

Title (en)
ROLL-TO-ROLL ELECTROPLATING FOR PHOTOVOLTAIC FILM MANUFACTURING

Title (de)
ROLLE-ZU-ROLLE-GALVANISIERUNG ZUR HERSTELLUNG VON PV-FOLIEN

Title (fr)
Dépôt électrolytique à rouleaux couplés pour la fabrication d'un film photovoltaïque

Publication
EP 2087151 A4 20120328 (EN)

Application
EP 07854221 A 20071019

Priority
• US 2007081912 W 20071019
• US 86216406 P 20061019

Abstract (en)
[origin: WO2008049103A2] A roll to roll system for forming an absorber structure for solar cells on a flexible foil as the flexible foil is advanced through units of the system and by unwrapping from a supply spool and wrapping around a take-up spool. Surface of the flexible foil is first conditioned in a conditioning unit to form an activated surface. A precursor stack including copper, gallium and indium layers is electroplated onto the activated surface by utilizing separate electroplating units for each layers. The precursor layer is reacted with at least one of Se and S in an annealing unit of the system.

IPC 8 full level
C25D 5/10 (2006.01); **C25D 5/16** (2006.01); **H01L 31/032** (2006.01)

CPC (source: EP KR US)
C25D 5/10 (2013.01 - EP US); **C25D 5/50** (2013.01 - EP US); **C25D 7/0635** (2013.01 - EP US); **C25D 17/00** (2013.01 - EP US); **C25D 21/12** (2013.01 - EP US); **H01L 31/0322** (2013.01 - EP US); **H01L 31/03928** (2013.01 - EP US); **H01L 31/04** (2013.01 - KR); **H01L 31/18** (2013.01 - KR); **B82Y 30/00** (2013.01 - KR); **Y02E 10/541** (2013.01 - EP US); **Y02P 70/50** (2015.11 - EP US)

Citation (search report)
• [I] US 2005202589 A1 20050915 - BASOL BULENT M [US]
• [A] US 4318938 A 19820309 - BARNETT ALLEN M, et al
• [A] US 2002011419 A1 20020131 - ARAO KOZO [JP], et al
• [A] WO 0157932 A1 20010809 - CIS SOLARTECHNIK GMBH [DE], et al
• [A] KAMPMANN ET AL: "ELECTRODEPOSITION OF CIGS ON METAL SUBSTRATES", MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS; [MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS], MATERIALS RESEARCH SOCIETY, PITTSBURG, PA; US, vol. 763, 1 January 2003 (2003-01-01), pages 323 - 328, XP009081441, ISBN: 978-1-55899-828-5
• [A] ZHANG L ET AL: "Formation of CuInSe₂ and Cu(In,Ga)Se₂ films by electrodeposition and vacuum annealing treatment", SOLAR ENERGY MATERIALS AND SOLAR CELLS, ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL, vol. 80, no. 4, 1 December 2003 (2003-12-01), pages 483 - 490, XP004470057, ISSN: 0927-0248, DOI: 10.1016/J.SOLMAT.2003.06.014

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DOCDB simple family (publication)
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DOCDB simple family (application)
US 2007081912 W 20071019; CN 200780044723 A 20071019; EP 07854221 A 20071019; JP 2009533561 A 20071019; KR 20097010132 A 20071019; TW 96139256 A 20071019; US 87578407 A 20071019