

Title (en)  
ORGANIC PHOTOVOLTAIC DEVICES

Title (de)  
ORGANISCHE FOTOVOLTAISCHE BAUELEMENTE

Title (fr)  
DISPOSITIFS ORGANIQUES PHOTOVOLTAIQUES

Publication  
**EP 1396033 A4 20110518 (EN)**

Application  
**EP 02765783 A 20020607**

Priority  
• US 0218183 W 20020607  
• US 87852301 A 20010611  
• US 94822601 A 20010906

Abstract (en)  
[origin: WO02101838A1] The present invention generally relates to organic photosensitive optoelectronic devices. More specifically, it is directed to organic photovoltaic devices, e.g., organic solar cells. Further, it is directed to an optimized organic solar cell comprising multiple stacked subcells in series. High power conversion efficiency are achieved by fabrication of a photovoltaic cell comprising multiple stacked subcells with thickness optimization and employing an electron blocking layer.

IPC 1-7  
**H01L 31/0256**; **H01L 31/04**; **H01L 31/06**

IPC 8 full level  
**H01L 51/42** (2006.01); **B05D 5/06** (2006.01); **H01L 27/30** (2006.01); **H01L 31/0256** (2006.01); **H01L 31/06** (2006.01); **H01L 51/00** (2006.01); **H01L 51/30** (2006.01)

CPC (source: EP KR)  
**H10K 30/211** (2023.02 - EP KR); **H10K 30/353** (2023.02 - EP KR); **H10K 30/50** (2023.02 - EP KR); **H10K 30/57** (2023.02 - EP KR); **H10K 85/1135** (2023.02 - EP); **H10K 85/311** (2023.02 - EP); **H10K 85/621** (2023.02 - EP); **H10K 85/657** (2023.02 - EP); **H10K 85/6572** (2023.02 - EP); **H10K 2102/103** (2023.02 - EP); **Y02E 10/549** (2013.01 - EP)

Citation (search report)  
• [A] JP H04192376 A 19920710 - SEKISUI CHEMICAL CO LTD  
• [XYI] WO 0139276 A1 20010531 - UNIV PRINCETON [US]  
• [YA] PETTERSSON L A A ROMAN L S INGAN[S O: "Modeling photocurrent action spectra of photovoltaic devices based on organic thin films", JOURNAL OF APPLIED PHYSICS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 86, no. 1, 1 July 1999 (1999-07-01), pages 487 - 496, XP002955718, ISSN: 0021-8979, DOI: 10.1063/1.370757  
• [XI] HIRAMOTO M ET AL: "Effect of thin gold interstitial-layer on the photovoltaic properties of tandem organic solar cell", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, PERGAMON, ELSEVIER SCIENCE, GB, 1 January 1990 (1990-01-01), pages 327 - 330, XP002991125, ISSN: 0960-894X  
• See also references of WO 02101838A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated extension state (EPC)  
AL LT LV MK RO SI

DOCDB simple family (publication)  
**WO 02101838 A1 20021219**; AU 2002329183 A1 20021223; BR 0210996 A 20040608; CN 100426529 C 20081015; CN 1579023 A 20050209; EP 1396033 A1 20040310; EP 1396033 A4 20110518; EP 3118907 A1 20170118; HK 1073016 A1 20050916; IN 1615DE2009 A 20090515; IN 2037DE2003 A 20051216; JP 2004523129 A 20040729; JP 2009188409 A 20090820; JP 2010021566 A 20100128; JP 2013225698 A 20131031; JP 2014030033 A 20140213; JP 2016028436 A 20160225; JP 5840826 B2 20160106; JP 5855061 B2 20160209; KR 100915530 B1 20090904; KR 20040012917 A 20040211; MX 247357 B 20070719; MX PA03011428 A 20050307; TW 556448 B 20031001

DOCDB simple family (application)  
**US 0218183 W 20020607**; AU 2002329183 A 20020607; BR 0210996 A 20020607; CN 02811645 A 20020607; EP 02765783 A 20020607; EP 16184567 A 20020607; HK 05105539 A 20050630; IN 1615DE2009 A 20090312; IN 2037DE2003 A 20031128; JP 2003504476 A 20020607; JP 2009042821 A 20090225; JP 2009222985 A 20090928; JP 2013146839 A 20130712; JP 2013189215 A 20130912; JP 2015188559 A 20150925; KR 20037016228 A 20020607; MX PA03011428 A 20020607; TW 91112519 A 20020610