

Title (en)

METHOD FOR PRODUCING A SOLAR CELL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER SOLARZELLE

Title (fr)

PROCÉDÉ DE FABRICATION D'UNE CELLULE SOLAIRE

Publication

EP 4186104 A1 20230531 (DE)

Application

EP 21763003 A 20210721

Priority

- DE 102020119206 A 20200721
- DE 2021100633 W 20210721

Abstract (en)

[origin: WO2022017565A1] The invention relates to a method for producing a solar cell, comprising the following steps: a) providing a substrate (2) having a front side (21) and a back side (22) in a deposition apparatus (1), and b) coating the substrate (2) in situ with two layers, comprising b1) oxidizing, by exposing the substrate to an oxygen-containing gas and a first plasma, to create an oxide layer (3) and b2) subsequently depositing a silicon layer (4) or SiC layer by exposure to a gas containing silicon, an optional gas containing carbon and a second plasma, wherein step b) is carried out under vacuum in the deposition apparatus (1) and the vacuum is maintained continuously during step b).

IPC 8 full level

H01L 31/0216 (2014.01); **C23C 16/40** (2006.01); **H01L 31/0745** (2012.01)

CPC (source: EP US)

C23C 16/24 (2013.01 - US); **C23C 16/325** (2013.01 - US); **C23C 16/401** (2013.01 - US); **C23C 16/402** (2013.01 - EP); **C23C 16/403** (2013.01 - US); **C23C 16/50** (2013.01 - US); **C23C 16/56** (2013.01 - US); **H01L 31/02167** (2013.01 - EP US); **H01L 31/022425** (2013.01 - EP US); **H01L 31/068** (2013.01 - EP); **H01L 31/1804** (2013.01 - EP); **H01L 31/1872** (2013.01 - EP); **H01L 31/1876** (2013.01 - EP); **Y02E 10/547** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (search report)

See references of WO 2022017565A1

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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

DE 102020119206 A1 20220127; CN 116325179 A 20230623; EP 4186104 A1 20230531; US 2024038909 A1 20240201; WO 2022017565 A1 20220127

DOCDB simple family (application)

DE 102020119206 A 20200721; CN 202180064041 A 20210721; DE 2021100633 W 20210721; EP 21763003 A 20210721; US 202118006234 A 20210721