

Title (en)
PHOTOELECTROCHEMICAL REACTION CELL

Title (de)
PHOTOELEKTROCHEMISCHE REAKTIONSZELLE

Title (fr)
CELLULE DE REACTION PHOTOELECTROCHIMIQUE

Publication
EP 1723267 A2 20061122 (DE)

Application
EP 05700999 A 20050118

Priority
• EP 2005000425 W 20050118
• DE 102004012303 A 20040311

Abstract (en)
[origin: DE102004012303B3] Reaction cell for photo-electrochemical production of hydrogen gas. Reaction cell for photo-electrochemical production of hydrogen gas comprises a housing filled with aqueous electrolyte (E1); two connected electrodes (E1, E2), immersed in E1, where E1 is made of a doped semiconductor and E2 is of metal or a semiconductor, doped oppositely with respect to E1; and a light source (L) for irradiating the electrodes. The new features are that (i) the faces of the two electrodes are in contact with each other; (ii) the electrode pair divides the cell into two compartments, connected to each other through ionic conduction; and (iii) the housing has at least one opening for release of gas. An independent claim is also included a device for converting light energy to electrical energy that includes the new cell.

IPC 8 full level
C25B 1/00 (2006.01); **C25B 9/06** (2006.01); **C25B 9/17** (2021.01); **H01M 8/06** (2006.01)

CPC (source: EP US)
C25B 1/55 (2021.01 - EP US); **Y02E 60/36** (2013.01 - EP US); **Y02P 20/133** (2015.11 - EP US)

Citation (search report)
See references of WO 2005088758A2

Citation (examination)
• US 4094751 A 19780613 - NOZIK ARTHUR J
• DE 3635585 A1 19870527 - KILLESREITER HERMANN DR RER NA [DE]

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
DE 102004012303 B3 20050714; AU 2005221010 A1 20050922; AU 2005221010 B2 20100708; CA 2558226 A1 20050922; CA 2558226 C 20150324; EP 1723267 A2 20061122; US 2008213641 A1 20080904; WO 2005088758 A2 20050922; WO 2005088758 A3 20060330

DOCDB simple family (application)
DE 102004012303 A 20040311; AU 2005221010 A 20050118; CA 2558226 A 20050118; EP 05700999 A 20050118; EP 2005000425 W 20050118; US 59225805 A 20050118