

The 564th

MANA Seminar



Chemistry at Structured Interfaces

Chair: Dr. Takashi Nakanishi (MANA Group Leader)

Prof. Archita Patnaik

(Indian Institute of Technology Madras, India)

New approaches to synthesis and processing of materials at structured interfaces enabling higher functionality structures, pattern formation and devices have been our prime focus. Through ab-initio electronic structure calculation and molecular dynamics simulations, spectro-microscopy and nanoscale electrochemistry, our group's research has culminated in bringing out the basic understandings of molecular-scale rectifiers, nanoscale capacitors, and structure and dynamics in stimuli-responsive, optoelectronically active molecular aggregates with varied curvature. At a restricted dimension, quantifying 'molecular orientation' in anisotropic monolayers of functional amphiphiles with real time polarized spectroscopy has enabled understanding of directed electron transport in bio-mimetic lipid-amino acid composite membranes. Consequently, the dynamic role of water has been explained in the interfacial molecular recognition.

Venue: Auditorium, 1F, WPI-MANA Bldg., Namiki-site

Date: November 22nd, Tuesday Time: 15:00 – 16:00

Contact: International Center for Materials Nanoarchitectonics (MANA), mana-seminar@ml.nims.go.jp