

Title (en)  
METHOD FOR THE SYNTHESIS OF GROUP III NITRIDE CRYSTALS

Title (de)  
METHODE ZUR HERSTELLUNG VON NITRIDKRISTALLEN DER 3 HAUPTGRUPPE

Title (fr)  
PROCEDE DE SYNTHESE DE CRISTAUX DE NITRURE DE GROUPE III

Publication  
**EP 0946411 A1 19991006 (EN)**

Application  
**EP 97945616 A 19971104**

Priority  
• US 9720196 W 19971104  
• US 3013196 P 19961104

Abstract (en)  
[origin: WO9819964A1] A novel method for the synthesis of Group III nitride crystals is disclosed. The method contemplates the reaction of a liquid form of the Group III nitride metal with active nitrogen. The active nitrogen may be generated by a plasma or the thermal decomposition of ammonia and may be neutral, ionic, excited or a mixture thereof. Using the method of the present invention, the crystalline Group III nitride can be grown at pressures of one atmosphere and below. Polycrystalline films grown by this method are of sufficient quality to show luminescence at room temperature.

IPC 1-7  
**C01B 21/064**; C01B 21/06; C01B 21/072

IPC 8 full level  
**C01B 21/06** (2006.01); **C01B 21/064** (2006.01); **C01B 21/072** (2006.01); **C30B 11/00** (2006.01); **C30B 15/00** (2006.01); **H01L 21/208** (2006.01)

CPC (source: EP)  
**C01B 21/0632** (2013.01); **C01B 21/0641** (2013.01); **C01B 21/0722** (2013.01); **C30B 11/00** (2013.01); **C30B 15/00** (2013.01); **C30B 29/403** (2013.01); **C30B 29/406** (2013.01); **H01L 21/02378** (2013.01); **H01L 21/02387** (2013.01); **H01L 21/0242** (2013.01); **H01L 21/0254** (2013.01); **H01L 21/02614** (2013.01); **H01L 21/02625** (2013.01); **C01P 2002/82** (2013.01); **C01P 2004/03** (2013.01); **C01P 2004/04** (2013.01)

Designated contracting state (EPC)  
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 9819964 A1 19980514**; AU 5105098 A 19980529; CA 2271117 A1 19980514; EP 0946411 A1 19991006; EP 0946411 A4 20000202

DOCDB simple family (application)  
**US 9720196 W 19971104**; AU 5105098 A 19971104; CA 2271117 A 19971104; EP 97945616 A 19971104