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High resolution Laplace deep-level transient spectroscopy characterization of radiation induced defects in germanium.

In this study we used high resolution Laplace Deep-Level Transient Spectroscopy (L-DLTS) to study the electrical properties of the E and E´ defects in germanium (Ge) which are introduced by alpha particle radiation. Current-voltage and capacitance-voltage measurements reveal a decrease in the quality of the devices fabricated on the radiated samples. The activation energies for these defects were found to be 0.370eV and 0.375eV, respectively. The electric field dependence of these defects was measured, and the capture cross-sections were measured from varying pulse width.

Keywords: Alpha radiation induced defects in Ge; Laplace Deep-Level Transient Spectroscopy; Electric field; Capture cross-section.

Apply to be considered for a student ; award (Yes / No)?

yes

Level for award;(Hons, MSc, PhD, N/A)?

MSc

Primary author: THABA, Cambel (Department of physics, University of Pretoria)

Co-authors: Dr TAGHIZADEH, Fatemeh (Department of physics, University of Pretoria); Prof. AURET, Danie (Department of physics, University of Pretoria); Prof. DIALE, Mmantsae (Department of physics, University of Pretoria)

Presenter: THABA, Cambel (Department of physics, University of Pretoria)

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