

Title (en)

DEVICE FOR GROWING SINGLE CRYSTALS, IN PARTICULAR SINGLE CRYSTALS OF SILICON CARBIDE

Title (de)

VORRICHTUNG ZUM ZÜCHTEN VON EINKRISTALLEN, INSBESONDERE VON EINKRISTALLEN AUS SILIZIUMCARBID

Title (fr)

DISPOSITIF DE CROISSANCE DE MONOCRISTAUX, EN PARTICULIER DE MONOCRISTAUX DE CARBURE DE SILICIUM

Publication

EP 4222296 A1 20230809 (DE)

Application

EP 21794708 A 20210923

Priority

- AT 508172020 A 20200928
- AT 2021060339 W 20210923

Abstract (en)

[origin: WO2022061384A1] The invention relates to a device for growing single crystals, in particular single crystals of silicon carbide, comprising a crucible (601), which crucible (601) defines an outer lateral surface and furthermore delimits a receiving chamber (604) having an axial extension between a bottom section and an opening section, the receiving chamber (604) being designed to grow the crystals, the device comprising at least one seed crystal layer (602), wherein the crucible (601) is arranged in a chamber, in particular a chamber made of a glass material, for example quartz glass, wherein an induction heating is arranged around the chamber. The invention is characterized in that the crucible (601) has a multi-part design and comprises a crucible bottom part (302, 605), at least one crucible wall part (608) and a crucible cover part (303, 606), which are connected to one another in a detachable manner.

IPC 8 full level

C30B 23/00 (2006.01); **C30B 29/36** (2006.01); **C30B 35/00** (2006.01)

CPC (source: AT EP US)

C30B 23/00 (2013.01 - AT EP); **C30B 29/36** (2013.01 - EP US); **C30B 35/002** (2013.01 - AT EP US)

Citation (search report)

See references of WO 2022061384A1

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 2022061384 A1 20220331; AT 524250 A1 20220415; AT 524250 B1 20220715; CN 116234947 A 20230606; EP 4222296 A1 20230809; TW 202217094 A 20220501; US 2023332330 A1 20231019

DOCDB simple family (application)

AT 2021060339 W 20210923; AT 508172020 A 20200928; CN 202180065957 A 20210923; EP 21794708 A 20210923; TW 110133001 A 20210906; US 202118028674 A 20210923