

Title: Investigation of optical properties of Gamma irradiated β-Ga_2O_3

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Wide band gap semiconductors are of prime interest in space and military applications due to their inherent radiation hardness. Among them, β-Ga_2O_3 is attracting special interest in power electronics and photodetection. Since radiation damage is a fundamental consequence of space applications, it is important to understand the behaviour of a material when exposed to varying doses of radiation. In this report, we expose thin films of β-Ga_2O_3 to different doses of Gamma radiation and study the change in cathodoluminescence (CL) using a state-of-the-art Gatan Monarc Pro (model 450. P) system. We observe a decrease in the CL intensity in films exposed to the radiation. Since the peak studied in the spectrum belongs to a defect level, we can comment on the behavior of the defect states upon exposure to Gamma radiation.

Biography

Varun Thakur has completed his PhD at the age of 29 years from Jawaharlal Nehru Centre for Advanced Scientific Research and is pursuing postdoctoral studies from Indian Institute of Technology, Department of Physics. He has published more than 10 papers in reputed journals.

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