

Title (en)
METHOD FOR PRODUCING A PRETREATED COMPOSITE SUBSTRATE, AND PRETREATED COMPOSITE SUBSTRATE

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES VORBEHANDELTEN VERBUNDSUBSTRATS UND VORBEHANDELTES VERBUNDSUBSTRAT

Title (fr)
PROCÉDÉ DE FABRICATION D'UN SUBSTRAT COMPOSITE PRÉTRAITÉ ET SUBSTRAT COMPOSITE PRÉTRAITÉ

Publication
EP 4264658 A2 20231025 (DE)

Application
EP 21836127 A 20211210

Priority

- DE 102020134222 A 20201218
- EP 2021085294 W 20211210

Abstract (en)
[origin: WO2022128817A2] The method for producing a pretreated composite substrate (18), which is used as the basis for further processing into electronic semiconductor components, comprises: doping a first layer (21) of SiC in a donor substrate (12) by means of ion implantation using an energy filter (20); generating a predetermined breaking point (26) in the donor substrate (12); and producing a bonded connection between donor substrate (12) and acceptor substrate (28), the first layer (21) being arranged in a region between the acceptor substrate (28) and a remaining part (22) of the donor substrate (12). Lastly, the donor substrate (12) is split in the region of the predetermined breaking point (26) to generate the pretreated composite substrate (18), wherein the pretreated composite substrate (18) has the acceptor substrate (28) and a doped layer (32), which is connected to said acceptor substrate and comprises at least a portion of the first layer (21) of the donor substrate (12).

IPC 8 full level
H01L 21/04 (2006.01); **H01J 37/317** (2006.01); **H01L 21/02** (2006.01); **H01L 21/18** (2006.01); **H01L 21/20** (2006.01); **H01L 21/265** (2006.01); **H01L 21/762** (2006.01)

CPC (source: EP US)
H01L 21/02002 (2013.01 - EP US); **H01L 21/046** (2013.01 - US); **H01L 21/0465** (2013.01 - EP); **H01L 21/185** (2013.01 - EP); **H01L 21/187** (2013.01 - US); **H01L 21/2007** (2013.01 - EP); **H01L 21/26513** (2013.01 - EP); **H01L 21/76254** (2013.01 - EP); **H01L 29/1608** (2013.01 - US); **H01L 29/165** (2013.01 - US)

Citation (search report)
See references of WO 2022128817A2

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 2022128817 A2 20220623; **WO 2022128817 A3 20220818**; DE 102020134222 A1 20220623; EP 4264658 A2 20231025; JP 2023553476 A 20231221; US 2024055251 A1 20240215

DOCDB simple family (application)
EP 2021085294 W 20211210; DE 102020134222 A 20201218; EP 21836127 A 20211210; JP 2023535861 A 20211210; US 202118267564 A 20211210