

### 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  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> 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)