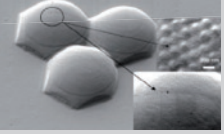
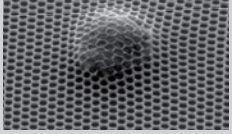
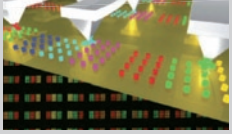


multi scale integration
(© Cardiff University)



nano printing on courved surfaces
(© Philips MiPlaza)

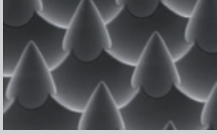


bottom-up nano bio structuring
(© Karlsruhe Institute of Technology/ KNMF)

high aspect ratio structures
(© Karlsruhe Institute of Technology/ KNMF)

low force balance
(© NPL)

mechanical microstructures
(© TEKNIKER)



3D nanostructures
(© IMS Nanofabrication)

EUMINAfab – your gateway in Europe to multimaterial micro and nanotechnologies

EUMINAfab

Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multimaterials´ repertoire

Introduction remarks

Dear colleague,

Many thanks for considering EUMINAfab an interesting opportunity for you, your collaborators your institute or organisation. We appreciate the opportunity to inform you and your colleagues about EUMINAfab's offer as an open infrastructure in the field of multimaterial micro and nanotechnologies. EUMINAfab is a European Research Infrastructure that is funded under FP7 Capacities (grant agreement no.: FP7-226460). We are grateful for your commitment and support of our initiative and anticipate results of mutual benefit.

EUMINAfab in brief

EUMINAfab is the first European research infrastructure for micro-nano fabrication of functional structures and devices out of a multitude of functional materials, predominantly other than classical IC-materials (IC: integrated circuit).

In case of public research EUMINAfab offers no-fee access to 36 installations in combination with the necessary technological and scientific expertise in the areas of micro and nano patterning, thin film deposition, replication and characterisation. In case of proprietary research EUMINAfab's offer remains the same, however on the basis of full cost recovery.

Access is by written proposal submission through the EUMINAfab Entry Point which is available on www.euminafab.eu, and will be granted according to international standards by independent peer review (public research).

EC funding under FP7 Capacities programme covers the costs of access, transport and accommodation for EUMINAfab's users, either from academia or industry, upon condition that the results can be publicly available.

Offer

By combining scientific expertise with technological capabilities, EUMINAfab

- offers you one-stop access no fee to 36 installations and processes from leading European institutions and enterprises
- provides you with innovative and efficient solutions to your challenges in the area of fabricating functional structures and devices out of a large repertoire of materials

Technology Profile

EUMINAfab offers a comprehensive technological profile to its users that is unique even on a global scale. The fabrication technologies offered, span from IC-technologies to multimaterial micro and nanotechnologies towards bio-inspired nano-processes. These converging technologies are complemented by a set of high resolution characterisation methods, partly even traceable. EUMINAfab's technology profile covers:

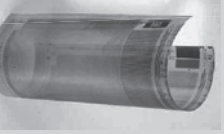
Micro-nano patterning
Electron beam lithography, ion beam nanolithography and nanopattering (focused cross beam; CHARPAN: parallelized ion multi-beams), substrate conformal imprint lithography (SCIL), dip pen nanolithopgraphy, direct X-ray lithography, laser technologies, freeform mechanical micromachining, mastermaking process chain, photopolymerisation process, DRIE (Si, glass, SiO_2)

Thin film deposition
PVD technologies (e.g. noble metals, DLC, nanocomposi-tes, metals, nitrides), organic PVD (e.g. organic liquids & powders, oxides), CVD (metals, polymers, ceramics), self assembly (e.g. semiconductors, organic), screen printing (e.g. metals, dielectrics)

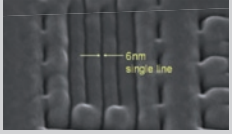
Replication
Micro injection moulding (polymers, metals, ceramics; small series), micro hot embossing (small series), thermal imprinting & UV-NIL, nano imprint lithography process chain, dry & wet etching

Characterisation
HRTEM, XPEEM, Auger Nanoprobe, in situ synchrotron X-ray diffractometry (> 2010), AFM, conductive AFM, spectrophotometry/ -radiometry, profilometry

CAPACITIES



flexible electronics
(© Philips MiPlaza)



top-down structuring
(© IMS Nanofabrication)

metrological atomic force microscopy
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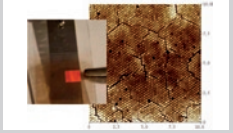
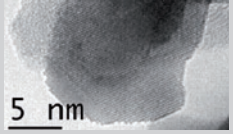


self assembly
(© Centro Ricerche FIAT)

mould inserts
(© Cardiff University)



nanomaterials characterisation
(© CEA Grenoble)

nano channels
(© TEKNIKER)

Access to EUMINAfab

If you are interested in using a particular technology or indeed have an idea but need advice on which technology can best fulfil your requirements, we recommend at first to contact EUMINAfab via its "virtual entry point" (www.euminafab.eu). There you find telephone numbers of particular scientific experts as well as of our user office.

You can apply for access at any time. However, we will publish calls twice a year. In any case, please submit your proposal at any time using our on-line application form (available September 2009). If public research and access is requested, the proposals will be subject to an independent peer review process. Prior to this our technology experts will check the technological feasibility. Only technical feasible proposals will be considered by the review panel. Therefore, we strongly recommend that you discuss proposed work with our EUMINAfab technology experts to check the feasibility before submitting a proposal as this could save you precious time at this stage.

You will be informed by email of the outcome of the evaluation procedure. Direct contact with the technologist responsible at the host organisation will enable the detailed planning and timing of the task as well as your travel. If there are reasons for urgent work a Fast Track access can be applied for which by-passes the peer review stage in first instance. In order to maintain transparency and fairness fast track proposals are nevertheless reviewed upon completion by the peer review board.

Availability of Access

No-fee transnational access is available to all researchers from academia or industry from EC member states and associated states on condition that the results can be published. Users may be from a single organisation of from a group of organisations. Proprietary research based on full cost recovery is the option for confidential projects.

Outreach Activities

Promoting the availability of our 36 high end installations available for transnational access is a top priority in EUMINAfab. Regional consultancy, workshops and special sessions at conferences where potential users gather are planned. We aim to cover a broader geographical area than the local regions of our partners and are interested in recommended locations for holding such events.

In this particular regard we highly appreciate your support and willingness to further distribute the news of EUMINAfab. Please feel encouraged to invite the EUMINAfab team for local or regional presentations.

Do not hesitate to get in touch via www.euminafab.eu or direct susan.anson@kit.edu.

Sincerely your
EUMINAfab team

The EUMINAfab partnership

KNMF Karlsruhe NANO MICRO Facility
CARDIFF UNIVERSITY PRIFYSGOL CAERDYDD MEC
Tekniker ik4 research alliance
MiPlaza
Fraunhofer IPA
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IMS Nanofabrication AG
NPL National Physical Laboratory

CAPACITIES