3. Workshops & Meetings

ISSP workshop:
Status of SPring-8 BL07LSU and strategies to genesis of the next-generation soft X-ray science

Date: 2018/3/13(Tues)

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

Program:

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

10:05- **Address** Masashi Takigawa (ISSP, The University of Tokyo)

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

10:20- **Observation of nontrivial magnetic structures and spin dynamics by using polarization switching** Hiroki Wadati (ISSP, The University of Tokyo)

10:40- **New Frontier of Catalysis Science Opened by Development and Synergy of *Operando* Soft X-ray Spectroscopies** Susumu Yamamoto (ISSP, The University of Tokyo)

11:00- ***Operando* nano-spectroscopy for energy efficient, power generation and energy storage devices** Masaharu Oshima (SRRO, The University of Tokyo)

11:20- **International Perspectives on Soft X-ray Spectroscopy**
Nobuhiro Kosugi (Institute for Molecular Science)

12:00- **lunch**

13:00- **Poster short presentation**
Poster session

14:30- **Charge Excitations in Hole-Doped Copper Oxide Superconductors**
Kenji Ishii (National Institutes for Quantum and Radiological Science and Technology)

14:45- **Electronic Structure Analyses of Oxygen-Redox Battery Electrodes Using High-Resolution Soft X-Ray Spectroscopy** Masashi Okubo (School of Engineering, The University of Tokyo)

15:00- **Analysis of Structures and Electronic States of Active-site by Microscopic High-resolution Two-Dimensional Photoelectron Spectroscopy**
Munetaka Taguchi (Nara Institute of Science and Technology)

15:15- **An approach to Carrier Dynamics Studies by Time-Resolved X-ray Spectroscopy**
Kenichi Ozawa (Department of Chemistry, Tokyo Institute of Technology)

15:30- **Time-resolved x-ray spectroscopy using x-ray free electron lasers at SACLA**
Tetsuo Katayama (Japan Synchrotron Radiation Research Institute)

16:10- **Coffee Break**

16:30- **Discussion on the next projects**

17:30- **Closing Address** Shik Shin (ISSP, The University of Tokyo)

Synchrotron radiation laboratory at the Harima branch develops the frontier science at high-brilliance soft X-ray beamline BL07LSU at SPring-8 and makes the experimental innovations with domestic and foreign users. We have performed time-resolved, spatial-resolved and energy-resolved soft X-ray spectroscopy to study electronic states and their dynamics of new materials. Recently, we have also carried out *operando* experiments to examine functional materials under the working conditions. This year, we celebrate 10 years since construction of the beamline, reaching a milestone to consider the next project. On the other hand, new light sources, such as XFEL or a diffraction limited storage ring, are recently encouraged to be designed and to be constructed over the world. In Japan, we have plans of Slit-J and SPring-8-II. Since science and techniques, developed at BL07LSU, are closely related to experiments expected to be held at such new generation synchrotron radiation sources, it is also high time to consider the next soft X-ray science. Thus, we organized this ISSP workshop to present our recent achievements and to discuss the strategies with participants.

We had two invited talks by two outstanding researchers. Prof. Kosugi prospected the future of synchrotron radiation researches and Dr. Katayama presented his recent results at SACLA. Speakers talked about their recent results from each end station (time-resolved spectroscopy, 3D nano-ESCA, emission spectroscopy, ambient pressure XPS and so on). During the discussion time, we shared information on the frontier researches of synchrotron radiation in various fields, physics, chemistry, and biology. Eventually, we were able to make the clear vision for the next-generation soft X-ray science at BL07LSU and at new storage rings. We also encouraged a young researcher by awarding the best poster prizes.