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Contribution ID: 63

Type: **Poster Presentations**

## Low-Temperature Alpha-Particle Irradiation of Pd/4H-SiC Schottky barrier diodes

*Tuesday, 5 May 2015 15:15 (1h 45m)*

The effect of low-temperature alpha-particle irradiation on Pd/4H-SiC Schottky barrier diodes has been investigated. The motivation is to study the radiation damage of the sample after bombarded with 1.6 MeV  $\alpha$ -particles [ $(\text{He})^{2+}$ ] at 20 K and the annealing of the radiation-induced defects taking place with increasing in temperature. The of fluence alpha-particles amounted to  $3 \times (10)^{13} (\text{cm})^{-2}$ . Thermal admittance and photo-capacitance spectroscopy were employed to characterize the diodes. The shallow donors D1 and D2 were detected in the as-grown as well as in the  $\alpha$ -bombarded samples. The defects  $T\alpha_{\text{Ann}}$  was stable to both irradiation and annealing at room temperature.

**Are you currently a postgraduate student? (Yes/No)**

Yes

**At what level of studies are you currently? (Hons/MSc/PhD)**

PhD

**Please provide the name and email address of your supervisor.**

Prof. Walter E. Meyer

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**Session Classification:** Poster

**Track Classification:** SACPM