

Title (en)
DIRECT-TRANSFER BIOPILE

Title (de)
DIREKTTRANSFER-BODENMIETEN

Title (fr)
BIOPILE A TRANSFERT DIRECT

Publication
EP 2606527 A1 20130626 (FR)

Application
EP 11758521 A 20110818

Priority
• FR 1056672 A 20100819
• FR 2011051931 W 20110818

Abstract (en)
[origin: WO2012022921A1] The invention relates to a biopile electrode or biosensor electrode intended to be immersed in a liquid medium containing a target and an oxidizer, respectively a reducer, in which the anode comprises an enzyme able to catalyse the oxidation of a target, and the cathode comprises an enzyme able to catalyse the reduction of the oxidizer, and in which each of the anode electrode and cathode electrode consists of a solid agglomeration of carbon nanotubes mixed with the enzyme, and is secured to an electrode wire.

IPC 8 full level
H01M 4/90 (2006.01); **H01M 4/88** (2006.01); **H01M 8/16** (2006.01)

CPC (source: EP US)
G01N 27/3271 (2013.01 - EP US); **G01N 27/3277** (2013.01 - US); **G01N 27/3278** (2013.01 - EP US); **H01M 4/8896** (2013.01 - EP US);
H01M 4/9008 (2013.01 - EP US); **H01M 4/9083** (2013.01 - EP US); **H01M 8/16** (2013.01 - EP US); **B82Y 5/00** (2013.01 - US);
Y02E 60/50 (2013.01 - EP US); **Y10T 29/49002** (2015.01 - EP US)

Citation (search report)
See references of WO 2012022921A1

Citation (examination)
• COSNIER S.: "Conception de biopiles à base de nanotubes de carbone monofeuillet (SWCNTs) et d'hydroxydes doubles lamellaires (HDL)", 29 March 2011 (2011-03-29), XP009190701, Retrieved from the Internet <URL:<https://www.yumpu.com/fr/document/view/28522238/pie-pr08-15-2-swcnt-hdl-biopiles-cnrs/1>> [retrieved on 20160630]
• "H2 et Pile - Conception de Biopiles à base de Nanotubes de carbone monofeuilllets (SWCNTs) et d'Hydroxydes doubles lamellaires (HDL)", 8 January 2010 (2010-01-08), XP054977130, Retrieved from the Internet <URL:<https://imedia.emn.fr/videos/watch.php?id=59>> [retrieved on 20170206]

Cited by
WO2015193624A1

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 2012022921 A1 20120223; CA 2808869 A1 20120223; EP 2606527 A1 20130626; FR 2963989 A1 20120224; FR 2963989 B1 20160311;
JP 2013541132 A 20131107; JP 5833123 B2 20151216; US 2013284596 A1 20131031

DOCDB simple family (application)
FR 2011051931 W 20110818; CA 2808869 A 20110818; EP 11758521 A 20110818; FR 1056672 A 20100819; JP 2013525336 A 20110818;
US 201113817536 A 20110818