

Title (en)  
METHOD FOR PRODUCING MULTICRYSTALLINE SILICON

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON MULTIKRISTALLINEM SILICIUM

Title (fr)  
PROCÉDÉ DE PRODUCTION DE SILICIUM POLYCRISTALLIN

Publication  
**EP 3253908 A1 20171213 (DE)**

Application  
**EP 16702122 A 20160129**

Priority

- DE 102015201988 A 20150205
- EP 2016051995 W 20160129

Abstract (en)  
[origin: WO2016124509A1] The object of the invention is a method for producing multicrystalline silicon, comprising the following steps: providing a crucible for receiving a silicon melt, which comprises a bottom and an internal face, wherein at least the bottom of the crucible has a coating containing one or more compounds selected from the group consisting of Si<sub>3</sub>N<sub>4</sub>, oxidised Si<sub>3</sub>N<sub>4</sub> and SiO<sub>2</sub> ; arranging a silicon layer in the crucible in contact with the coating of the bottom of the crucible; arranging polycrystalline silicon in the crucible in contact with the silicon layer; heating the crucible, until the polycrystalline silicon and silicon layer are completely melted to form a silicon melt; directional solidification of the silicon melt so as to result in a multicrystalline silicon block, characterised in that on heating the crucible and/or on melting the silicon layer, the silicon layer releases a reducing agent.

IPC 8 full level  
**C30B 11/00** (2006.01); **C30B 29/06** (2006.01)

CPC (source: CN EP KR)  
**C30B 11/002** (2013.01 - EP KR); **C30B 21/02** (2013.01 - KR); **C30B 28/06** (2013.01 - CN); **C30B 29/06** (2013.01 - CN EP KR); **C30B 29/12** (2013.01 - KR); **H01L 31/0368** (2013.01 - KR); **Y02E 10/50** (2013.01 - EP)

Citation (search report)  
See references of WO 2016124509A1

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

DOCDB simple family (publication)  
**DE 102015201988 A1 20160811**; CN 107208308 A 20170926; CN 107208308 B 20200515; EP 3253908 A1 20171213; JP 2018504359 A 20180215; JP 2019069898 A 20190509; JP 6517355 B2 20190522; KR 101954785 B1 20190306; KR 20170094317 A 20170817; MY 183217 A 20210218; SG 11201704945Y A 20170830; TW 201629278 A 20160816; TW I591217 B 20170711; WO 2016124509 A1 20160811

DOCDB simple family (application)  
**DE 102015201988 A 20150205**; CN 201680007941 A 20160129; EP 16702122 A 20160129; EP 2016051995 W 20160129; JP 2017541336 A 20160129; JP 2018242190 A 20181226; KR 20177018795 A 20160129; MY PI2017000903 A 20160129; SG 11201704945Y A 20160129; TW 105103649 A 20160204