3. Workshops & Meetings

**ISSP workshop** “*Origins of material functions elucidated by SPring-8 BL07LSU*”

**Date:** 2017/3/8 (Wed)

**Place:** Lecture Room (A632), 6th Floor, ISSP, the University of Tokyo

Synchrotron radiation laboratory has a Harima branch to maintain and develop a high-brilliance soft X-ray beamline BL07LSU at SPring-8. There we are performing time-resolved, spatial-resolved and energy-resolved soft X-ray spectroscopy to study electronic states and their dynamics of new materials. In this workshop, recent research activities at our beamline were reported and we discussed our new experimental techniques which will reveal the origins of material functions. The speakers talked about their recent results from each end station (time-resolved spectroscopy, 3D nano-ESCA, emission spectroscopy, and so on). There were two invited talks; one is about soft X-ray nanofocusing with ultraprecise mirrors, and the other is about nano-metric spin textures observed by coherent soft X-ray scattering. There were a lot of discussions for each talk, and we successfully started to obtain a clear vision about how we can elucidate the origins of material functions such as magnetism, chemical reaction, and biological systems. We also encouraged the young generation in this research field by awarding the best poster prizes to two graduate students.
Program

10:00 - Opening Address
Akio Kimura (Hiroshima University, VSX Users’ Organization)

10:05 - Guest Address
Ryotaro Tanaka (Japan Synchrotron Radiation Research Institute)

10:10 - Introduction
Takahisa Arima (The University of Tokyo)

10:20 - Observation of nontrivial magnetic structures and spin dynamics by using polarization switching
Yasuyuki Hirata (ISSP, the University of Tokyo)

10:50 - Understanding of biological functions by synchrotron radiation research
Shuya Fukai (The University of Tokyo)

11:20 - Soft X-ray Nanofocusing with Ultraprecise Mirror
Hidekazu Mimura (The University of Tokyo)

11:50 - Poster short presentation

12:10 - Lunch

13:00 - Poster session

14:30 - Operando nano-spectroscopy for energy efficient, power generation and energy storage devices
Masaharu Oshima (SRRO, the University of Tokyo)

15:00 - New Frontier of Catalysis Science Opened by Development and Synergy of Operando Soft X-ray Spectroscopies
Susumu Yamamoto (ISSP, the University of Tokyo)

15:30 - Nano-metric Spin Texture Observed via Coherent Soft X-ray Scattering
Yuichi Yamasaki (The University of Tokyo)

16:00 - Coffee Break

16:20 - Time-resolved Photoelectron spectroscopy on 2D electron systems for developing high-speed photonic and electronic devices
Hirokazu Fukidome (Tohoku University)

16:40 - Weak Ferromagnetism in α-Fe₂O₃ studied by MCD in SX-RIXS
Jun Miyawaki (ISSP, the University of Tokyo)

17:00 - Analysis of Structures and Electronic States by Microscopic High-resolution Two-Dimensional Photoelectron Spectroscopy
Munetaka Taguchi (Nara Institute of Science and Technology)

17:20 - Closing Address
Shik Shin (ISSP, the University of Tokyo)