Title (en)

RECHARGEABLE ELECTROCHEMICAL DEVICE FOR PRODUCING ELECTRIC ENERGY

Title (de)

WIEDERAUFLADBARE ELEKTROCHEMISCHE VORRICHTUNG ZUR ERZEUGUNG VON ELEKTRISCHER ENERGIE

Title (fr)

DISPOSITIF ÉLECTROCHIMIQUE RECHARGEABLE POUR LA PRODUCTION D'ÉNERGIE ÉLECTRIQUE

Publication

EP 3443611 B1 20200219 (EN)

Application

EP 17721855 A 20170411

Priority

- IT UA20162598 A 20160414
- IB 2017052075 W 20170411

Abstract (en)

[origin: WO2017178964A1] An innovative device that integrates, internally to one individual electrochemical cell, the functions of an electrolyzer, a hydrogen accumulator, and a fuel cell. The device can be recharged both electrically, by connecting it to a usual battery charger, and by way of a direct injection of gaseous hydrogen. The present device is very compact and features a reduced weight, consequently it can be advantageously used both to supply power to small-size portable electronic devices and to supply power to motors of electric vehicles.

IPC 8 full level

H01M 8/065 (2016.01); **H01M 4/86** (2006.01); **H01M 8/04082** (2016.01); **H01M 8/04089** (2016.01); **H01M 8/04119** (2016.01); **H01M 8/18** (2006.01); **H01M 8/2457** (2016.01); **H01M 8/248** (2016.01); **H01M 8/2484** (2016.01); H01M 4/92 (2006.01); H01M 8/1018 (2016.01)

CPC (source: EP KR US)

H01M 4/8615 (2013.01 - KR US); **H01M 4/8657** (2013.01 - EP KR US); **H01M 4/8668** (2013.01 - KR); **H01M 4/921** (2013.01 - KR US); **H01M 4/926** (2013.01 - KR); **H01M 8/0234** (2013.01 - KR); **H01M 8/04089** (2013.01 - EP KR US); **H01M 8/04141** (2013.01 - EP KR US); **H01M 8/04201** (2013.01 - EP KR US); **H01M 8/04216** (2013.01 - US); **H01M 8/065** (2013.01 - EP US); **H01M 8/0656** (2013.01 - KR); **H01M 8/1007** (2013.01 - US); **H01M 8/1067** (2013.01 - US); **H01M 8/186** (2013.01 - EP KR US); **H01M 8/2457** (2016.02 - EP US); **H01M 8/2484** (2016.02 - EP US); H01M 4/8668 (2013.01 - EP US); H01M 4/926 (2013.01 - EP US); H01M 8/248 (2013.01 - EP US); H01M 2008/1095 (2013.01 - EP US); Y02E 60/50 (2013.01 - EP US)

Citation (examination)

None

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 2017178964 A1 20171019; CN 109075361 A 20181221; DK 3443611 T3 20200525; EP 3443611 A1 20190220; EP 3443611 B1 20200219; ES 2803899 T3 20210201; IT UA20162598 A1 20171014; JP 2019514190 A 20190530; JP 6904611 B2 20210721; KR 20180132139 A 20181211; PL 3443611 T3 20210308; PT 3443611 T 20200527; US 10424802 B2 20190924; US 2018261870 A1 20180913

DOCDB simple family (application)

IB 2017052075 W 20170411; CN 201780023262 A 20170411; DK 17721855 T 20170411; EP 17721855 A 20170411; ES 17721855 T 20170411; IT UA20162598 A 20160414; JP 2019505297 A 20170411; KR 20187032857 A 20170411; PL 17721855 T 20170411; PT 17721855 T 20170411; US 201715760236 A 20170411