuranic elements. Also for focussing electrically charged particles such as ions, instead of relativistic electron beams. Also for focussing electrically charged particles and continuous particle beams, instead of pulsed laser beams.

公开（公告）号：[DE2440921A1](https://www.incopat.com/detail/init2?formerQuery=2j42%2Ba%2FhotVQVUJPPJm86PR0OjOTHMZL&local=zh)

公开（公告）日：1976-03-18

申请号：DE2440921

申请日：1974-08-27

申请人：WINTERBERG FRIEDWART PROF DR

**641、**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[JP50075589A](https://www.incopat.com/detail/init2?formerQuery=xlHG1VJJ0W5pSqwd5JO9SvR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-20

申请号：JP49095997

申请日：1974-08-21

**642、**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[JP50079501A](https://www.incopat.com/detail/init2?formerQuery=xlHG1VJJ0W42%2FrgJ12XfUPR0OjOTHMZL&local=zh)

公开（公告）日：1975-06-28

申请号：JP49490937

申请日：1974-08-15

**643、APPARATUS AND METHOD FOR dISSOCIATION OF wATER VAPOUR**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[DE2438926A1](https://www.incopat.com/detail/init2?formerQuery=2j42%2Ba%2FhotV8lybundT3cPR0OjOTHMZL&local=zh)

公开（公告）日：1975-05-22

申请号：DE2438926

申请日：1974-08-14

申请人：TEXAS GAS TRANSMISSION CORP

法律状态：法律状态公告日：19810924;?

状态效果：+;?

状态代码：8110;?

法律状态：REQUEST FOR EXAMINATION PARAGRAPH 44描述信息：Docdb Publication Number:; DE 2438926A1法律状态公告日：19830908;?

状态效果：-;?

状态代码：8139;?

法律状态：DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE描述信息：Docdb Publication Number:; DE 2438926A1

**644、METHOD AND APPARATUS FOR NUCLEAR THERMOCHEMICAL WATER CRACKING**

摘要：1492786 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37834/74 Heading CIA [Also in Division G6] Water vapour is decomposed into hydrogen and oxygen by exposing the vapour to the energy from a nuclear fusion reaction, and separating the hydrogen from the oxygen before recombination. In the apparatus shown, a pellet 18 of fusion fuel is introduced at 22 into a spherical chamber 10, and a laser pulse from source 14 is used to ignite and burn the pellet. Steam is introduced at 28. Hydrogen and oxygen leave the chamber at 30 and are separated by a nozzle 32 which may comprise zirconium dioxide ceramic through which oxygen diffuses more rapidly than hydrogen. Specification 1, 492, 785 is referred to.

公开（公告）号：[CA1026707A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFjIz85aqpjXIvR0OjOTHMZL&local=zh)

公开（公告）日：1978-02-21

申请号：CA205657

申请日：1974-07-25

申请人：TEXAS GAS TRANSMISSION CORP

**645、**

摘要：1481848 Thermonuclear fusion WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO 18 July 1974 [25 July 1973] 31806/74 Heading G6P In a process of effecting thermonuclear microfusion, a pellet of solidified D-T undergoes precompression produced by detonation of explosive material and subsequently is bombarded by laser radiation. The multi-stream system illustrated embodies eight laser streams directed through apertures 7 on to the coated pellet 1, the streams being produced some 10-7 seconds after precompression. The shock-waves from six sources 4 of explosive material are directed on to the pellet 1 by forming heads 5 and inserts 3. A bi-directional system is also described.

公开（公告）号：[JP50043398A](https://www.incopat.com/detail/init2?formerQuery=xlHG1VJJ0W6%2BCO9lJvgmcPR0OjOTHMZL&local=zh)

公开（公告）日：1975-04-19

申请号：JP49085562

申请日：1974-07-25

**646、NOVEL METHOD FOR rEALIZATION OF tHERMONUCLEAR ONE LASER- mICRO FUSION**

摘要：1481848 Thermonuclear fusion WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO 18 July 1974 [25 July 1973] 31806/74 Heading G6P In a process of effecting thermonuclear microfusion, a pellet of solidified D-T undergoes precompression produced by detonation of explosive material and subsequently is bombarded by laser radiation. The multi-stream system illustrated embodies eight laser streams directed through apertures 7 on to the coated pellet 1, the streams being produced some 10-7 seconds after precompression. The shock-waves from six sources 4 of explosive material are directed on to the pellet 1 by forming heads 5 and inserts 3. A bi-directional system is also described.

公开（公告）号：[DE2435603A1](https://www.incopat.com/detail/init2?formerQuery=2j42%2Ba%2FhotXN%2BT98xYRzdPR0OjOTHMZL&local=zh)

公开（公告）日：1975-02-06

申请号：DE2435603

申请日：1974-07-24

申请人：WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO WARSCHAU

法律状态：法律状态公告日：19811112;?

状态效果：-;?

状态代码：8141;?

法律状态：DISPOSAL/NO REQUEST FOR EXAMINATION描述信息：Docdb Publication Number:; DE 2435603A1

**647、**

摘要：1481848 Thermonuclear fusion WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO 18 July 1974 [25 July 1973] 31806/74 Heading G6P In a process of effecting thermonuclear microfusion, a pellet of solidified D-T undergoes precompression produced by detonation of explosive material and subsequently is bombarded by laser radiation. The multi-stream system illustrated embodies eight laser streams directed through apertures 7 on to the coated pellet 1, the streams being produced some 10-7 seconds after precompression. The shock-waves from six sources 4 of explosive material are directed on to the pellet 1 by forming heads 5 and inserts 3. A bi-directional system is also described.

公开（公告）号：[FR2238990A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDJ%2FcuBnWCB%2FzvR0OjOTHMZL&local=zh)

公开（公告）日：1975-02-21

申请号：FR74025676

申请日：1974-07-24

申请人：WOJSKOWA AKADEMIA TECHNICZNA IM PO

法律状态：法律状态公告日：19810522;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2238990A1

**648、PRODUCTION OF HYDROGEN-BASED GASEOUS FUEL**

摘要：1492785 Hydrogen TEXAS GAS TRANSMISSION CORP 29 Aug 1974 [9 Nov 1973] 37833/74 Heading ClA [Also in Divisions C5 and G6] Hydrogen is produced by decomposition of H 2 O into H 2 and O 2 by exposure of the H 2 O to energy from a nuclear fusion reaction. The hydrogen may be reacted with carbon, CO, or CO 2 to form a hydrocarbon fuel. In the apparatus shown, a fusion pellet is introduced into reaction chamber 10 from injection device 32 and is fired by laser energy directed through tube 38. Water vapour present in chamber 10 is decomposed and the gases issue through separation nozzle 14 which may be designed for supersonic flow, oxygen being removed at 18 and hydrogen led to methanation plant 47. The nozzle may include a grid of ZrO 2 ceramic through which O 2 diffuses more rapidly than H 2 . The chamber 10 is surrounded by a lithium blanket 20, lithium being circulated through heat exchanger 76 and tritium separation plant 82 and used to heat plant 84 where water is decomposed into H 2 and O 2 . This decomposition is assisted by radiolytic converter 90 driven by gamma rays and alpha particles generated in neutron conversion chamber 92. The plant 84 is also heated by nuclear energy from loop 24 connected by pipes 86, 88. Hydrogen and oxygen are also produced in radiolysis blanket 28 and separated at 100. Water is introduced into chamber 60 where it boils and decomposes partially into H 2 and O 2 ; separation takes place at 66, the residual water vapour being led by pipe 72 into reaction chamber 10. A carbon-containing material, e.g. coal or limestone, passes through channel 40 where it is heated to produce carbon or carbon dioxide which is directed to chamber 47 where it reacts with hydrogen from the chamber 10 to form methane. In the apparatus of Fig. 2 (not shown), the channel 40 is replaced by a further jacket (110) round the chamber 10 through which a heat transfer medium, e.g. lead, circulates and heats the carbonaceous material in an external heat exchanger (116). Specification 1, 492, 786 is referred to.

公开（公告）号：[CA1025800A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFgBAOIx0z%2B9UPR0OjOTHMZL&local=zh)

公开（公告）日：1978-02-07

申请号：CA205390

申请日：1974-07-23

申请人：TEXAS GAS TRANSMISSION CORP

**649、PROCESS FOR THERMONUCLEAR LASER MICROFUSION**

摘要：1481848 Thermonuclear fusion WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO 18 July 1974 [25 July 1973] 31806/74 Heading G6P In a process of effecting thermonuclear microfusion, a pellet of solidified D-T undergoes precompression produced by detonation of explosive material and subsequently is bombarded by laser radiation. The multi-stream system illustrated embodies eight laser streams directed through apertures 7 on to the coated pellet 1, the streams being produced some 10-7 seconds after precompression. The shock-waves from six sources 4 of explosive material are directed on to the pellet 1 by forming heads 5 and inserts 3. A bi-directional system is also described.

公开（公告）号：[GB1481848A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAtcJr7QXteW4Q%3D%3D&local=zh)

公开（公告）日：1977-08-03

申请号：GB7431806

申请日：1974-07-18

申请人：WOJSKOWA AKAD TECH IM JAROSLAWA DABROWSKIEGO

法律状态：法律状态公告日：19771214;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1481848A 法律状态公告日：19810225;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1481848A

**650、Short laser pulse generation by gas breakdown switching and highly selective spectral filtering**

摘要：In a laser pulse generator, short pulses adjustable in the range between about 0.1 and 0.5 nanoseconds are produced by improved spectral filtering of the output of a gas breakdown switch. The spectral filter in one embodiment is a hot, linearly absorbing gas cell that passes both sidebands of the radiation producing the gas breakdown in the switch and that linearly absorbs the center frequency. A second embodiment uses a tandem dual-slit monochromator as the spectral filter in order to pass both sidebands. The hot gas cell is simpler, cheaper and characterized by a higher rejection ratio than any other alternative to date. It yields very clean pulses with a steeper leading edge than prior techniques. The leading edge is highly reproducible, as needed for nuclear fusion work. The advantage over prior pulsed CO.sub.2 lasers for nuclear fusion work is substantial, since those prior lasers have not achieved pulse durations less than one nanosecond.

公开（公告）号：[US3979694A](https://www.incopat.com/detail/init2?formerQuery=Izcja9aGORGVFcfj1yw%2FYw%3D%3D&local=zh)

公开（公告）日：1976-09-07

申请号：US05485361

申请日：1974-07-03

申请人：Bell Telephone Laboratories Incorporated

**651、PULSED MULTILINE CO2 LASER OSCILLATOR APPARATUS AND METHOD**

摘要：PULSED MULTILANE CO2 LASER OSCILLATOR APPARATUS AND METHOD An apparatus and method for producing a multiline output from a CO2 laser comprising an optical resonant cavity containing gaseous CO2, means for producing a controlled electrical glow discharge within the gas, such as Rogowski profile electrodes connected to a high voltage source, preferably mode locking means such as an acoustooptic modulator, and means within the cavity for producing a wavelength dependent loss, such as a Fabry-Perot etalon filter. The apparatus and method disclosed in the specification greatly increase the efficiency of energy extraction from large CO2 laser amplifiers such as those contemplated for use in inducing nuclear fusion. The means for producing wavelength dependent loss within the laser oscillator cavity lowers the net gain of the usually dominant P(20) transition enough to allow the P(16), P(18), P(22), and P(24) transitions to successfully compete for available upper state population. In prior art pulsed laser oscillators, only the P(20) transition reached laser threshold because of its anomalously high gain coefficient at the expense of the remainder of the nearby rotational transitions. Thus in prior art lasers, the P(20) line dominated the output in all gain switched and mode locked Transverse Excited Atmospheric (TEA) laser oscillators, including electron beam controlled devices.

公开（公告）号：[CA1038070A1](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFiwwzWbhd%2BGkfR0OjOTHMZL&local=zh)

公开（公告）日：1978-09-05

申请号：CA198511

申请日：1974-04-30

申请人：US GOVERNMENT

**652、High velocity reaction process - using various means to create purely kinetic or thermal energy**

摘要：Chemical, technical and physical process for raising the velocity of reactions is applicable to all types of reaction-solids, liqs. and gases, and allows controlled reactions in the required direction. It permits a relatively small initiator by using special surfaces to be used for explosive charges and this can be used in simple weapons. The energy thus generated can be used as propellant (kinetic energy) or as purely thermal energy, or as a desired balance of the two. The process can be used to alter the properties of solids and gases, e.g. decay time. It can be used to obt. previously unobtainable temps. and to create high temp. plasma. It can be used for nuclear fusion. By detonation, a desired spatial direction can be achieved. These processes can be achieved by ultrasonic, high frequency, induction, magnetic fields and lasers instead of current effects. Purely kinetic energy can be balanced.

公开（公告）号：[DE2418292A1](https://www.incopat.com/detail/init2?formerQuery=2j42%2Ba%2FhotUdssrka331ufR0OjOTHMZL&local=zh)

公开（公告）日：1976-05-20

申请号：DE2418292

申请日：1974-04-16

申请人：SCHWEIGER LUDWIG

**653、Method and apparatus for making uniform pellets for fusion reactors**

摘要：A method and apparatus for making uniform pellets for laser driven fusion reactors which comprises selection of a quantity of glass frit which has been accurately classified as to size within a few micrometers and contains an occluded material, such as urea, which gasifies and expands when heated. The sized particles are introduced into an apparatus which includes a heated vertical tube with temperatures ranging from 800.degree. C to 1300.degree. C. The particles are heated during the drop through the tube to molten condition wherein the occluded material gasifies to form hollow microspheres which stabilize in shape and plunge into a collecting liquid at the bottom of the tube. The apparatus includes the vertical heat resistant tube, heaters for the various zones of the tube and means for introducing the frit and collecting the formed microspheres.

公开（公告）号：[US4017290A](https://www.incopat.com/detail/init2?formerQuery=SpS2r2W%2BnUWKIIECSl%2Br6A%3D%3D&local=zh)

公开（公告）日：1977-04-12

申请号：US05463860

申请日：1974-04-15

申请人：KMS Fusion Inc

法律状态：法律状态公告日：19821112;?

状态代码：AS;?

法律状态：ASSIGNMENT描述信息：Docdb Publication Number:; US 4017290A New Owner:;KMS FUSION, INC., 3621 S. STATE ST., ANN ARBOR, MIFree Text Description:;ASSIGNMENT OF ASSIGNORS INTEREST.;ASSIGNOR:SNELL, RICHARD G.;REEL/FRAME:004060/0578Effective Date:;19821105法律状态公告日：19830726;?

状态代码：CC;?

法律状态：CERTIFICATE OF CORRECTION描述信息：Docdb Publication Number:; US 4017290A 法律状态公告日：19840522;?

状态代码：CC;?

法律状态：CERTIFICATE OF CORRECTION描述信息：Docdb Publication Number:; US 4017290A

**654、A PROCESS FOR SETTING OFF AND CONDUCTING MICRO-FISSION EXPLOSIONS FOR THE CONTROLLED RELEASE OF NUCLEAR ENERGY, MEANS FOR CARRYING OUT THE PROCESS AND ITS APPLICATION**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[ZM674A1](https://www.incopat.com/detail/init2?formerQuery=27Fmq7c5rUIip56IciDG0g%3D%3D&local=zh)

公开（公告）日：1974-09-23

申请号：ZM6/74

申请日：1974-01-14

申请人：WINTERBERG FRIEDWARDT

**655、PROCEDURE AND MEANS FOR THE INITIATION AND ACCOMPLISHMENT OF MICROEXPLOSIONS OF FISSION FOR THE NUCLEAR LIBERATION WITH TROLADA OF ENERGY.**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[ES422246A1](https://www.incopat.com/detail/init2?formerQuery=WB0z9vXj4QUsmUhHFY8kpg%3D%3D&local=zh)

公开（公告）日：1977-07-01

申请号：ES422246

申请日：1974-01-12

申请人：WINTERBERG FRIEDWARDT

**656、Process of starting and production of microphone-explosions of fission for controlled release of nuclear energy, means of execution of the process and its applications.**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[OA4680A](https://www.incopat.com/detail/init2?formerQuery=vflenaPC%2Fip1iUhGFUC39g%3D%3D&local=zh)

公开（公告）日：1980-07-31

申请号：OA55097

申请日：1974-01-12

申请人：FRIEDWARDT WINTERBERG

**657、CONTROLLED METHOD AND APPARATUS FOR INITIATING AND CARRYING OUT MICRO-BURSTS FOR FISSION, FOR ENERGY RELEASE CORE**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[BR7400166D0](https://www.incopat.com/detail/init2?formerQuery=H1UQEfEajHC03LEmQQOCUfR0OjOTHMZL&local=zh)

公开（公告）日：1974-08-15

申请号：BRPI7400166

申请日：1974-01-11

申请人：WINTERBERG FRIEDWARDT

**658、CONTROLLED NUCLEAR FISSION PROCESS**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[IE38737L](https://www.incopat.com/detail/init2?formerQuery=BIeUvCgz8hHW7LYXVRuSVg%3D%3D&local=zh)

公开（公告）日：1974-07-12

申请号：IE740070

申请日：1974-01-11

申请人：FRIEDWARDT WINTERBERG

**659、METHOD FOR OBTAINING A NUCLEAR ENERGY, AND DEVICE FOR PRODUCING SAID NUCLEAR**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[RO64303A](https://www.incopat.com/detail/init2?formerQuery=dUolfH6uLSPyXLbIJdJjFA%3D%3D&local=zh)

公开（公告）日：1979-03-15

申请号：RO7477246

申请日：1974-01-11

申请人：WINTERBERG FRIEDWARDT

**660、**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[DD111259A5](https://www.incopat.com/detail/init2?formerQuery=HqhOtj9poEwDAQDKtR%2Bi9w%3D%3D&local=zh)

公开（公告）日：1975-02-05

申请号：DD175948

申请日：1974-01-10

**661、**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[PL88489B1](https://www.incopat.com/detail/init2?formerQuery=8pAjO7Qr7LbyLgUATKbohA%3D%3D&local=zh)

公开（公告）日：1976-09-30

申请号：PL1974 168035

申请日：1974-01-10

**662、**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[TR18014A](https://www.incopat.com/detail/init2?formerQuery=VllDybPKPdOEFcSNIByw%2FA%3D%3D&local=zh)

公开（公告）日：1976-08-17

申请号：TR18014

申请日：1974-01-10

申请人：WINTERBERG F

**663、PRIMING AND FOR PRODUCING MICRO FISSION EXPLOSION FOR CONTROLLED RELEASE OF NUCLEAR ENERGY**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[BE809586A](https://www.incopat.com/detail/init2?formerQuery=fiPUCWHk%2FBjTUxWjO9K%2Fww%3D%3D&local=zh)

公开（公告）日：1974-05-02

申请号：BE6044419

申请日：1974-01-09

**664、PROCEDURE IN ORDER TO HALF START AND TO PUT INTO EFFECT OUTBREAKS TO MICROFISSION FOR THE CONTROLLED DEVELOPMENT OF ENERGY NU CLEARE FOR THE REALIZATION OF THE PROCEDURE AND ITS APPLICAZION**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[IT1006813B](https://www.incopat.com/detail/init2?formerQuery=JCMXxJDQNgqHPmwa8wIH1Q%3D%3D&local=zh)

公开（公告）日：1976-10-20

申请号：IT1921874

申请日：1974-01-09

申请人：WINTERBERG FRIEDWARDT;

**665、travelled father spirit AND MEANS TRAVELED INGANGSETTNING AND GENOMFORANDE OF MIKROKLYVNINGSEXPLOSIONER TRAVELED CHECKED, NUKLEER ENERGIFRIGORING**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[SE396154B](https://www.incopat.com/detail/init2?formerQuery=WUYF%2FOzPOddhKDWJ0ch9bQ%3D%3D&local=zh)

公开（公告）日：1977-09-05

申请号：SE7400193

申请日：1974-01-08

申请人：WINTERBERG FRIEDWARDT

**666、MICRO-FISSION EXPLOSIONS**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[AU6424974A](https://www.incopat.com/detail/init2?formerQuery=yC%2BzRgA7sRQOrsi5WRXEjw%3D%3D&local=zh)

公开（公告）日：1975-07-10

申请号：AU6424974

申请日：1974-01-07

申请人：FRIEDWARDT WINTERBERG

**667、**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[FR2214155A1](https://www.incopat.com/detail/init2?formerQuery=03utKc6KMDJV%2Ff1RJL7BPfR0OjOTHMZL&local=zh)

公开（公告）日：1974-08-09

申请号：FR74000887

申请日：1974-01-07

申请人：WINTERBERG FRIEDWARDT DT

法律状态：法律状态公告日：19801031;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2214155A1

**668、**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[NL7400162A](https://www.incopat.com/detail/init2?formerQuery=7ekUxZCuwXnRS9YNDWA0aQ%3D%3D&local=zh)

公开（公告）日：1974-07-16

申请号：NL7400162

申请日：1974-01-07

法律状态：法律状态公告日：19790925;?

状态效果：-;?

状态代码：BV;?

法律状态：THE PATENT APPLICATION HAS LAPSED描述信息：Docdb Publication Number:; NL 7400162A

**669、THE POSSIBILITY OF SETTING OFF AND CONDUCTING THERMONUCLEAR REACTIONS BY MEANS OF CONTROLLED LASER OR ELECTRON BEAMS**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[ZA7400111A](https://www.incopat.com/detail/init2?formerQuery=3UqvYhETIO73s5ZYy9lcvA%3D%3D&local=zh)

公开（公告）日：1974-12-24

申请号：ZA740111

申请日：1974-01-07

申请人：WINTERBERG F

**670、**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[LU69111A1](https://www.incopat.com/detail/init2?formerQuery=ZDz5L%2BGj3TRXCDly2by4Jw%3D%3D&local=zh)

公开（公告）日：1974-04-02

申请号：LU69111

申请日：1974-01-03

**671、CONTROLLED NUCLEAR FISSION PROCESS**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[GB1446671A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAvGJh5gQVJOdQ%3D%3D&local=zh)

公开（公告）日：1976-08-18

申请号：GB7400017

申请日：1974-01-02

申请人：WINTERBERG F

法律状态：法律状态公告日：19761231;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1446671A 法律状态公告日：19800820;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1446671A

**672、METHOD FOR [...] AND eXECUTION OF mICRO - sPLITTING - eXPLOSIONS ON CONTROLLED, NUCLEAR [...], AGENTS FOR eXECUTION OF THE PROCEEDING AND ITS APPLICATION**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[DE2365115A1](https://www.incopat.com/detail/init2?formerQuery=xIOOjqjnUAd0JLHbX05Bp%2FR0OjOTHMZL&local=zh)

公开（公告）日：1974-07-18

申请号：DE2365115

申请日：1973-12-29

申请人：WINTERBERG FRIEDWARDT PROF DR 7750 KONSTANZ

法律状态：法律状态公告日：19780727;?

状态效果：-;?

状态代码：OHW;?

法律状态：REJECTION描述信息：Docdb Publication Number:; DE 2365115A1

**673、PLANT FOR THE THERMONUCLEAR FUSION OF DEUTERIUM OBTAINED FROM SEA WATER**

摘要：1409210 Thermonuclear fusion apparatus A P PEDRICK 28 Dec 1973 60120/73 Heading G6P A plant for producing thermo-nuclear fusion, in a controlled manner, of deuterium obtained from sea-water comprises means for projecting droplets 1 of deuterium in a stream of inert gas to the centre of a fusion chamber 3, means for projecting simultaneously, by explosive charge, an odd number (3 or more) of bullets at the deuterium droplets, the bullets having concave nose profiles formed by parabolic mirror surfaces, and means for projecting, in the opposite sense to the line of movement of each bullet, laser pulses, the projection of the laser pulses being delayed until the bullets are at such a distance from the centre of the chamber that the laser pulses reflected off the noses are concentrated at the centre of the chamber so that the deuterium droplets receive concentrated radiant energy to raise the temperature to enable fusion. The resultant plasma is modulated in the field of an electromagnetic soil to produce electricity, as described in Specification 1, 207, 698. As shown, the chamber 3 is cooled by water 5, the water also being used to cool the coils of the electricity generator and the plasma 13, the resultant steam being used to drive a turbine 7 which in turn drive a generator. The electricity so produced is used to drive pumps for the water, the inert gas, and the deuterium droplets. Means are also provided for collecting helium from the plasma.

公开（公告）号：[GB1409210A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAshQNJAufBtMQ%3D%3D&local=zh)

公开（公告）日：1975-10-08

申请号：GB7360120

申请日：1973-12-28

申请人：PEDRICK A P

法律状态：法律状态公告日：19760603;?

状态代码：CSNS;?

法律状态：APPLICATION OF WHICH COMPLETE SPECIFICATION HAVE BEEN ACCEPTED AND PUBLISHED, BUT PATENT IS NOT SEALED描述信息：Docdb Publication Number:; GB 1409210A

**674、METHODS AND APPARATUS FOR eFFECTIVE ONEcOMPRESSIONmORE LASER-PRODUCEDnUCLEAR FUSION PLASMAS**

公开（公告）号：[DE2357481A1](https://www.incopat.com/detail/init2?formerQuery=xIOOjqjnUAc9IjslG0rKZfR0OjOTHMZL&local=zh)

公开（公告）日：1975-05-22

申请号：DE2357481

申请日：1973-11-17

申请人：HORA HEINRICH PROF DR 8012 OTTOBRUNN

法律状态：法律状态公告日：19790927;?

状态效果：-;?

状态代码：OHN;?

法律状态：WITHDRAWAL描述信息：Docdb Publication Number:; DE 2357481A1

**675、**

摘要：1481848 Thermonuclear fusion WOJSKOWA AKADEMIA TECHNICZNA IM JAROSLAWA DABROWSKIEGO 18 July 1974 [25 July 1973] 31806/74 Heading G6P In a process of effecting thermonuclear microfusion, a pellet of solidified D-T undergoes precompression produced by detonation of explosive material and subsequently is bombarded by laser radiation. The multi-stream system illustrated embodies eight laser streams directed through apertures 7 on to the coated pellet 1, the streams being produced some 10-7 seconds after precompression. The shock-waves from six sources 4 of explosive material are directed on to the pellet 1 by forming heads 5 and inserts 3. A bi-directional system is also described.

公开（公告）号：[PL93676B1](https://www.incopat.com/detail/init2?formerQuery=cTNwd%2B1TWwecpnFCzknqlQ%3D%3D&local=zh)

公开（公告）日：1977-06-30

申请号：PL1973 164252

申请日：1973-07-25

**676、Method of achieving the controlled release of thermonuclear energy**

摘要：A method of achieving the controlled release of thermonuclear energy by illuminating a minute, solid density, hollow shell of a mixture of material such as deuterium and tritium with a high intensity, uniformly converging laser wave to effect an extremely rapid build-up of energy in inwardly traveling shock waves to implode the shell creating thermonuclear conditions causing a reaction of deuterons and tritons and a resultant high energy thermonuclear burn. Utilizing the resulting energy as a thermal source and to breed tritium or plutonium. The invention also contemplates a laser source wherein the flux level is increased with time to reduce the initial shock heating of fuel and provide maximum compression after implosion; and, in addition, computations and an equation are provided to enable the selection of a design having a high degree of stability and a dependable fusion performance by establishing a proper relationship between the laser energy input and the size and character of the selected material for the fusion capsule.

公开（公告）号：[US4608222A](https://www.incopat.com/detail/init2?formerQuery=Q7tq1T2lyJxCTfNq7VMz%2BA%3D%3D&local=zh)

公开（公告）日：1986-08-26

申请号：US05377508

申请日：1973-07-10

申请人：KMS Fusion Inc

**677、CONTROL SYSTEM FOR REGULATING THE SPEED OF DEUTERIUM-TRITIUM TIP ONTROLLED NUCLEAR FUSION REACTION**

摘要：1366285 Apparatus for controlling the velocity of a projectile through a gun barrel A P PEDRICK 9 July 1973 32707/73 Heading F3C Means for projecting a bullet 5 along a gun barrel 2 is associated with means for controlling the velocity of the bullet. The latter means comprises a disc 15 rotated by a constant-speed motor 21, the disc leaving conducting and non-conducting zones arranged to perform a switching function in a circuit for energizing a coil 18 which surrounds the barrel. If the bullet traverses a length D of the barrel in a predetermined time, no energization of the coil takes place, but if the bullet travels faster than its predetermined correct velocity, the coil is energized to create a magnetic drag on the bullet. This speed-control system is designed for use in an apparatus, Fig. 1 (not shown), wherein three guns, all intended to be fired simultaneously and to have their bullets controlled to the same speed, are used to cause three deuterium and/or tritium pellets mounted on the bullets to come together at a given instant, laser radiation being trained on the point of impact of the pellets just before they collide. The intention is to bring about nuclear fusion in the same general way as is described in Specifications 1, 207, 698 and 1, 282, 391.

公开（公告）号：[GB1366285A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcUrDx%2BnIawBGA%3D%3D&local=zh)

公开（公告）日：1974-09-11

申请号：GB7332707

申请日：1973-07-09

申请人：PEDRICK A P

法律状态：法律状态公告日：19750604;?

状态代码：CSNS;?

法律状态：APPLICATION OF WHICH COMPLETE SPECIFICATION HAVE BEEN ACCEPTED AND PUBLISHED, BUT PATENT IS NOT SEALED描述信息：Docdb Publication Number:; GB 1366285A

**678、CATOPTRIC LENS ARRANGEMENT**

摘要：1412955 Catoptric lenses RAYTHEON CO 4 May 1973 [3 July 1972] 21389/73 Heading G2J "Confocal" catoptric lens arrangements of the type described in Specification 1412954 are used to combine the energy from a number of highpowered lasers on a cylindrical surface adjacent to the lens axis so as to form an "optical compressor" intended for the production of thermonuclear fusion. Such a lens arrangement comprises an entrance mirror 11' having a reflecting surface corresponding to the surface described by moving a portion of a selected quadratic conic section 11a' about the lens axis, both focal points of the conic section 11a' tracing focal circles Fo, Fo1 centred on the lens axis, an exit mirror 15 having a reflecting surface corresponding to the surface described by a portion of a second selected quadratic conic section 15a having a pair of focal points Fo1, F 1 rotated about the lens axis, one of these focal points Fo1 tracing a second focal circle having a radius equal to the radius of the focal circle F o 1 traced by the section 11a1 and the other one F 1 tracing a final focal circle having a radius approximately equal to the radius of the cylindrical surface, and means so supporting the entrance and exit mirrors relative to each other as to make the first and second focal circles Fo1 coincident. Examples are given wherein the quadratic conic sections are ellipses, hyperbolas, and parabolas, in various combinations. The entrance and exit mirrors may be zoned, the zones corresponding to different quadratic conic sections Fig. 4 (not shown). Each laser beam falling on the entrance mirror may first be focused using lens arrangements described in Specification 1412954. The invention may also be applied in the design of optical radars.

公开（公告）号：[GB1412955A](https://www.incopat.com/detail/init2?formerQuery=PuuK83OTUAtljo4zD7yqTA%3D%3D&local=zh)

公开（公告）日：1975-11-05

申请号：GB7321389

申请日：1973-05-04

申请人：RAYTHEON CO

法律状态：法律状态公告日：19760317;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1412955A 法律状态公告日：19810114;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1412955A

**679、CATOPTRIC LENS ARRANGEMENT**

摘要：1425608 Catoptric lenses RAYTHEON CO 21 May 1973 [3 July 1972] 24171/73 Heading G2J A catoptric lens arrangement for combining the energy from a number of high-powered lasers so as to form an "optical bottle" intended for the production of thermonuclear fusion comprises a plurality of catoptric lens assemblies of the "confocal" type disclosed in Specifications 1412954 and 1412955, i.e. of the type comprising mirrors having reflecting surfaces corresponding to the curved surfaces generated by rotating selected quadratic conic sections about the assembly axis, a focal circle (i.e. the resulting lens of a focus of the quadratic conic section) of one mirror being made coincident with the focal circle of another mirror. The catoptric lens arrangement comprises reflective lens assemblies 11, 11a, having individual, different assembly axes both spaced from a common lens axis of the arrangement, each lens assembly comprising a plurality of mirrors 13, 15 disposed along the assembly axis and "confocally" arranged so as to focus energy directed towards an input focal point F 1 at an output focal point F2 lying on the assembly axis, the mirrors 13, 15 of each lens assembly being generated by rotation about the assembly axis through less than 360 degrees of generating arcs of quadratic conic sections, the mirrors of all the assemblies being supported relative to each other, so as to maintain the output focal points of the assemblies in a predetermined relation to each other, by a common supporting structure which enters the regions where the mirrors are incomplete, by virtue of the aforesaid rotation of lens than 360 but does not extend into the paths of the radiant energy to and from the assemblies and between the mirrors of the assemblies.

公开（公告）号：[IL42173D0](https://www.incopat.com/detail/init2?formerQuery=KolCoiVI7H%2BqwISWNgERnQ%3D%3D&local=zh)

公开（公告）日：1973-07-30

申请号：IL42173

申请日：1973-05-02

申请人：RAYTHEON CO

**680、APPARATUS FOR PRODUCING ELECTRICITY FROM THERMONUCLEAR REACTIONS**

摘要：1353727 Generators operating by electromagnetic interaction with fluids A P PEDRICK 2 April 1973 15724/73 Heading H2A [Also in Division G6] In apparatus for producing electricity from thermonuclear energy, deuterium/tritium tipped bullets are fired radially inwardly towards the centre 10 of a pressure shell 8, one of the bullets triggering an electric circuit via a photo-cell just prior to impact with the other bullets to energize laser beams which are directed at the centre 10. The noses of the bullets are concave and on impact trap high energy radiation from the lasers so that the deuterium-tritium undergoes nuclear fusion. Inert gas 23 flows between electrodes 24, 241 to form a plasma which passes through the pressure shell 8. The plasma is energized in the shell 8 and is shaped by electromagnetic field coils 25. The shaped plasma 20 is passed through coil 26 in which is induced an alternating current fed to transformers. Usable electricity is obtained from transformer secondary coils 29 and feedback secondary coils are used to apply alternating current to coils 25 to modulate the flow of plasma. Three barrels 7 each with a rotary bullet-containing magazine radiate from the shell 8 and three triple laser beam tubes also radiate from the shell.

公开（公告）号：[GB1353727A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcV%2FRHlZbYB00A%3D%3D&local=zh)

公开（公告）日：1974-05-22

申请号：GB7315724

申请日：1973-04-02

申请人：PEDRICK A P

法律状态：法律状态公告日：19750205;?

状态代码：CSNS;?

法律状态：APPLICATION OF WHICH COMPLETE SPECIFICATION HAVE BEEN ACCEPTED AND PUBLISHED, BUT PATENT IS NOT SEALED描述信息：Docdb Publication Number:; GB 1353727A

**681、MAGNETICALLY INSULATED CAPACITOR, PROCESS FOR ELECTROSTATIC ENERGY STORAGE AND ITS APPLICATIONS**

摘要：The invention relates to a novel electric capacitor for the attainment of very high voltages and for the storage of electric energy, comprising of two concentric coaxial toroidal conductors with the inner conductor levitated, an external magnetic field coil, a thermionic cathode emitting electrons, a levitated guide electrode and a discharge tube. The stored energy can thereby be delivered in form of atomic particle beams or electromagnetic waves especially electron beams in very short times and thus with very high power. Applications are : (1) the initiation of nuclear reactions, especially thermonuclear reactions, (2) the collective acceleration of electrically charged atomic particles to very high energies, (3) Gamma-ray flash tubes, (4) the pumping of lasers, (5) micro wave pulse generators and (6) the use of the thusly generated radiation for medical purposes.

公开（公告）号：[US3873930A](https://www.incopat.com/detail/init2?formerQuery=oMiyeMjjpwfLSin2gvCpyw%3D%3D&local=zh)

公开（公告）日：1975-03-25

申请号：US05336899

申请日：1973-03-01

申请人：WINTERBERG FRIEDWARDT M

**682、Nuclear fusion - produced by laser energy absorption by a frozen degassed liquid unable to expand**

摘要：Prodn. of pure nuclear fusion in which D2O or a critical mass e.g. 21H + 31H which cannot expand during energy absorption by h .alt theta, is brought about by holding a completely degassed liq. sample (as above) in a reaction chamber in sucha wa that this can experience a volume expansion either on freezing or on energy absorption (h alt. theta) while a hydraulic pressure counteracts proportionally the tendency of the sample to expand.

公开（公告）号：[DE2308071A1](https://www.incopat.com/detail/init2?formerQuery=xIOOjqjnUAdjtb1JcEFLGfR0OjOTHMZL&local=zh)

公开（公告）日：1975-01-02

申请号：DE2308071

申请日：1973-02-19

申请人：PROTON PHYSIK FORSCHUNGSGMBH

**683、PROCEDURE FOR CAUSING MICRO SPLITTING EXPLOSIONS FUER CONTROLLED ONES, NUCLEAR ENERGIEFREISETZUNG, MEANS FOR THE EXECUTION OF THE PROCEDURE AND ITS APPLICATION.**

摘要：1446671 Thermonuclear fission; thermonuclear fusion F WINTERBERG 2 Jan 1974 [12 Jan 1973] 00017/74 Heading G6P Thermonuclear fission is initiated in a body of fissile material, e.g. U-233, U-235 or Pu-239, including material capable of releasing energy by a fusion process, by compressing the body to a critical assembly using a beam of radiation, e.g. laser-, electron- or ion beam. It is preferred to surround the body by a neutron reflector of, e.g. D-T or Li-D, whereby the thermonuclear fusion reactions result. The fuel body may comprise an inner body (1) (Fig. 1, not shown) of fissile material and an outer shell (2) of fusion fuel formed to spherical or cylindrical shape. Alternatively, the inner body (11) (Fig. 2, not shown) can be surrounded by concentric shells alternately of fusion fuel (12, 14, 16) and fissile fuel (13, 15). The body may contain cavities which are eliminated during compression.

公开（公告）号：[CH558973A](https://www.incopat.com/detail/init2?formerQuery=20pPIODkwRnveKhibgY8Iw%3D%3D&local=zh)

公开（公告）日：1975-02-14

申请号：CH00040173

申请日：1973-01-12

申请人：WINTERBERG FRIEDWARDT

法律状态：法律状态公告日：19800930;?

状态效果：-;?

状态代码：PL;?

法律状态：PATENT CEASED描述信息：Docdb Publication Number:; CH 558973A

**684、Producing X-rays**

摘要：A method of producing X-rays by directing radiant energy from a laser onto a target. Conversion efficiency of at least about 3 percent is obtained by providing the radiant energy in a low-power precursor pulse of approximately uniform effective intensity focused onto the surface of the target for about 1 to 30 nanoseconds so as to generate an expanding unconfined coronal plasma having less than normal solid density throughout and comprising a low-density (underdense) region wherein the plasma frequency is less than the laser radiation frequency and a higher-density (overdense) region wherein the plasma frequency is greater than the laser radiation frequency and, about 1 to 30 nanoseconds after the precursor pulse strikes the target, a higher-power main pulse focused onto the plasma for about 10.sup.-3 to 30 nanoseconds and having such power density and total energy that the radiant energy is absorbed in the underdense region and conducted into the overdense region to heat it and thus to produce X-rays therefrom with the plasma remaining substantially below normal solid density and thus facilitating the substantial emission of X-rays in the form of spectral lines arising from nonequilibrium ionization states. PAL The X-rays may be produced essentially as from a point source (i.e., they are spatially coherent) and thus are suitable for many applications that would otherwise require an X-ray laser. In some embodiments phase coherence is achieved, thus providing a true X-ray laser. PAL In a similar method, providing a controlled nuclear fusion reaction, the target comprises alternate layers of high-Z and lower-Z material.

公开（公告）号：[US4058486A](https://www.incopat.com/detail/init2?formerQuery=SpS2r2W%2BnUXCSkWocnCrjA%3D%3D&local=zh)

公开（公告）日：1977-11-15

申请号：US05319756

申请日：1972-12-29

申请人：Battelle Memorial Institute

**685、lASER LIGHT SOURCE**

摘要：1386988 Thermonuclear fusion apparatus UNITED STATES ATOMIC ENERGY COMMISSION 4 Dec 1972 [23 Dec 1971] 55918/72 Heading G6P In thermonuclear fusion apparatus, a spherical target 67 (Fig. 2) is mounted, by means of a support 93, in a holder 81 forming a generally elliptical reflector and laser radiation 13 enters a chamber (Fig. 1), in which the target is positioned, via an aperture which at least partially protects the laser 11 from the reaction products produced in the chamber. In the embodiment shown, the aperture 59 is provided in a rotatable shutter 49 positioned within a neutron shield 51 so that the aperture 59 aligns with a passage 38 through the shield. Pulses of laser radiation are thus passed into the chamber to interact with the target in a "oneshot" operation. The target 67 may comprise a 1 : 1 D-T mixture or liquid hydrogen, deuterium or tritium, or lithium hydride. The target 67 and its mounting can be fabricated in a fabricator and supplied directly to the chamber. The holder 81 and support 93 may be of lithium, the target 67 being disposed at the focus of the reflector. A bottom cut-away portion 921 of the holder 81 enables some radiation to be reflected on to the support 93 to cause the latter to be vaporized. The reflector may have a copper or gold reflective coating. The capsule 15 constituted by the target 67, support 93 and holder 81 may be held in a jig in the chamber or may be dropped by free fall into a liquid lithium vortex therein. Heat can be extracted from the chamber by a circulating fluid and used to produce power by means of a heat-engine, MHD converter, thermoelectric, or thermionic converter. Some of the electrical energy produced can be used to energize the laser.

公开（公告）号：[DE2263241A1](https://www.incopat.com/detail/init2?formerQuery=v7JYpsvgU2u27DdciOrlefR0OjOTHMZL&local=zh)

公开（公告）日：1973-06-28

申请号：DE2263241

申请日：1972-12-23

申请人：U S ATOMIC ENERGY COMMISSION WASHINGTON D C

**686、**

摘要：1386988 Thermonuclear fusion apparatus UNITED STATES ATOMIC ENERGY COMMISSION 4 Dec 1972 [23 Dec 1971] 55918/72 Heading G6P In thermonuclear fusion apparatus, a spherical target 67 (Fig. 2) is mounted, by means of a support 93, in a holder 81 forming a generally elliptical reflector and laser radiation 13 enters a chamber (Fig. 1), in which the target is positioned, via an aperture which at least partially protects the laser 11 from the reaction products produced in the chamber. In the embodiment shown, the aperture 59 is provided in a rotatable shutter 49 positioned within a neutron shield 51 so that the aperture 59 aligns with a passage 38 through the shield. Pulses of laser radiation are thus passed into the chamber to interact with the target in a "oneshot" operation. The target 67 may comprise a 1 : 1 D-T mixture or liquid hydrogen, deuterium or tritium, or lithium hydride. The target 67 and its mounting can be fabricated in a fabricator and supplied directly to the chamber. The holder 81 and support 93 may be of lithium, the target 67 being disposed at the focus of the reflector. A bottom cut-away portion 921 of the holder 81 enables some radiation to be reflected on to the support 93 to cause the latter to be vaporized. The reflector may have a copper or gold reflective coating. The capsule 15 constituted by the target 67, support 93 and holder 81 may be held in a jig in the chamber or may be dropped by free fall into a liquid lithium vortex therein. Heat can be extracted from the chamber by a circulating fluid and used to produce power by means of a heat-engine, MHD converter, thermoelectric, or thermionic converter. Some of the electrical energy produced can be used to energize the laser.

公开（公告）号：[JP48069999A](https://www.incopat.com/detail/init2?formerQuery=wHajovPq2HqF2o7cWTZoevR0OjOTHMZL&local=zh)

公开（公告）日：1973-09-22

申请号：JP48004533

申请日：1972-12-23

**687、**

摘要：1386988 Thermonuclear fusion apparatus UNITED STATES ATOMIC ENERGY COMMISSION 4 Dec 1972 [23 Dec 1971] 55918/72 Heading G6P In thermonuclear fusion apparatus, a spherical target 67 (Fig. 2) is mounted, by means of a support 93, in a holder 81 forming a generally elliptical reflector and laser radiation 13 enters a chamber (Fig. 1), in which the target is positioned, via an aperture which at least partially protects the laser 11 from the reaction products produced in the chamber. In the embodiment shown, the aperture 59 is provided in a rotatable shutter 49 positioned within a neutron shield 51 so that the aperture 59 aligns with a passage 38 through the shield. Pulses of laser radiation are thus passed into the chamber to interact with the target in a "oneshot" operation. The target 67 may comprise a 1 : 1 D-T mixture or liquid hydrogen, deuterium or tritium, or lithium hydride. The target 67 and its mounting can be fabricated in a fabricator and supplied directly to the chamber. The holder 81 and support 93 may be of lithium, the target 67 being disposed at the focus of the reflector. A bottom cut-away portion 921 of the holder 81 enables some radiation to be reflected on to the support 93 to cause the latter to be vaporized. The reflector may have a copper or gold reflective coating. The capsule 15 constituted by the target 67, support 93 and holder 81 may be held in a jig in the chamber or may be dropped by free fall into a liquid lithium vortex therein. Heat can be extracted from the chamber by a circulating fluid and used to produce power by means of a heat-engine, MHD converter, thermoelectric, or thermionic converter. Some of the electrical energy produced can be used to energize the laser.

公开（公告）号：[FR2164897A1](https://www.incopat.com/detail/init2?formerQuery=t8PImr3mSIk%2BW5W0VCW3o%2FR0OjOTHMZL&local=zh)

公开（公告）日：1973-08-03

申请号：FR72045981

申请日：1972-12-22

申请人：US ATOMIC ENERGY COMMI

法律状态：法律状态公告日：19790216;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2164897A1

**688、METHOD OF MOUNTING A FUEL PELLET IN A LASER-EXCITED FUSION REACTOR**

摘要：1386988 Thermonuclear fusion apparatus UNITED STATES ATOMIC ENERGY COMMISSION 4 Dec 1972 [23 Dec 1971] 55918/72 Heading G6P In thermonuclear fusion apparatus, a spherical target 67 (Fig. 2) is mounted, by means of a support 93, in a holder 81 forming a generally elliptical reflector and laser radiation 13 enters a chamber (Fig. 1), in which the target is positioned, via an aperture which at least partially protects the laser 11 from the reaction products produced in the chamber. In the embodiment shown, the aperture 59 is provided in a rotatable shutter 49 positioned within a neutron shield 51 so that the aperture 59 aligns with a passage 38 through the shield. Pulses of laser radiation are thus passed into the chamber to interact with the target in a "oneshot" operation. The target 67 may comprise a 1 : 1 D-T mixture or liquid hydrogen, deuterium or tritium, or lithium hydride. The target 67 and its mounting can be fabricated in a fabricator and supplied directly to the chamber. The holder 81 and support 93 may be of lithium, the target 67 being disposed at the focus of the reflector. A bottom cut-away portion 921 of the holder 81 enables some radiation to be reflected on to the support 93 to cause the latter to be vaporized. The reflector may have a copper or gold reflective coating. The capsule 15 constituted by the target 67, support 93 and holder 81 may be held in a jig in the chamber or may be dropped by free fall into a liquid lithium vortex therein. Heat can be extracted from the chamber by a circulating fluid and used to produce power by means of a heat-engine, MHD converter, thermoelectric, or thermionic converter. Some of the electrical energy produced can be used to energize the laser.

公开（公告）号：[CA978287A1](https://www.incopat.com/detail/init2?formerQuery=36b6IIIq%2F3rw4lPH2%2BoGdA%3D%3D&local=zh)

公开（公告）日：1975-11-18

申请号：CA158060

申请日：1972-12-05

申请人：US GOVERNMENT

**689、METHOD OF MOUNTING A FUEL PELLET IN A LASER-EXCITED FUSION REACTOR**

摘要：1386988 Thermonuclear fusion apparatus UNITED STATES ATOMIC ENERGY COMMISSION 4 Dec 1972 [23 Dec 1971] 55918/72 Heading G6P In thermonuclear fusion apparatus, a spherical target 67 (Fig. 2) is mounted, by means of a support 93, in a holder 81 forming a generally elliptical reflector and laser radiation 13 enters a chamber (Fig. 1), in which the target is positioned, via an aperture which at least partially protects the laser 11 from the reaction products produced in the chamber. In the embodiment shown, the aperture 59 is provided in a rotatable shutter 49 positioned within a neutron shield 51 so that the aperture 59 aligns with a passage 38 through the shield. Pulses of laser radiation are thus passed into the chamber to interact with the target in a "oneshot" operation. The target 67 may comprise a 1 : 1 D-T mixture or liquid hydrogen, deuterium or tritium, or lithium hydride. The target 67 and its mounting can be fabricated in a fabricator and supplied directly to the chamber. The holder 81 and support 93 may be of lithium, the target 67 being disposed at the focus of the reflector. A bottom cut-away portion 921 of the holder 81 enables some radiation to be reflected on to the support 93 to cause the latter to be vaporized. The reflector may have a copper or gold reflective coating. The capsule 15 constituted by the target 67, support 93 and holder 81 may be held in a jig in the chamber or may be dropped by free fall into a liquid lithium vortex therein. Heat can be extracted from the chamber by a circulating fluid and used to produce power by means of a heat-engine, MHD converter, thermoelectric, or thermionic converter. Some of the electrical energy produced can be used to energize the laser.

公开（公告）号：[GB1386988A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcV1DwRQ%2BF8JoA%3D%3D&local=zh)

公开（公告）日：1975-03-12

申请号：GB7255918

申请日：1972-12-04

申请人：UNITED STATES ATOMIC ENERGY COMMISSION

法律状态：法律状态公告日：19750723;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1386988A 法律状态公告日：19761027;?

状态代码：435;?

法律状态：PATENT ENDORSED 'LICENCES OF RIGHT' ON THE DATE SPECIFIED (SECT. 35/1949)描述信息：Docdb Publication Number:; GB 1386988A 法律状态公告日：19780712;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1386988A

**690、Nuclear fusion energy generation - regulated and controlled by adjustment of excitation laser**

摘要：A spherical envelope of deuterium and tritium of theoretical specific wt., radius 0.5-2 mm and wall thickness 5-30% of than radius, is exposed to the beam of energy from a laser of regulated peak amplitude, pulse shape and pulse repetition frequency. The initial flux creates an outer expanded layer and a subcutaneous compressed layer from which a first implosion shock wave converges into the cone. Successive shock waves produced by raising the laser flux following a specified time function bring about compression ignition and thermonuclear fusion. The pressure rises to between a few hundred and a few thousand g/cm3. Process is compact, lightweight and esp. suitable for space propulsion system.

公开（公告）号：[FR2196505A1](https://www.incopat.com/detail/init2?formerQuery=t8PImr3mSImnMKOa07KHCvR0OjOTHMZL&local=zh)

公开（公告）日：1974-03-15

申请号：FR72029692

申请日：1972-08-18

申请人：KMS IND NC

法律状态：法律状态公告日：19740531;?

状态代码：TP;?

法律状态：TRANSMISSION OF PROPERTY描述信息：Docdb Publication Number:; FR 2196505A1法律状态公告日：19830624;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2196505A1

**691、APPARATUS FOR INITIATING DEUTERIUM-TRITIUM FUSION**

摘要：1337936 Thermonuclear fusion apparatus A P PEDRICK 24 July 1972 31036/72 Heading G6P [Also in Division H1] Apparatus for initiating a nuclear fusion reaction between deuterium and tritium comprises a cylindrical shell (1), Fig. 1 (not shown), e.g. of steel, with a high gloss on its bore, a plurality of lasers (4) mounted externally of the shell with their beams directed at the shell axis, and three or more gun barrels directed at the shell axis and having explosive charges (5) at their outer ends, a bullet (7) in each barrel having a recessed nose with a deuterium or tritium insert, the bullets being fired substantially simultaneously towards the shell axis and the lasers being fired after the bullets, such that when the bullets collide, their noses enclose an approximately spherical space containing a high intensity of energy from the lasers in a shell of deuterium and tritium. The bullets are governed by speed-sensing contact rings (9) on the barrels controlling magnetic coil braking fields (10). A control unit (8) controls the gun and laser operations. In another embodiment, Figs. 4 and 5 (not shown), three guns are used with bullets having mirror surfaced recesses for reflecting laser beams from diametrically opposite laser devices.

公开（公告）号：[GB1337936A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcVufrxWRjEplA%3D%3D&local=zh)

公开（公告）日：1973-11-21

申请号：GB7231036

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申请人：PEDRICK A P

法律状态：法律状态公告日：19740807;?

状态代码：CSNS;?

法律状态：APPLICATION OF WHICH COMPLETE SPECIFICATION HAVE BEEN ACCEPTED AND PUBLISHED, BUT PATENT IS NOT SEALED描述信息：Docdb Publication Number:; GB 1337936A

**692、NUCLEAR FUEL RODS**

摘要：1362761 Fuel elements BELGONUCLEAIRE SA and CENTRE D' ETUDE DE L' ENERGIE NUCLEAIRE 4 May 1972 [4 May 1971] 20771/72 Heading G6C A nuclear fuel rod comprises a stainless steel casing 1 closed at one end by a plug 2, in which plug is formed a pressurization channel 3 closed at its inner end by a metallic membrane 4. The plug 2 is welded to the casing 1 along a seam 5, and the membrane 4 is welded to the plug 2 along a seam 6 around the periphery of the plug. The rod, closed at the other end and filled with fuel, is placed in a welding chamber and air is removed by means of a vacuum pump. The chamber is subsequently filled with helium at atmospheric pressure and the plug 2 located on the casing 1 and welded thereto. The rod is then introduced into a pressurizing chamber which is purged before admitting helium at a pressure of 40 kg/cm.2 The helium at this pressure fractures the metallic membrane and thus opens the channel in the plug allowing helium under pressure to enter the rod. The channel is then closed by localized fusion of the surrounding metal by means of the TIG welding method. Alternative fusion methods include plasma welding, resistance welding and laser welding.

公开（公告）号：[GB1362761A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcWu%2B8HYPgXFOg%3D%3D&local=zh)

公开（公告）日：1974-08-07

申请号：GB7220771

申请日：1972-05-04

申请人：BELGONUCLEAIRE SA AND CENTRE DETUDE DE LENERGIE NUCLEAIRE

法律状态：法律状态公告日：19741218;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1362761A 法律状态公告日：19800103;?

状态效果：-;?

状态代码：PCNP;?

法律状态：PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE描述信息：Docdb Publication Number:; GB 1362761A

**693、LASER?DRIVEN FUSION REACTOR**

公开（公告）号：[US3762992A](https://www.incopat.com/detail/init2?formerQuery=lFSPxSY6utVLVJMRhDYHBw%3D%3D&local=zh)

公开（公告）日：1973-10-02

申请号：US05230863

申请日：1972-03-01

申请人：UNITED STATES OF AMERICA DEPARTMENT OF ENERGY

**694、DYNAMIC GAS LASER APPARATUS**

摘要：1338801 Lasers MESSERSCHMITTBOLKOW-BLOHM GmbH 13 Sept 1971 [15 Sept 1970 (3)] 42477/71 Heading H1C A dynamic gas laser is pumped by a nuclear reactor, solar mirror or chemical reaction. Fig. 1, shows a closed circuit around which laser gas is pumped by a blower 13. A nuclear fission or fusion reactor 10 heats the gas to about 1000? C. to produce an inverted population in the gas. The gas expands in nozzle 30 and enters a resonator 40 where it lases. The gas is cooled at 12 before re-entering the blower. The population inversion may be achieved also be neutron bombardment from the reactor; uranium may be so placed in the resonator that it is bombarded, or direct bombardment of the gas may be used, Figs, 2, 3 (not shown). This may be used as the sole pumping energy, or to supplement an electrical pumping discharge. The nuclear reactor of, Fig. 1, may be replaced by a solar mirror, Fig. 4 (not shown). In the chemical laser of, Fig. 5, oxygen or air is injected into a combustion chamber 310 via pipe 311, and C 2 N 2 , CO or C 2 H 2 is injected via pipe 312. After ignition at 313, e.g. by a heated platinum coil, the combustion gases expand along nozzle 320, and the vibrationally excited nitrogen molecules cause an inverted population in CO 2 injected at 321 and 322. The resulting mixture passes through a laser resonator or amplifier region 330 before being compressed in a diffuser 340, and is finally exhausted to the atmosphere at F3. Carbon monoxide may be added with the CO 2 , and is similarly excited. Other fuels such as benzene or carbon powder may replace the combustible gases injected into the chamber 310. Reference has been directed by the Comptroller to Specifications 1, 054, 490 and 1, 279, 368.

公开（公告）号：[GB1338801A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcVl18yJr9vgHQ%3D%3D&local=zh)

公开（公告）日：1973-11-28

申请号：GB7142477

申请日：1971-09-13

申请人：MESSERSCHMITT BOLKOW BLOHM GMBH

法律状态：法律状态公告日：19740410;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1338801A 法律状态公告日：19780412;?

状态效果：-;?

状态代码：PLNP;?

法律状态：PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES描述信息：Docdb Publication Number:; GB 1338801A

**695、**

摘要：1338801 Lasers MESSERSCHMITTBOLKOW-BLOHM GmbH 13 Sept 1971 [15 Sept 1970 (3)] 42477/71 Heading H1C A dynamic gas laser is pumped by a nuclear reactor, solar mirror or chemical reaction. Fig. 1, shows a closed circuit around which laser gas is pumped by a blower 13. A nuclear fission or fusion reactor 10 heats the gas to about 1000? C. to produce an inverted population in the gas. The gas expands in nozzle 30 and enters a resonator 40 where it lases. The gas is cooled at 12 before re-entering the blower. The population inversion may be achieved also be neutron bombardment from the reactor; uranium may be so placed in the resonator that it is bombarded, or direct bombardment of the gas may be used, Figs, 2, 3 (not shown). This may be used as the sole pumping energy, or to supplement an electrical pumping discharge. The nuclear reactor of, Fig. 1, may be replaced by a solar mirror, Fig. 4 (not shown). In the chemical laser of, Fig. 5, oxygen or air is injected into a combustion chamber 310 via pipe 311, and C 2 N 2 , CO or C 2 H 2 is injected via pipe 312. After ignition at 313, e.g. by a heated platinum coil, the combustion gases expand along nozzle 320, and the vibrationally excited nitrogen molecules cause an inverted population in CO 2 injected at 321 and 322. The resulting mixture passes through a laser resonator or amplifier region 330 before being compressed in a diffuser 340, and is finally exhausted to the atmosphere at F3. Carbon monoxide may be added with the CO 2 , and is similarly excited. Other fuels such as benzene or carbon powder may replace the combustible gases injected into the chamber 310. Reference has been directed by the Comptroller to Specifications 1, 054, 490 and 1, 279, 368.

公开（公告）号：[FR2106525A1](https://www.incopat.com/detail/init2?formerQuery=t8PImr3mSIlw8zBY2YcY7PR0OjOTHMZL&local=zh)

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申请号：FR71032772

申请日：1971-09-10

申请人：MESSERSCHMITT BOLKOW

法律状态：法律状态公告日：19791123;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2106525A1

**696、PULSED LASER-IGNITED THERMONUCLEAR REACTOR**

摘要：1, 273, 945. Thermonuclear fusion. UNITED STATES ATOMIC ENERGY COMMISSION. 19 April, 1971 [11 Feb., 1970], No. 24175/71. Heading G6P. In a thermonuclear fusion reactor, deuteriumtritium pellets are injected into a liquid lithium mass and vaporized, to cause fusion, by a pulsed laser beam. The 14-mev neutrons released by the fusion, breed tritium from the lithium using the reaction Heating of the lithium is also effected during fusion and this is transferred, through a heat exchanger to a prime mover. The liquid lithium is injected into the containers vessel through jets which form a central cavity into which the pellets are directed. The lithium heated in the reactor supplies heat to a potassium-turbine system through a heat exchanger which also receives the tritium, produced in the reactor, through the niobium exchanger tubes. The tritium is removed from the potassium which supplies heat to a further, steam turbine plant. . (For Figures see next page)

公开（公告）号：[GB1273945A](https://www.incopat.com/detail/init2?formerQuery=K%2FhpCGuaeZjOuCkvp9jCKA%3D%3D&local=zh)

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申请号：GB7124175

申请日：1971-04-19

申请人：UNITED STATES ATOMIC ENERGY COMMISSION

法律状态：法律状态公告日：19720920;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1273945A 法律状态公告日：19751119;?

状态效果：-;?

状态代码：PLNP;?

法律状态：PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES描述信息：Docdb Publication Number:; GB 1273945A

**697、PRODUCTION OF PLASMAS BY LONGWAVELENGTH LASERS**

摘要：1356366 Thermonuclear fusion apparatus UNITED STATES ATOMIC ENERGY COMMISSION 2 March 1972 [1 April 1971] 9819/72 Heading G6P In a thermonuclear reactor, a magnetically confined toroidol plasma is heated by a longwavelength laser beam. The plasma, 19, in the stellarator, 21, is heated by the CO 2 laser, 11, the light from which is repeatedly passed through the plasma by the mirrors, 13. D-T gas is introduced into 21 from the source, 27 and the magnetic field 35 is produced by the external winding, 29, concentric with the axis, 33. Magnetic mirrors and punches are additionally formed. The self-focusing polar field, 59, is formed by the plasma current and the plasma is centred by the longitudinally extending conductors 63; periodic quadrupoles, 67, are also formed. The laser beam strikes the container 31 at the glass windows, 73.

公开（公告）号：[US3764466A](https://www.incopat.com/detail/init2?formerQuery=lFSPxSY6utUA1g41w2WqIA%3D%3D&local=zh)

公开（公告）日：1973-10-09

申请号：US05130368

申请日：1971-04-01

申请人：ATOMIC ENERGY COMMISSION

**698、THERMONUCLEAR REACTOR AND METHOD TO CONTROL THE OPERATION OF SUCH A REACTOR**

摘要：1, 273, 945. Thermonuclear fusion. UNITED STATES ATOMIC ENERGY COMMISSION. 19 April, 1971 [11 Feb., 1970], No. 24175/71. Heading G6P. In a thermonuclear fusion reactor, deuteriumtritium pellets are injected into a liquid lithium mass and vaporized, to cause fusion, by a pulsed laser beam. The 14-mev neutrons released by the fusion, breed tritium from the lithium using the reaction Heating of the lithium is also effected during fusion and this is transferred, through a heat exchanger to a prime mover. The liquid lithium is injected into the containers vessel through jets which form a central cavity into which the pellets are directed. The lithium heated in the reactor supplies heat to a potassium-turbine system through a heat exchanger which also receives the tritium, produced in the reactor, through the niobium exchanger tubes. The tritium is removed from the potassium which supplies heat to a further, steam turbine plant. . (For Figures see next page)

公开（公告）号：[BE762741A1](https://www.incopat.com/detail/init2?formerQuery=to0fPtWoAvoVNajd30jNRw%3D%3D&local=zh)

公开（公告）日：1971-08-10

申请号：BE0762741

申请日：1971-02-10

申请人：ATOMIC ENERGY COMMISSION

**699、**

摘要：1, 273, 945. Thermonuclear fusion. UNITED STATES ATOMIC ENERGY COMMISSION. 19 April, 1971 [11 Feb., 1970], No. 24175/71. Heading G6P. In a thermonuclear fusion reactor, deuteriumtritium pellets are injected into a liquid lithium mass and vaporized, to cause fusion, by a pulsed laser beam. The 14-mev neutrons released by the fusion, breed tritium from the lithium using the reaction Heating of the lithium is also effected during fusion and this is transferred, through a heat exchanger to a prime mover. The liquid lithium is injected into the containers vessel through jets which form a central cavity into which the pellets are directed. The lithium heated in the reactor supplies heat to a potassium-turbine system through a heat exchanger which also receives the tritium, produced in the reactor, through the niobium exchanger tubes. The tritium is removed from the potassium which supplies heat to a further, steam turbine plant. . (For Figures see next page)

公开（公告）号：[NL7101778A](https://www.incopat.com/detail/init2?formerQuery=vGeahvFhphhxFy7y1DRo0Q%3D%3D&local=zh)

公开（公告）日：1971-08-13

申请号：NL7101778

申请日：1971-02-10

**700、**

摘要：1, 273, 945. Thermonuclear fusion. UNITED STATES ATOMIC ENERGY COMMISSION. 19 April, 1971 [11 Feb., 1970], No. 24175/71. Heading G6P. In a thermonuclear fusion reactor, deuteriumtritium pellets are injected into a liquid lithium mass and vaporized, to cause fusion, by a pulsed laser beam. The 14-mev neutrons released by the fusion, breed tritium from the lithium using the reaction Heating of the lithium is also effected during fusion and this is transferred, through a heat exchanger to a prime mover. The liquid lithium is injected into the containers vessel through jets which form a central cavity into which the pellets are directed. The lithium heated in the reactor supplies heat to a potassium-turbine system through a heat exchanger which also receives the tritium, produced in the reactor, through the niobium exchanger tubes. The tritium is removed from the potassium which supplies heat to a further, steam turbine plant. . (For Figures see next page)

公开（公告）号：[SE371520B](https://www.incopat.com/detail/init2?formerQuery=w%2FcrpYcH0pCbIYchBv3c1Q%3D%3D&local=zh)

公开（公告）日：1974-11-18

申请号：SE163871

申请日：1971-02-10

申请人：ATOMIC ENERGY COMMISSION

**701、SPACE VEHICLE**

摘要：1310990 Space vehicles BRITISH RAILWAYS BOARD 10 March 1972 [11 Dec 1970] 59083/70 Heading B7W [Also in Division G6] A space vehicle includes a platform 10 under which is provided a thermonuclear fusion zone 12 to which liquid fuel is supplied under pressure to be ignited by beams from lasers 11. The platform mounts electromagnets 14, possibly superconducting magnets, to deflect charged particles produced by the fusion reaction; some particles are deflected so as to be received on insulated electrodes 15 for generation of electric power. Excess thermal energy produced in the reaction is removed by cooling tubes 19 to a radiating surface 20. The lasers may be energized by an homopolar generator 21. The latter may also be used as a reference for stabilizing the vehicle by varying the electrostatic voltages on sections 16 of the electrodes 15 to apply a correcting couple to the vehicle. By controlling voltages on sections 16 and also the fields from magnets 14, the thrust on the vehicle can be directed to control the attitude and direction of the craft. A passener cabin 22 is included.

公开（公告）号：[GB1310990A](https://www.incopat.com/detail/init2?formerQuery=kxnsPbiqFcUSyMjNVVtMoA%3D%3D&local=zh)

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申请号：GB7059083

申请日：1970-12-11

申请人：BRITISH RAILWAYS BOARD

法律状态：法律状态公告日：19730801;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1310990A 法律状态公告日：19761006;?

状态效果：-;?

状态代码：PLNP;?

法律状态：PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES描述信息：Docdb Publication Number:; GB 1310990A

**702、Fusion reactors - using pinched plasma with laser injection inside spherical magnetic field**

摘要：Fusion reactor utilising a HDTHEplasma injected into a reaction vessel with an external spherical magnetic field to create a pinched plasma. This is subjected to laser impulse bombardment at least two impulse pairs following one after another to induce fusion of the hydrogen nuclei. Subsequent gamma and heat energy release is absorbed by a lithium 6/7 cooling jacket which surrounds the reaction vessel. The consequent lithium reactions produce tritium helium plus heat energy in addition to surplus neutrons. Ancillary plant separates the tritium and helium for re-cycling with deuterium from a storage vellse for re-injection in the reaction chamber. Helium is also extracted for use as a coolant for the magnetic coils. The litium is circulated through a heat exchanger to convert its heat energy to steam for thermal power plant.

公开（公告）号：[DE2056199A1](https://www.incopat.com/detail/init2?formerQuery=r1XbBAEcqYX4124WQCovVPR0OjOTHMZL&local=zh)

公开（公告）日：1972-05-25

申请号：DE2056199

申请日：1970-11-16

申请人：GENSWEIN A

**703、Thermonuclear fusion - using laser beam energy**

摘要：Thermonuclear fusion by the known technique of forming a plasma by the interaction of a laser beam with a solid target placed in a secondary vacuum with its surface at the focus of the laser beam optical system at the instant the plasma is formed, but incorporating the following features : - (a) the selection of the wavelength and flux of the laser beam so that the plasma, in accordance with the composition of the target has pre-determined temp. (T) and density (n) characteristics, (b) the selection of a target of cylindrical shape of length at least equal to the product of the speed of propagation of sound in the target and the time (t) for which the predetermined plasma characteristics must be preserved for the energy balance to be positive, (c) the maintenance of the laser flux incident on the target at a constant value and of the position of the focal plane of the laser beam optical system in the laser-radiation absorption zone of the plasma, at least for the time (t), so that the plasma characteristics (T) and (n) remain unchanged during this time.

公开（公告）号：[FR2112057A1](https://www.incopat.com/detail/init2?formerQuery=t8PImr3mSImHsDKGdDcxEPR0OjOTHMZL&local=zh)

公开（公告）日：1972-06-16

申请号：FR70030426

申请日：1970-08-19

申请人：COMMISSARIAT ENERGIE ATOMIQUE

法律状态：法律状态公告日：19761008;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 2112057A1

**704、Fuel pellets for controlled nuclear fusion**

摘要：In connection with a fusion process which can be initiated by a high energy input such as a laser beam, the use of a layer of uranium surrounding the fusion fuel such as deuterium-tritium or a non-cryogenic fuel such as lithium deuterium-lithium tritium. The uranium serves as a tamper layer to contain the fusion fuel and supplement the heating by a fission reaction which not only increases the fusion yield but increases the time of disassembly, thus materially increasing the efficiency of the fusion system.

公开（公告）号：[US4297165A](https://www.incopat.com/detail/init2?formerQuery=Z0HpEndtapAjYnVSCJ3tLA%3D%3D&local=zh)

公开（公告）日：1981-10-27

申请号：US05065756

申请日：1970-07-13

申请人：KMS Fusion Inc

**705、PULSED LASER?IGNITED THERMONUCLEAR REACTOR**

摘要：1, 273, 945. Thermonuclear fusion. UNITED STATES ATOMIC ENERGY COMMISSION. 19 April, 1971 [11 Feb., 1970], No. 24175/71. Heading G6P. In a thermonuclear fusion reactor, deuteriumtritium pellets are injected into a liquid lithium mass and vaporized, to cause fusion, by a pulsed laser beam. The 14-mev neutrons released by the fusion, breed tritium from the lithium using the reaction Heating of the lithium is also effected during fusion and this is transferred, through a heat exchanger to a prime mover. The liquid lithium is injected into the containers vessel through jets which form a central cavity into which the pellets are directed. The lithium heated in the reactor supplies heat to a potassium-turbine system through a heat exchanger which also receives the tritium, produced in the reactor, through the niobium exchanger tubes. The tritium is removed from the potassium which supplies heat to a further, steam turbine plant. . (For Figures see next page)

公开（公告）号：[US3624239A](https://www.incopat.com/detail/init2?formerQuery=Og60mEcHzi33vwzrjNTJVA%3D%3D&local=zh)

公开（公告）日：1971-11-30

申请号：US05010516

申请日：1970-02-11

申请人：UNITED STATES OF AMERICA DEPARTMENT OF ENERGY

**706、GENERATOR OF ELECTRICITY FROM WAVES OF GASEOUS PLASMA, PREFERABLY PRODUCED BY LAZER BEAM INITIATED NUCLEAR FUSION REACTIONS**

摘要：1, 207, 698. Thermonuclear fusion. A. P. PEDRICK. 27 Oct., 1969, No. 38562/68. Heading G6P. [Also in Divisions H1 and H2] An arrangement for generating electrical power from a plasma comprises a spherical shell 8 at the centre of which there is supported a ball 10 of plasma-forming material, a plurality of lasers 4 being directed on to the ball and being simultaneously pulsed to create a plasma, the plasma so formed being subjected to the e.m. field of a coil 13 to constrict and modulate it as it flows upwards, and the modulated plasma generating an alternating current in a coil 14, this current being supplied to a transformer whose output may feed an electrical grid. As shown, the balls 10, which may be of deuterium or deuterium and tritium, are carried to the centre of the sphere 8 by an inert gas flowing through tube 11. Water and air-cooling systems are also shown. The Specification describes ways in which the laser beams may be focused on the ball (Figs. 1, 2 and 5, not shown), and the method whereby the lasers are triggered at the instant when the ball is in the centre of the sphere (Fig. 6, not shown). The Specification also describes so called " laser beam compression guns " for producing the pulses of laser energy. Fig. 7 shows an example of such an arrangement wherein laser energy is fed into the end of a tube 71 through a hole in a bullet 76, and is reflected at a diaphragm 73. When the bullet, which has a reflecting front end, is fired it travels up the tube compressing the energy until this bursts through the diaphragm to be focused by a lens 79 on the target ball 70. Several more elaborate examples are disclosed (Figs. 8-15, not shown).

公开（公告）号：[GB1207698A](https://www.incopat.com/detail/init2?formerQuery=K%2FhpCGuaeZjeSTAqoGZKZw%3D%3D&local=zh)

公开（公告）日：1970-10-07

申请号：GB6838562

申请日：1969-10-27

申请人：ARTHUR PAUL PEDRICK

法律状态：法律状态公告日：19710707;?

状态代码：CSNS;?

法律状态：APPLICATION OF WHICH COMPLETE SPECIFICATION HAVE BEEN ACCEPTED AND PUBLISHED, BUT PATENT IS NOT SEALED描述信息：Docdb Publication Number:; GB 1207698A

**707、Apparatus for nuclear fusion reactions with pulsed cause, on fusionsfaehige gases directed lasers**

公开（公告）号：[DE1900524B1](https://www.incopat.com/detail/init2?formerQuery=%2B6vzJuzv%2BwlWoCDNkIssYPR0OjOTHMZL&local=zh)

公开（公告）日：1970-08-27

申请号：DE1900524

申请日：1969-01-07

申请人：KAISER DR WOLFGANG; OPOWER DR RER NAT HANS

**708、Arrangement for Bringing About Nuclear Fusion Reactions.**

摘要：1, 157, 598. Fusion processes. W. KAISER. 9 Feb., 1968 [10 Feb., 1967], No. 6471/68. Heading G6P. In a nuclear fusion device, deuterium or deuterium-tritium targets produce plasma when irradiated by laser beams. Two targets are mounted adjacent to each other but spaced apart, each at the focal point of the optical system of the associated beam. The generated ion streams move towards each other and interact. The targets are hollow, concave bodies, with the cavities facing. The two laser beams are simultaneously activated by an auxiliary laser via a transparent mirror system. Each of the two interacting laser beams has an objective lens system having an aperture of 1.

公开（公告）号：[GB1157598A](https://www.incopat.com/detail/init2?formerQuery=GEkuICEfVOUbYcvdfXt4bA%3D%3D&local=zh)

公开（公告）日：1969-07-09

申请号：GB6806471

申请日：1968-02-09

申请人：WOLGANG KAISER

法律状态：法律状态公告日：19691119;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1157598A 法律状态公告日：19700520;?

状态代码：435;?

法律状态：PATENT ENDORSED 'LICENCES OF RIGHT' ON THE DATE SPECIFIED (SECT. 35/1949)描述信息：Docdb Publication Number:; GB 1157598A 法律状态公告日：19760908;?

状态效果：-;?

状态代码：PLNP;?

法律状态：PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES描述信息：Docdb Publication Number:; GB 1157598A

**709、ARRANGEMENT FOR BRINGING ABOUT NUCLEAR FUSION REACTIONS**

摘要：The invention provides an arrangement for bringing about nuclear fusion reactions comprising a known system of two synchronously activated lasers.

公开（公告）号：[US3652393A](https://www.incopat.com/detail/init2?formerQuery=Og60mEcHzi35HXV5MBEt6Q%3D%3D&local=zh)

公开（公告）日：1972-03-28

申请号：US04704026

申请日：1968-02-08

申请人：HANS OPOWER; ; HEINZ PUELL; KAISER WOLFGANG

**710、**

摘要：The invention provides an arrangement for bringing about nuclear fusion reactions comprising a known system of two synchronously activated lasers.

公开（公告）号：[FR1573929A](https://www.incopat.com/detail/init2?formerQuery=t9cLnBWkw%2FGUoruUXDYZRg%3D%3D&local=zh)

公开（公告）日：1969-07-11

申请号：FR1573929D

申请日：1968-02-07

法律状态：法律状态公告日：19770415;?

状态效果：-;?

状态代码：ST;?

法律状态：NOTIFICATION OF LAPSE描述信息：Docdb Publication Number:; FR 1573929A

**711、Procedure for producing and/or heating a plasma cloud and a device for its execution**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[DE1300183B](https://www.incopat.com/detail/init2?formerQuery=wJYl8Whv5bvA2Sc4%2FcCDgA%3D%3D&local=zh)

公开（公告）日：1969-07-31

申请号：DEC44523

申请日：1968-02-01

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

**712、**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[NL6801494A](https://www.incopat.com/detail/init2?formerQuery=3iT%2FAkxE8z6vcbTCgGYVXw%3D%3D&local=zh)

公开（公告）日：1968-08-05

申请号：NL6801494

申请日：1968-02-01

**713、**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[LU55363A1](https://www.incopat.com/detail/init2?formerQuery=ti3DFqiiyeEocvMdx8vipw%3D%3D&local=zh)

公开（公告）日：1968-04-09

申请号：LU55363D

申请日：1968-01-26

**714、METHOD AND APPARATUS OF PRODUCTION OF NON? CONTAMINATED PLASMOIDS**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[US3562530A](https://www.incopat.com/detail/init2?formerQuery=zkTzEFal4gwm%2Fae%2BIJb3%2BA%3D%3D&local=zh)

公开（公告）日：1971-02-09

申请号：US04699584

申请日：1968-01-22

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

**715、PROCEDURE AND DEVICE OF PRODUCTION OF WHIFFS IN CLEAN PLASMA.**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[ES349998A1](https://www.incopat.com/detail/init2?formerQuery=M8oXXR5c05ja2afrhJeHBg%3D%3D&local=zh)

公开（公告）日：1969-04-16

申请号：ES349998

申请日：1968-01-21

申请人：COMMISSARIAT ENERGIE ATOMIQUE

**716、Method and Device of Production of Non-Contaminated Plasmoids**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[GB1195602A](https://www.incopat.com/detail/init2?formerQuery=GEkuICEfVOXZVaB%2F4gKvGg%3D%3D&local=zh)

公开（公告）日：1970-06-17

申请号：GB6801921

申请日：1968-01-19

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

法律状态：法律状态公告日：19701028;?

状态效果：+;?

状态代码：PS;?

法律状态：PATENT SEALED描述信息：Docdb Publication Number:; GB 1195602A 法律状态公告日：19730912;?

状态代码：435;?

法律状态：PATENT ENDORSED 'LICENCES OF RIGHT' ON THE DATE SPECIFIED (SECT. 35/1949)描述信息：Docdb Publication Number:; GB 1195602A 法律状态公告日：19770817;?

状态效果：-;?

状态代码：PLNP;?

法律状态：PATENT LAPSED THROUGH NONPAYMENT OF RENEWAL FEES描述信息：Docdb Publication Number:; GB 1195602A

**717、**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[BE709351A1](https://www.incopat.com/detail/init2?formerQuery=%2F6ct%2B3G8e8UoNthv1stjdQ%3D%3D&local=zh)

公开（公告）日：1968-05-16

申请号：BE709351D

申请日：1968-01-15

**718、Process of production of puffs of plasma and device of implementation of the process**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[CH488371A](https://www.incopat.com/detail/init2?formerQuery=ETF3gCn1H1sgUWnCDS2L6w%3D%3D&local=zh)

公开（公告）日：1970-03-31

申请号：CH00055868

申请日：1968-01-15

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

法律状态：法律状态公告日：19711231;?

状态效果：-;?

状态代码：PL;?

法律状态：PATENT CEASED描述信息：Docdb Publication Number:; CH 488371A

**719、Laser ray beam gun, or concentrator, for use in polar regions, accelerating crop growth, and promoting nuclear fusion reactions**

摘要：1, 119, 948. Thermonuclear fusion. A. P. PEDRICK. 24 June, 1967, No. 29263/67. Heading G6P. [Also in Divisions E1 and H1] A plurality of separate output beams from a group of gaseous or ruby active media 11, Fig. 1, are combined' into a concentrated beam by two confocal parabolic mirrors 3, 6. The outer mirror 3 is part of a casing 1, and the group of active media 11 are mounted on a base-plate 12 of a casing 2, flash tubes being regularly disposed among the active media, Fig. 2 (not shown). The inner mirror 6 is cooled by passing a fluid through inlet and outlet pipes 8, 10. Several such laser arrangements 43 may be radially arranged about a focal heat chamber, Fig. 8 (1), in which a fusion reaction may be produced. Spherical balls 41 of steel, platinum or titanium containing deuterium or tritium are carried through a pipe 40 into the focal heat chamber by an inert gas, the plasma produced in the chamber being constricted by energized coils 45 and escaping through an outlet pipe 50. A coolant circuit comprising pipes 50, 51, 52, 53 is provided and the coolant may be water for steam generation.

公开（公告）号：[GB1119948A](https://www.incopat.com/detail/init2?formerQuery=GEkuICEfVOWFsOCRyBPeeg%3D%3D&local=zh)

公开（公告）日：1968-07-17

申请号：GB6729263

申请日：1967-06-24

申请人：ARTHUR PAUL PEDRICK

**720、IMPROVEMENTS IN DEVICES OF PRODUCTION AND INTERACTION OF PLASMA BEAMS.**

摘要：1, 177, 171. Fusion processes. COMMISSARIAT A L' ENERGIE ATOMIQUE. 9 March, 1967 [11 March, 1966], No. 11066/67. Heading G6P. In a nuclear fusion device, plasma beams are formed, and react with each other, in the cavity 10. The gas in the cavity is ionzed by an H.F. electric field formed by the resonating, in the TE 112 mode, of the cavity, excited by klystrons 14, 141. The electrons are attracted to the medial plane and so form the identical plasma beams which pass through each other and oscillate in the central zone. Axial containment is effected by magnetic microns formed by windings 24, 241, 26, 261. A radial magnetic field is formed by conductors 28. Injection of ionized gas is effected by the focusing of a laser beam a lithium hydrate within the cavity 10.

公开（公告）号：[ES337882A1](https://www.incopat.com/detail/init2?formerQuery=wdKZVy2FRKHuwijsrs6IYg%3D%3D&local=zh)

公开（公告）日：1968-03-16

申请号：ES337882

申请日：1967-03-11

申请人：COMMISSARIAT ENERGIE ATOMIQUE

**721、Device of containment of plasma**

摘要：1, 177, 171. Fusion processes. COMMISSARIAT A L' ENERGIE ATOMIQUE. 9 March, 1967 [11 March, 1966], No. 11066/67. Heading G6P. In a nuclear fusion device, plasma beams are formed, and react with each other, in the cavity 10. The gas in the cavity is ionzed by an H.F. electric field formed by the resonating, in the TE 112 mode, of the cavity, excited by klystrons 14, 141. The electrons are attracted to the medial plane and so form the identical plasma beams which pass through each other and oscillate in the central zone. Axial containment is effected by magnetic microns formed by windings 24, 241, 26, 261. A radial magnetic field is formed by conductors 28. Injection of ionized gas is effected by the focusing of a laser beam a lithium hydrate within the cavity 10.

公开（公告）号：[CH483181A](https://www.incopat.com/detail/init2?formerQuery=ETF3gCn1H1t6gCphCRKzjQ%3D%3D&local=zh)

公开（公告）日：1969-12-15

申请号：CH00352167

申请日：1967-03-10

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

法律状态：法律状态公告日：19711231;?

状态效果：-;?

状态代码：PL;?

法律状态：PATENT CEASED描述信息：Docdb Publication Number:; CH 483181A

**722、**

摘要：1, 177, 171. Fusion processes. COMMISSARIAT A L' ENERGIE ATOMIQUE. 9 March, 1967 [11 March, 1966], No. 11066/67. Heading G6P. In a nuclear fusion device, plasma beams are formed, and react with each other, in the cavity 10. The gas in the cavity is ionzed by an H.F. electric field formed by the resonating, in the TE 112 mode, of the cavity, excited by klystrons 14, 141. The electrons are attracted to the medial plane and so form the identical plasma beams which pass through each other and oscillate in the central zone. Axial containment is effected by magnetic microns formed by windings 24, 241, 26, 261. A radial magnetic field is formed by conductors 28. Injection of ionized gas is effected by the focusing of a laser beam a lithium hydrate within the cavity 10.

公开（公告）号：[LU53169A1](https://www.incopat.com/detail/init2?formerQuery=JJYrP%2BYt9Xj%2Bh9vsV9cgkQ%3D%3D&local=zh)

公开（公告）日：1967-05-10

申请号：LU53169D

申请日：1967-03-10

**723、Apparatus for Plasma Production and Interaction**

摘要：1, 177, 171. Fusion processes. COMMISSARIAT A L' ENERGIE ATOMIQUE. 9 March, 1967 [11 March, 1966], No. 11066/67. Heading G6P. In a nuclear fusion device, plasma beams are formed, and react with each other, in the cavity 10. The gas in the cavity is ionzed by an H.F. electric field formed by the resonating, in the TE 112 mode, of the cavity, excited by klystrons 14, 141. The electrons are attracted to the medial plane and so form the identical plasma beams which pass through each other and oscillate in the central zone. Axial containment is effected by magnetic microns formed by windings 24, 241, 26, 261. A radial magnetic field is formed by conductors 28. Injection of ionized gas is effected by the focusing of a laser beam a lithium hydrate within the cavity 10.

公开（公告）号：[GB1177171A](https://www.incopat.com/detail/init2?formerQuery=GEkuICEfVOVHmsX7ISu8bQ%3D%3D&local=zh)

公开（公告）日：1970-01-07

申请号：GB6711066

申请日：1967-03-09

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

**724、**

摘要：1, 177, 171. Fusion processes. COMMISSARIAT A L' ENERGIE ATOMIQUE. 9 March, 1967 [11 March, 1966], No. 11066/67. Heading G6P. In a nuclear fusion device, plasma beams are formed, and react with each other, in the cavity 10. The gas in the cavity is ionzed by an H.F. electric field formed by the resonating, in the TE 112 mode, of the cavity, excited by klystrons 14, 141. The electrons are attracted to the medial plane and so form the identical plasma beams which pass through each other and oscillate in the central zone. Axial containment is effected by magnetic microns formed by windings 24, 241, 26, 261. A radial magnetic field is formed by conductors 28. Injection of ionized gas is effected by the focusing of a laser beam a lithium hydrate within the cavity 10.

公开（公告）号：[BE694778A1](https://www.incopat.com/detail/init2?formerQuery=KQPc2mvz0qgkW2X%2BA%2BewPA%3D%3D&local=zh)

公开（公告）日：1967-07-31

申请号：BE694778D

申请日：1967-02-28

**725、Mechanism for the production of neutrons from nuclear fusion reactions**

摘要：The invention provides an arrangement for bringing about nuclear fusion reactions comprising a known system of two synchronously activated lasers.

公开（公告）号：[DE1279859B](https://www.incopat.com/detail/init2?formerQuery=w5%2BucZmhe6M82kcgf1lSWw%3D%3D&local=zh)

公开（公告）日：1968-10-10

申请号：DEK61394

申请日：1967-02-10

申请人：DR WOLFGANG KAISER

**726、Process of production of puffs of plasma and device of implementation of the process**

摘要：1, 195, 602. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 19 Jan., 1968 [2 Feb., 1967], No. 2921/68. Heading G6P. In a nuclear fusion device a target of solid deuterium, or solid deuterium-tritium mixture, is subjected to the focused radiation from a spherical charge of TNT, a neutron burst being generated. The radiant energy reaches the target before the impurities formed at the expansion point, thus leaving the plasma generated at the target uncontaminated. The target 20, is located at one focus of the ellipsoidal chamber 10 and the spherical TNT charge 16 at the other focus. Ignition of the charge is effected by the circuit 18 and the radiation energy is reflected by the lining 14 on to the target 20. A wall 21, transparent to radiations may be inserted between 16 and 20, thereby further reducing the contamination of 20 by 16. The explosive may be triggered by a laser beam and a spark gap may be employed to supply the radiation in place of the explosion. The wall 21 may be replaced by a solid ellipsoid which provides screening but does not restrict the pressure distribution.

公开（公告）号：[FR1518806A](https://www.incopat.com/detail/init2?formerQuery=t9cLnBWkw%2FG9ycsTKTSsbA%3D%3D&local=zh)

公开（公告）日：1968-03-29

申请号：FR67093498

申请日：1967-02-02

申请人：COMMISSARIAT ENERGIE ATOMIQUE

**727、Process for Producing Bursts of Plasma and apparatus for putting this process into use**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[GB1153599A](https://www.incopat.com/detail/init2?formerQuery=GEkuICEfVOUDsY84wGx1ww%3D%3D&local=zh)

公开（公告）日：1969-05-29

申请号：GB6639345

申请日：1966-09-02

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

**728、**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[NL6612441A](https://www.incopat.com/detail/init2?formerQuery=nozvoaI5vMQm26uXs3S3SA%3D%3D&local=zh)

公开（公告）日：1967-03-06

申请号：NL6612441

申请日：1966-09-02

**729、METHOD OF OBTAINING WAFTS PLASMA.**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[ES330829A1](https://www.incopat.com/detail/init2?formerQuery=wdKZVy2FRKGHPtdXWCrhAA%3D%3D&local=zh)

公开（公告）日：1967-09-16

申请号：ES330829

申请日：1966-09-01

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

**730、Process of obtaining puffs of plasma and device implementing this process**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[CH461655A](https://www.incopat.com/detail/init2?formerQuery=TxjU4dCDZ1M1goBmoy%2FDZw%3D%3D&local=zh)

公开（公告）日：1968-08-31

申请号：CH01246666

申请日：1966-08-29

申请人：COMMISSARIAT A L' ENERGIE ATOMIQUE

**731、**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[LU51848A1](https://www.incopat.com/detail/init2?formerQuery=NnVej2IroINv2xu%2ByiFMoQ%3D%3D&local=zh)

公开（公告）日：1966-10-29

申请号：LU51848

申请日：1966-08-29

**732、**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[BE685988A1](https://www.incopat.com/detail/init2?formerQuery=peZ7EqP5tGxYA4WV0Me0Rw%3D%3D&local=zh)

公开（公告）日：1967-02-01

申请号：BE685988D

申请日：1966-08-25

**733、Process of production and interaction of plasma and device of implementation of the known as process**

摘要：1, 177, 171. Fusion processes. COMMISSARIAT A L' ENERGIE ATOMIQUE. 9 March, 1967 [11 March, 1966], No. 11066/67. Heading G6P. In a nuclear fusion device, plasma beams are formed, and react with each other, in the cavity 10. The gas in the cavity is ionzed by an H.F. electric field formed by the resonating, in the TE 112 mode, of the cavity, excited by klystrons 14, 141. The electrons are attracted to the medial plane and so form the identical plasma beams which pass through each other and oscillate in the central zone. Axial containment is effected by magnetic microns formed by windings 24, 241, 26, 261. A radial magnetic field is formed by conductors 28. Injection of ionized gas is effected by the focusing of a laser beam a lithium hydrate within the cavity 10.

公开（公告）号：[FR1481122A](https://www.incopat.com/detail/init2?formerQuery=ZyYUMqTmrDo4u10tjorlAA%3D%3D&local=zh)

公开（公告）日：1967-05-19

申请号：FR66053204

申请日：1966-03-11

申请人：COMMISSARIAT ENERGIE ATOMIQUE

**734、Process of obtaining puffs of plasma and device implementing this process**

摘要：1, 153, 599. Thermonuclear apparatus. COMMISSARIAT A L' ENERGIE ATOMIQUE. 2 Sept., 1966 [3 Sept., 1965], No. 39345/66. Heading G6P. In a nuclear fusion device, a molecular beam is subjected to laser irradiation, which effects ionization and produces plasma which is magnetically confined. The plasma is formed in separate sections, or bursts, by interrupting the molecular beam with a shutter synchronized with the laser. Hydrogen gas and a laser, operating in the visible spectrum, are employed. By controlling the length and diameter of the molecular beam, the quantity of plasma formed and its temperature can be predetermined.

公开（公告）号：[FR1455419A](https://www.incopat.com/detail/init2?formerQuery=ZyYUMqTmrDqQ123OIkwfoQ%3D%3D&local=zh)

公开（公告）日：1966-04-01

申请号：FR65030443

申请日：1965-09-03

申请人：COMMISSARIAT ENERGIE ATOMIQUE

**735、NEUTRON PULSE SOURCE**

摘要：1, 111, 093. Producing neutrons. INSTITUT FUR PLASMAPHYSIK G.m.b.H. 5 Aug., 1965 [12 Aug., 1964], No. 33660/65. Heading G6P. In a neutron source, a laser beam is directed on to a mixture of solid deuterium and tritium. The temperature of the mixture is raised sufficiently to effect a fusion reaction with the simultaneous generation of neutrons. The hydrogen isotopes may be solidified by cooling with liquid helium or either adsorbed or absorbed in a foil of titanium, zirconium or palladium. The laser beam is focused on to the fusion mixture mounted in an evacuated chamber and a neutron pulse of duration less than 10-9 seconds is produced.

公开（公告）号：[US3444377A](https://www.incopat.com/detail/init2?formerQuery=3N4qOEiknwNfYnAN3eTAhg%3D%3D&local=zh)

公开（公告）日：1969-05-13

申请号：US04480251

申请日：1965-08-12

申请人：INSTITUT FUR PLASMAPHYSIK G M B H

**736、Improvements in or relating to neutron pulse sources**

摘要：1, 111, 093. Producing neutrons. INSTITUT FUR PLASMAPHYSIK G.m.b.H. 5 Aug., 1965 [12 Aug., 1964], No. 33660/65. Heading G6P. In a neutron source, a laser beam is directed on to a mixture of solid deuterium and tritium. The temperature of the mixture is raised sufficiently to effect a fusion reaction with the simultaneous generation of neutrons. The hydrogen isotopes may be solidified by cooling with liquid helium or either adsorbed or absorbed in a foil of titanium, zirconium or palladium. The laser beam is focused on to the fusion mixture mounted in an evacuated chamber and a neutron pulse of duration less than 10-9 seconds is produced.

公开（公告）号：[GB1111093A](https://www.incopat.com/detail/init2?formerQuery=GEkuICEfVOV9LWO9gWVNqA%3D%3D&local=zh)

公开（公告）日：1968-04-24

申请号：GB6533660

申请日：1965-08-05

申请人：INSTITUT FUER PLASMAPHYSIK G M B H

**737、Method and arrangement for generating short surface current densityneutron impulses high**

摘要：1, 111, 093. Producing neutrons. INSTITUT FUR PLASMAPHYSIK G.m.b.H. 5 Aug., 1965 [12 Aug., 1964], No. 33660/65. Heading G6P. In a neutron source, a laser beam is directed on to a mixture of solid deuterium and tritium. The temperature of the mixture is raised sufficiently to effect a fusion reaction with the simultaneous generation of neutrons. The hydrogen isotopes may be solidified by cooling with liquid helium or either adsorbed or absorbed in a foil of titanium, zirconium or palladium. The laser beam is focused on to the fusion mixture mounted in an evacuated chamber and a neutron pulse of duration less than 10-9 seconds is produced.

公开（公告）号：[DE1489023A1](https://www.incopat.com/detail/init2?formerQuery=40btFsB%2FTXa0fas7T2VStPR0OjOTHMZL&local=zh)

公开（公告）日：1969-04-24

申请号：DE1489023

申请日：1964-08-12

申请人：INST PLASMAPHYSIK GMBH

法律状态：法律状态公告日：19710422;?

状态效果：+;?

状态代码：SH;?

法律状态：REQUEST FOR EXAMINATION BETWEEN 03.10.1968 AND 22.04.1971描述信息：Docdb Publication Number:; DE 1489023A1

**738、Apparatus using lasers to trigger thermonuclear reactions**

公开（公告）号：[US3378446A](https://www.incopat.com/detail/init2?formerQuery=o4%2FzbSj8vhjOuTsWfwZFcg%3D%3D&local=zh)

公开（公告）日：1968-04-16

申请号：US04350176

申请日：1964-03-09

申请人：JOHN R B WHITTLESEY

**739、METHOD FOR CONTROLLED RELEASE OF NUCLEAR POWERED FUSION**

摘要：A spherical envelope of deuterium and tritium of theoretical specific wt., radius 0.5-2 mm and wall thickness 5-30% of than radius, is exposed to the beam of energy from a laser of regulated peak amplitude, pulse shape and pulse repetition frequency. The initial flux creates an outer expanded layer and a subcutaneous compressed layer from which a first implosion shock wave converges into the cone. Successive shock waves produced by raising the laser flux following a specified time function bring about compression ignition and thermonuclear fusion. The pressure rises to between a few hundred and a few thousand g/cm3. Process is compact, lightweight and esp. suitable for space propulsion system.

公开（公告）号：[BE790737A1](https://www.incopat.com/detail/init2?formerQuery=oV9hdHABs0f7qJ867Y%2BM8w%3D%3D&local=zh)

公开（公告）日：1973-02-15

申请号：BE790737D

申请人：KMS IND INC

**740、PROGRAMMED LASER BEAMS FOR OPTIMUM PRODUCTION OF FUSION REACTIONS IN FUEL PELLETS**

公开（公告）号：[CA1014676A](https://www.incopat.com/detail/init2?formerQuery=W%2B%2FYM3R5KFgnL2kKWwjCXw%3D%3D&local=zh)

公开（公告）日：1977-07-26

申请号：CA1014676D

申请人：UNITED STATES (GOVERNMENT OF THE) OF AMERICA AS REPRESENTED BY THE UNITE D STATES ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

**741、METHOD OF MOUNTING A FUEL PELLET IN A LASER-EXCITED FUSION REACTOR**

公开（公告）号：[CA978287A](https://www.incopat.com/detail/init2?formerQuery=36b6IIIq%2F3qFCSO8E3v%2FPA%3D%3D&local=zh)

公开（公告）日：1975-11-18

申请号：CA978287D

申请人：UNITED STATES (GOVERNMENT OF THE) OF AMERICA AS REPRESENTED BY THE UNITE D STATES ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION

**742、Method for generation of electrical energy by laser-based nuclear fusion and laser- [...] r**

摘要：A method for generating electrical energy, comprising the steps of providing a fusion fuel (1), the fusion fuel (1) being held in a magnetic field within a cylindrical reaction chamber (2), initiating nuclear fusion in the fusion fuel (1), in which a fusion flame is produced by fusion laser pulses (4) having a pulse duration of less than 10 ps and a power of more than 1 petawatt, and converting the energy that is released during the nuclear fusion from the nuclei that are produced into power plant power, wherein the magnetic field has a field strength which is greater than or equal to 1 kilotesla and the nuclear fusion has an energy yield of more than 500 per laser energy of the fusion laser pulses (4) that produce the fusion flame. Also described is a nuclear fusion reactor which is configured for generating electrical energy.

公开（公告）号：[DE112014006495A5](https://www.incopat.com/detail/init2?formerQuery=EjdcrAf2M92j8uQAC%2BmyChVM%2B%2FUO%2FP7I&local=zh)

公开（公告）日：2016-12-08

申请号：DE112014006495

申请人：Heinrich Hora; UJK Management GmbH

**743、Laser gain device, laser device and laser - nuclear fusion reactor**

摘要：The laser amplification apparatus is provided with a plurality of plate-shaped laser medium components (M1 to M4) which are disposed to be aligned along a thickness direction, and prisms (P1 to P3) which optically couples the laser medium components. Each of the laser medium components is provided with a main surface to which a seed light is incident, and a side surface which surrounds the main surface. An excitation light is incident from at least one side surface of a specific laser medium component among the plurality of laser medium components. The excitation light is incident through the prism to a side surface of the laser medium component adjacent to the prism.

公开（公告）号：[DE112015005208T5](https://www.incopat.com/detail/init2?formerQuery=EjdcrAf2M921GeudAAHUzfAljU3FRadp&local=zh)

公开（公告）日：2017-08-03

申请号：DE112015005208

申请人：Hamamatsu Photonics K K

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状态代码：R012;?

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