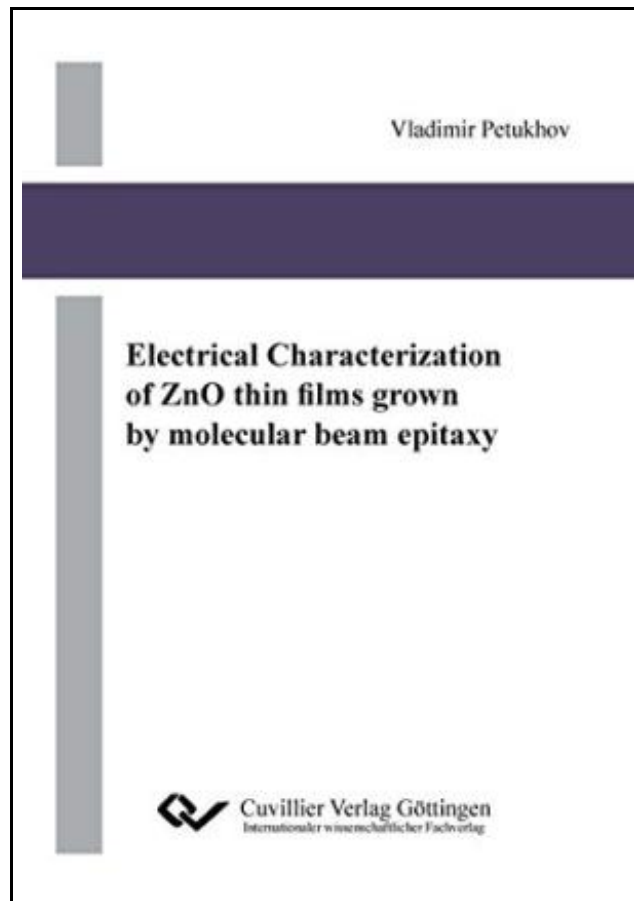


Electrical Characterization of ZnO thin films grown by molecular beam epitaxy



Filesize: 1.2 MB

Reviews

This publication is wonderful. It can be rally fascinating throgh reading period of time. You are going to like the way the writer create this publication.

(Mrs. Piper Jacobi)

ELECTRICAL CHARACTERIZATION OF ZNO THIN FILMS GROWN BY MOLECULAR BEAM EPITAXY

[DOWNLOAD](#)

Cuvillier Verlag Apr 2012, 2012. Taschenbuch. Book Condition: Neu. 211x149x4 mm. Neuware - For the electronic and optoelectronic device realization a precise control of the electrical properties in the utilized material is a very important issue. Doping profiles in realized p-n-junctions influence the functionality of the devices. The morphological and crystal properties of a device material directly influence the electrical ones. Dislocations present in a region of p-n-junctions can short circuit them leading to malfunctions. Too rough surfaces during epitaxial growth could lead to inhomogeneities in a single or multiple quantum wells and superlattices. The main goal of the present work was to provide the basis for a reliable p-type doping of ZnO grown by molecular beam epitaxy. Firstly, the well established heteroepitaxial growth on c-sapphire substrates has been employed. Based on the theoretical and experimental works, suggesting nitrogen to be the impurity that builds the most shallow acceptor level in ZnO comparing to other group-V elements, it has been implied as a dopant. To generate reactive nitrogen atoms an rf-plasma source has been utilized in the MBE process. The resulting samples have been characterized by such methods as AFM, XRD, TEM, PL spectroscopy, temperature domain Hall measurements (TDHM) and ECV-profiling. First results of TDHM have shown that even in undoped samples the temperature dependencies of the electron mobility and carrier concentration have regions which are difficult to interpret. It is necessary to fit them with theoretical curves in order to extract the correct values. This task has proven to be very difficult. The complicated character of the dependencies has been explained in terms of the multilayer conduction model dividing a layer in thin interfacial region with mobility and carrier concentration μ_1 and n_1 respectively and bulk region with a higher mobility μ_2 and lower carrier concentration n_2 . The electrical transport...



[Read Electrical Characterization of ZnO thin films grown by molecular beam epitaxy Online](#)



[Download PDF Electrical Characterization of ZnO thin films grown by molecular beam epitaxy](#)

Other Books



Learn at Home:Learn to Read at Home with Bug Club: Pink Pack Featuring Trucktown (Pack of 6 Reading Books with 4 Fiction and 2 Non-fiction)

Pearson Education Limited. Paperback. Book Condition: new. BRAND NEW, Learn at Home:Learn to Read at Home with Bug Club: Pink Pack Featuring Trucktown (Pack of 6 Reading Books with 4 Fiction and 2 Non-fiction), Catherine...

[Download Book »](#)



Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications .

Rarebooksclub.com, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English . Brand New Book ***** Print on Demand *****.This historic book may have numerous typos and missing text. Purchasers can usually...

[Download Book »](#)



Crochet: Learn How to Make Money with Crochet and Create 10 Most Popular Crochet Patterns for Sale: (Learn to Read Crochet Patterns, Charts, and Graphs, Beginner s Crochet Guide with Pictures)

Createspace, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book ***** Print on Demand *****.Getting Your FREE Bonus Download this book, read it to the end and...

[Download Book »](#)



DK Readers Animal Hospital Level 2 Beginning to Read Alone

DK CHILDREN. Paperback. Book Condition: New. Paperback. 32 pages. Dimensions: 8.9in. x 5.8in. x 0.1in.This Level 2 book is appropriate for children who are beginning to read alone. When Jack and Luke take an injured...

[Download Book »](#)



DK Readers Day at Greenhill Farm Level 1 Beginning to Read

DK CHILDREN. Paperback. Book Condition: New. Paperback. 32 pages. Dimensions: 8.8in. x 5.7in. x 0.2in.This Level 1 book is appropriate for children who are just beginning to read. When the rooster crows, Greenhill Farm springs...

[Download Book »](#)