This file has been cleaned of potential threats.

If you confirm that the file is coming from a trusted source, you can send the following SHA-256 hash value to your admin for the original file.

bf7f2fdcb94451c07b10bcd9edecde93b2497c67fae5eb17ac967150d252e700

To view the reconstructed contents, please SCROLL DOWN to next page.

Seminar

Institute for Plasma Research

Title : Defects related structural, electrical, optical and magnetic properties of metal oxides thin films

Speaker: Dr. Razia Nongjai
Inter University Accelerator Centre (IUAC), New Delhi

Date : 2nd December 2021 (Thursday)

Time : 03.30 PM

Venue : Online - Join the talk:
https://meet.ipr.res.in/Dr.RaziaNongjai_PDFTalk

Abstract :

Metal oxides nanostructures have attracted intensive research interests in different strategic research fields such as optoelectronics, sensors, energy-related technologies and spintronics due to their intriguing multi-functional properties. The presence of defects and imperfections in such materials are known to influence the overall functional properties to a great extent. As a matter of example, the presences of surface defects induce ferromagnetism and cation vacancies enhanced the conductivity in NiO while oxygen vacancies lead to highly conducting behaviour in ZnO or Fe3O4. Defects can be created during the synthesis of materials or induced post-synthesis via thermal treatment and ion beam irradiation or implantation. Controlling the defects to obtain desired properties of materials is a challenging task. We have synthesized metal oxides nanoparticles and thin films such as doped and undoped Fe3O4, NiO, In2O3 and employed ion beam irradiation and implantation techniques to introduce controlled defects and impurities in materials for engineering their structural, electrical, optical and magnetic properties. In this talk, I will present some of these results.