

Seminar

Highlights of Research activities of Materials Science Group - Accelerator based irradiation studies of materials

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The present talk will highlight accelerator based irradiation facilities and characterization facilities set up at Materials Science Group (MSG), IGCAR in terms of HRTEM, positron annihilation, and surface characterization using AFM/STM. The study of effect of radiation on materials is important from the point of development of structural materials for nuclear reactors and radiation-resistant electronic devices for space applications. Irradiation studies on nuclear structural D9 steel will be presented to show the void swelling behavior of the material. From the point of view of device applications, the results on disordered and amorphous Si will be shown and identification of vacancy defects using positron beam studies will be highlighted. Metal-silicides are critical components in many semiconductor devices, which act as the interfacing layers for various electrical connections in the devices. The results of Interdiffusion of the metal and silicon across the interface obtained in Pd/Si using Auger electron spectroscopy, XRD, RBS and Positron annihilation spectroscopy will be highlighted. Some of the research areas for collaborative research will be highlighted.

Tuesday, Apr 2nd 2019

11:30 AM (Tea/Coffee at 11:00 AM)

Auditorium, TIFR-H