

Title (en)

METHOD AND DEVICE FOR PRODUCING A SIC SOLID MATERIAL

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG EINES SIC-FESTMATERIALS

Title (fr)

PROCÉDÉ ET DISPOSITIF DE PRODUCTION DE MATÉRIAU SOLIDE DE SIC

Publication

**EP 4259863 A1 20231018 (EN)**

Application

**EP 21836146 A 20211213**

Priority

- DE 102020215755 A 20201211
- EP 2021085393 W 20211213

Abstract (en)

[origin: WO2022123072A1] The present invention relates to a method for producing a preferably elongated SiC solid, in particular of polytype 3C. The method according to the invention preferably comprises at least the following steps: Introducing at least a first source gas into a process chamber, said first source gas comprising Si, introducing at least one second source gas into the process chamber, the second source gas comprising C, electrically energizing at least one separator element disposed in the process chamber to heat the separator element, setting a deposition rate of more than 200pm/h, wherein a pressure in the process chamber of more than 1 bar is generated by the introduction of the first source gas and/or the second source gas, and wherein the surface of the deposition element is heated to a temperature in the range between 1300°C and 1700°C.

IPC 8 full level

**C30B 35/00** (2006.01); **C01B 32/963** (2017.01); **C23C 16/32** (2006.01); **C30B 23/00** (2006.01); **C30B 23/02** (2006.01); **C30B 25/08** (2006.01); **C30B 25/10** (2006.01); **C30B 25/14** (2006.01); **C30B 25/18** (2006.01); **C30B 29/36** (2006.01)

CPC (source: EP)

**C01B 32/963** (2017.08); **C30B 25/10** (2013.01); **C30B 29/36** (2013.01); **C30B 35/00** (2013.01); **C01P 2006/10** (2013.01); **C01P 2006/80** (2013.01); **C30B 23/00** (2013.01)

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)

**WO 2022123072 A1 20220616**; CN 116829770 A 20230929; EP 4259863 A1 20231018

DOCDB simple family (application)

**EP 2021085393 W 20211213**; CN 202180089271 A 20211213; EP 21836146 A 20211213