

Title (en)
METHOD FOR PRODUCING AN EMITTER ELECTRODE FOR A CRYSTALLINE SILICON SOLAR CELL AND CORRESPONDING SILICON SOLAR CELL

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER EMITTER-ELEKTRODE FÜR EINE KRISTALLINE SILIZIUMSOLARZELLE UND ENTSPRECHENDE SILIZIUMSOLARZELLE

Title (fr)
PROCÉDÉ DE RÉALISATION D'UNE ÉLECTRODE ÉMETTEUR DESTINÉE À UNE PILE SOLAIRE CRISTALLINE AU SILICIUM ET PILE SOLAIRE AU SILICIUM CORRESPONDANTE

Publication
EP 2465145 A2 20120620 (DE)

Application
EP 10741995 A 20100812

Priority

- DE 102009038141 A 20090813
- EP 2010061797 W 20100812

Abstract (en)
[origin: CA2771013A1] The invention relates to a method for producing a front-side emitter electrode as a front contact for a silicon solar cell on a silicon wafer, wherein a recess is generated in the front side thereof. A front-side n-doped silicon layer and an antireflection layer are then generated. A paste is then introduced into the recess by means of an inkjet printer, said paste comprising electrically conductive metal particles and corrosive glass frit etching through the antireflection layer to the n-doped silicon layer and electrically contacting the same. Electrically conductive front contact metal is subsequently galvanically deposited in the recess on the tempered paste as a front contact.

IPC 8 full level
H01L 31/18 (2006.01); **H01L 31/0224** (2006.01)

CPC (source: EP KR US)
H01L 31/0224 (2013.01 - KR); **H01L 31/022425** (2013.01 - EP US); **H01L 31/04** (2013.01 - KR); **H01L 31/18** (2013.01 - KR); **Y02E 10/50** (2013.01 - US); **Y02E 10/547** (2013.01 - EP)

Citation (search report)
See references of WO 2011018507A2

Citation (examination)

- US 4726850 A 19880223 - WENHAM STUART R [AU], et al
- EAGER S ET AL: "Environmentally Friendly Processes In The Manufacture Of Saturn Solar Cells", CONFERENCE RECORD OF THE 29TH IEEE PHOTOVOLTAIC SPECIALISTS CONFERENCE - 200, vol. CONF. 29, 19 May 2002 (2002-05-19), pages 62 - 65, XP010666238, ISBN: 978-0-7803-7471-3, DOI: 10.1109/PVSC.2002.1190456
- COLE A ET AL: "Fine-Line Screen Printing In Large Area Laser Grooved, Buried Contact Silicon Solar Cells", 23RD EUROPEAN PHOTOVOLTAIC SOLAR ENERGY CONFERENCE, EU PVSEC ; PROCEEDINGS OF THE INTERNATIONAL CONFERENCE, HELD IN VALENCIA, SPAIN, 1 - 5 SEPTEMBER 2008, 1 September 2008 (2008-09-01), pages 1677 - 1681, XP040529107, ISBN: 978-3-936338-24-9

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 SE SI SK SM TR

DOCDB simple family (publication)
DE 102009038141 A1 20110217; AU 2010283702 A1 20120301; CA 2771013 A1 20110217; CN 102687280 A 20120919; EP 2465145 A2 20120620; IL 218040 A0 20120430; JP 2013502064 A 20130117; KR 20120047287 A 20120511; MX 2012001900 A 20120907; SG 178373 A1 20120329; TW 201130149 A 20110901; US 2012204946 A1 20120816; WO 2011018507 A2 20110217; WO 2011018507 A3 20110519

DOCDB simple family (application)
DE 102009038141 A 20090813; AU 2010283702 A 20100812; CA 2771013 A 20100812; CN 201080036047 A 20100812; EP 10741995 A 20100812; EP 2010061797 W 20100812; IL 21804012 A 20120209; JP 2012524237 A 20100812; KR 20127006330 A 20100812; MX 2012001900 A 20100812; SG 2012009643 A 20100812; TW 99127155 A 20100813; US 201213371139 A 20120210