

Title (en)
SEMICONDUCTOR LAYER MATERIAL AND HETEROJUNCTION SOLAR CELL

Title (de)
HALBLEITER-SCHICHTMATERIAL UND HETEROÜBERGANGS-SOLARZELLE

Title (fr)
MATÉRIAU STRATIFIÉ À SEMICONDUCTEUR ET CELLULE SOLAIRE À HÉTÉROJONCTION

Publication
EP 2474041 A2 20120711 (DE)

Application
EP 10728700 A 20100707

Priority
• DE 102009029017 A 20090831
• EP 2010059695 W 20100707

Abstract (en)
[origin: WO2011023441A2] The invention relates to a semiconductor layer material, in particular for use as an emitter material for a heterojunction solar cell, formed as a stack of a plurality of first and second layers each arranged in alternation one over the other, wherein the first layers comprise an elementary, polycrystalline semiconductor and the second layer comprises a substoichiometric, electrically insulating compound, particularly an oxide, carbide or nitride, of the semiconductor and wherein the bordering surfaces between the first and second layers are irregularly structured by a tempering such that micro contact regions are formed between neighboring first layers separated from each other by a second layer.

IPC 8 full level
H01L 31/0352 (2006.01); **H01L 31/072** (2012.01)

CPC (source: EP US)
B82Y 20/00 (2013.01 - EP US); **H01L 31/028** (2013.01 - EP US); **H01L 31/032** (2013.01 - EP US); **H01L 31/035236** (2013.01 - EP US); **H01L 31/0384** (2013.01 - EP US); **H01L 31/072** (2013.01 - EP US); **Y02E 10/547** (2013.01 - EP US)

Citation (search report)
See references of WO 2011023441A2

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

Designated extension state (EPC)
BA ME RS

DOCDB simple family (publication)
DE 102009029017 A1 20110303; CN 102576744 A 20120711; CN 102576744 B 20160210; EP 2474041 A2 20120711; US 2012211064 A1 20120823; WO 2011023441 A2 20110303; WO 2011023441 A3 20120329

DOCDB simple family (application)
DE 102009029017 A 20090831; CN 201080038231 A 20100707; EP 10728700 A 20100707; EP 2010059695 W 20100707; US 201013392345 A 20100707