

Title (en)

SEED SELECTION AND GROWTH METHODS FOR REDUCED-CRACK GROUP III NITRIDE BULK CRYSTALS

Title (de)

IMPFKRISTALLAUSWAHL UND WACHSTUMSVERFAHREN FÜR GRUPPE-III-NITRID-MASSENKRISTALLE MIT VERMINDERTER RISSBILDUNG

Title (fr)

SÉLECTION DE GERMES ET PROCÉDÉS DE CROISSANCE POUR RÉDUIRE LA FISSURE DE CRISTAUX MASSIFS DE NITRURE DU GROUPE III

Publication

EP 3247824 A1 20171129 (EN)

Application

EP 16703412 A 20160122

Priority

- US 201562106709 P 20150122
- US 2016014522 W 20160122

Abstract (en)

[origin: WO2016118862A1] In one instance, the invention provides a method of growing bulk crystal of group III nitride using a seed crystal selected by (a) measuring x-ray rocking curves of a seed crystal at more than one point, (b) quantifying the peak widths of the measured x-ray rocking curves, and (c) evaluating the distribution of the quantified peak widths. The invention also includes the method of selecting a seed crystal for growing bulk crystal of group III nitride. The bulk crystal of group III nitride can be grown in supercritical ammonia or a melt of group III metal using at least one seed selected by the method above.

IPC 8 full level

C30B 29/40 (2006.01); **C30B 7/10** (2006.01)

CPC (source: CN EP KR)

C30B 7/105 (2013.01 - CN EP KR); **C30B 29/403** (2013.01 - CN EP KR); **H01L 21/0242** (2013.01 - KR); **H01L 21/0254** (2013.01 - KR)

Citation (search report)

See references of WO 2016118862A1

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)

WO 2016118862 A1 20160728; CN 107208305 A 20170926; EP 3247824 A1 20171129; JP 2018504355 A 20180215; JP 6448155 B2 20190109; KR 102069277 B1 20200122; KR 20170121182 A 20171101

DOCDB simple family (application)

US 2016014522 W 20160122; CN 201680006774 A 20160122; EP 16703412 A 20160122; JP 2017538419 A 20160122; KR 20177023443 A 20160122