

Indo-Japan mini-workshop
Frontiers in Molecular Spectroscopy: From Fundamentals to Applications in Chemistry and
Biology

October 30 – November 2 at room Z201, 202 of Graduate School of Science, Kobe University

October 30 (Tue)

18:00 – discussion with dinner for invited speakers (Takigawa Memorial Hall)

October 31 (Wed)

9:00-9:05 Keisuke Tominaga (Kobe University)

Opening remarks

9:05-9:45 Biman Bagchi (Indian Institute of Science)

“Coherence, excitation transfer and quantum transport in the presence of correlated dynamical disorder”

9:45-10:25 Shigehiko Hayashi (Kyoto University)

“Functional Molecular Dynamics of Photo-Receptor Proteins Revealed by a Hybrid Molecular Simulation Technique”

10:25-10:40 Coffee Break

10:40-11:20 Bidyut Sarkar (Riken)

“Observation of heterogeneous folding kinetics and distinct binding mechanisms of preQ₁ riboswitch using two-dimensional fluorescence lifetime correlation spectroscopy (2D FLCS)”

11:20-12:00 Satoshi Takahashi (Tohoku University)

"Single Molecule Fluorescence Tracking at 10- μ s Resolution: Application to Protein Folding and Functional Dynamics"

12:00-13:20 lunch

13:20-14:00 Keiichi Inoue (the University of Tokyo)

“Spectroscopic study on the functional mechanism of new microbial rhodopsin families”

14:00-14:40 Takashi Tachikawa (Kobe University)

“Single-molecule, single-particle study toward development of efficient photocatalysts”

14:40-14:55 Coffee Break

14:55-15:35 Kaoru Ohta (Kobe University)

“Charge carrier dynamics in diketopyrrolopyrrole-linked tetrabenzoporphyrin based bulk heterojunction thin films probed by time-resolved terahertz spectroscopy”

15:35-16:15 Hemanth Noothalapati (Shimane University)

“Raman microscopy: See the unseen in single cell biology”

16:15-16:30 Coffee Break

16:30-17:10 Satoshi Takeuchi (Riken)

“Ultrafast time-domain Raman study of bond strengthening in oligomers of Au(I) complex”

17:10-17:30 Mahroof Kalathingal (Graduate University for Advanced Studies)

“Theoretical Study on Polytheonamide B Channel”

17:30-18:10 Harumi Sato (Kobe University)

“Terahertz Spectroscopy on Polymers: Intermolecular Interaction and Higher-Order Structure”

18:30- discussion with dinner for invited speakers and chairs (Takigawa Memorial Hall)

November 1 (Thu)

9:30-10:10 Prabhat Verma (Osaka University)

“Nano-spectroscopy and nano-imaging through tip-enhanced Raman spectroscopy”

10:10-10:50 Masahiro Ehara (Institute for Molecular Science)

“Photophysical properties of functional molecules studied by correlated wavefunction theory”

10:50-11:05 Coffee Break

11:05-11:25 Yusuke Yoneda (Osaka University)

“Ultrafast energy transfer and electron transfer dynamics of hybrid photosynthetic antenna systems”

11:25-12:05 Shinaj Rajagopalan (NAIST)

"Photoinduced Excited State Processes in Carbonylpyrenes: A Comparison between Solution and Solid-State Properties"

12:05-13:20 lunch

13:20-14:00 Amalendu Chandra (Indian Institute of Technology, Kanpur)

"Terahertz and Infrared Spectra of Aqueous Solutions in Bulk and at Interfaces from Molecular Dynamics Simulations using Polarizable Models"

14:00-14:20 Izuru Karimata (Kobe University)

"In-situ observation of charge carrier and ion dynamics during halide exchange reaction on $\text{CH}_3\text{NH}_3\text{PbBr}_3$ crystal"

14:20-15:00 Shinji Saito (Institute for Molecular Science)

"Excitation energy transfer in photosynthetic protein FMO"

15:00-15:15 Coffee Break

15:15-15:55 Richard Buchner (Universitaet Regensburg, Germany)

"Hydration and ion-binding of small biologically active molecules - From osmolytes to neurotransmitters"

15:55-16:35 Hideaki Shirota (Chiba University)

"Low-frequency vibrations in liquids studied by fs-RIKES"

16:35-16:50 Coffee Break

16:50-17:30 Shinsuke Shigeto (Kwansei Gakuin University)

"How does nanoconfined water respond to external electric fields? An infrared electroabsorption spectroscopic study"

17:30-18:10 Naoki Yamamoto (Jichi Medical University)

"Broadband dielectric spectroscopy on proteins from sub-GHz to THz regions"

dinner on your own

November 2 (Fri)

10:00 – lab tour for invited speakers

11:30- lunch

12:30- excursion for invited speakers