Contribution ID: **11** Type: **not specified**

New results on the annealing behaviour of the E4/E5-defect

Wednesday 17 November 2010 14:10 (20 minutes)

This work deals with the bistable congurations of the E4/E5-defect levels, which are known to be the important current generator after neutrons and charged hadrons irradiation. We studied 300 um thick n-type diodes made from MCz and FZ-silicon after irradiation with reactor neutrons. Capacitance-Deep Level Transient Spectroscopy (C-DLTS) as well as Capacitance- Voltage and Current-Voltage characteristics were performed. E4/E5 is visible in C-DLTS directly after irradiation and anneals out at 80 ℃ by changing its configuration. The injection of high forward current reestablishes the E4/E5-conguration, even after high annealing temperatures (e.g. 200 ℃). The aim of this study is to obtain optimal parameters for future studies of the E4/E5-defect. For this reason injection temperature, type of injected charge carriers, duration and value of applied current pulse were varied.

Author: JUNKES, Alexandra (Universität Hamburg)

Co-authors: NEUBÜSER, Coralie (Universität Hamburg); FRETWURST, Eckhart (Universität Hamburg)

Presenter: JUNKES, Alexandra (Universität Hamburg)

Session Classification: Defect and Material Characterization