



# ***SEMINAR ANNOUNCEMENT***

## **“High Energy Ion Implantation in GaAs: Electrical Investigations\*”**

**Yousuf Pyar Ali Hassan**

*Professor, Department of Physics, Jazan University*

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Over the past decade, low energy ion implantation in GaAs has evolved into a well-established reliable doping technique. It can be also used to create high resistivity regions for device isolations. Enhancement of this energy range to higher energies has attracted much attention as a promising tool for the fabrication of devices which require deep conducting or insulating layers. High energy ion implantation permits the integration of these devices on a single wafer leading to a large density of optical and electronic devices. The extension of the implantation process to the MeV range raises questions about the effects of radiation defects on the electrical, optical and structural properties of the material. This talk explores the change in the electrical behaviors of high energy (70 MeV)  $^{120}\text{Sn}$  implanted n-type GaAs substrates due to radiation induced defects and the effect of annealing on them. Possible electrical conduction mechanisms and defect related characteristics are also discussed.

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\*This work is done in collaboration with TIFR-India, Mumbai University & NSC-India.

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