



US006657232B2

(12) **United States Patent**
Morkoc

(10) **Patent No.:** **US 6,657,232 B2**
(45) **Date of Patent:** **Dec. 2, 2003**

(54) **DEFECT REDUCTION IN GAN AND RELATED MATERIALS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **09/834,763**

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(22) Filed: **Apr. 16, 2001**

(65) **Prior Publication Data**

US 2002/0013042 A1 Jan. 31, 2002

Related U.S. Application Data

(60) Provisional application No. 60/197,681, filed on Apr. 17, 2000.

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(51) **Int. Cl.**⁷ **H01L 29/15; H01L 31/0256**

(52) **U.S. Cl.** **257/76; 257/183; 257/615**

(58) **Field of Search** 438/604, 481; 117/89; 257/17, 76, 183, 615

(57) **ABSTRACT**

A material with reduced surface defects includes a defect filter layer on an underlying material. The defect filter reduces dislocations and defects present in an underlying material. The defect filter include islands of one material formed on the underlying material and a continuous layer of a second material over the islands. The pair of layers is repeated a plurality of times to reduce the number of defects emanating from the underlying material.

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21 Claims, 2 Drawing Sheets

