

Seminar

Institute for Plasma Research

Title : Surface and interface modification by low energy ion beams

Speaker: Dr. Dipak Bhowmik
VECC, Kolkatta, India

Date : 12th September 2019 (Thursday)

Time : 3.30 PM.

Venue : Seminar Hall, IPR

Abstract:

The low energy ion beam is a very useful technique to modify surface and interface properties of a material. The periodic nano-pattern is formed on solid surface by energetic ion bombardment. The periodic rim surrounded nanostructure has been formed on Si surface by 10 keV plasmon active Ni⁺ ion bombardments. The interface of the surface is modified by forming buried nickel silicide layer, which enhances the optical absorption of light. The potential application of the ionmodified Si surface will be discussed for photovoltaic application. The ripple pattern formation mechanism and growth on Si and mica surfaces will be discussed. The tailoring of hydrophobicity will also be discussed for N bombarded Si surfaces. The detailed chemical modification of multi-elemental mica surface will be deliberated. Another interesting thing is the concept of beam impurity with inert ion and its effect on Si pattern formation, which will be presented.
