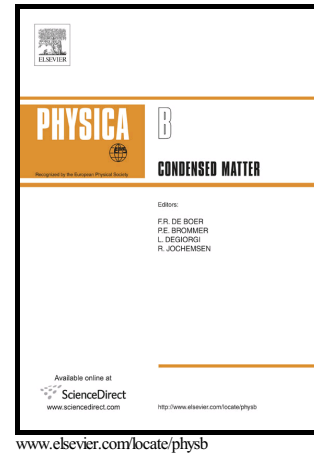


Author's Accepted Manuscript

Characterisation of Cs ion implanted GaN by DLTS

P.N.M. Ngoepe, W.E. Meyer, F.D. Auret, E. Omotoso, T.T. Hlatshwayo, M. Diale



PII: S0921-4526(17)30364-2
DOI: <http://dx.doi.org/10.1016/j.physb.2017.06.064>
Reference: PHYSB310042

To appear in: *Physica B: Physics of Condensed Matter*

Received date: 21 April 2017
Revised date: 19 June 2017
Accepted date: 22 June 2017

Cite this article as: P.N.M. Ngoepe, W.E. Meyer, F.D. Auret, E. Omotoso, T.T. Hlatshwayo and M. Diale, Characterisation of Cs ion implanted GaN by DLTS *Physica B: Physics of Condensed Matter* <http://dx.doi.org/10.1016/j.physb.2017.06.064>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain

Characterisation of Cs ion implanted GaN by DLTS

P.N.M. Ngoepe*, W.E. Meyer, F.D. Auret, E. Omotoso, T.T. Hlatshwayo, and M. Diale

*Physics Department, University of Pretoria, Pretoria, South Africa***Abstract**

Deep level transient spectroscopy (DLTS) was used to characterise Cs implanted GaN grown by hydride vapour phase epitaxy (HVPE). This implantation was done at room temperature using energy of 360 keV to a fluence of 10^{-11} cm⁻². A defect with activation energy of 0.19 eV below the conduction band and an apparent capture cross section of 1.1×10^{-15} cm² was induced. This defect has previously been observed after rare earth element (Eu, Er and Pr) implantation. It has also been reported after electron, proton and He ion implantation.

Keywords: GaN; Cs implantation; Defect; DLTS

* Corresponding author: e-mail address: phuti.ngoepe@up.ac.za

Download English Version:

<https://daneshyari.com/en/article/8161072>

Download Persian Version:

<https://daneshyari.com/article/8161072>

[Daneshyari.com](https://daneshyari.com)