

Internal Seminar

Developing Nanomaterials for Versatile Applications: Bulk to Single Nanoparticle Approach

Padmanabh B Joshi

Temple University, Philadelphia

Materials at nanoscale are finding manifold applications in the various fields like sensing, plasmonics, therapeutics, to mention a few. Significant development has taken place regarding synthesis and exploring the novel applications of the various types of nanomaterials such as organic, inorganic and hybrid of both. In this talk, first bulk approach to develop nanomaterials for applications such as quantitative Surface Enhanced Raman Scattering (SERS) based detection and photodynamic therapy will be discussed. Second part of the talk will be focused on developing optical microscopy technique to study electrochemical reactions on a single nanoparticle/nanoflake of metal nanoparticles/2-D materials. As bulk approach provides average information over large number of particles, single nanoparticle approach is necessary to reveal how heterogeneity amongst nanoparticles affects their performance.

Tuesday, Oct 23rd 2018

2:30 PM (Tea/Coffee at 2:00 PM)

Seminar Hall, TIFR-H