

## 4. Workshops & Meetings

*ISSP workshop “New Scientific Opportunities in Solid State Spectroscopy at SPring-8 BL07LSU”*

**Date:** March 8, 2011

**Place:** Meeting Room-1 (A636), 6th Floor, ISSP

The construction of the new undulator beamline at the SPring-8, BL07LSU, was finished two years ago and since then, the high brilliance synchrotron light within the energy range from 250 eV and 2 keV is applied for the advanced solid state spectroscopy. The aim of the workshop is to discuss the recent results obtained at this beamline under the research proposals by construction teams and general users. After a brief report on the present status of the polarization controlled undulator and the characteristics of the beamline, the new scientific achievements of three main topics of the research program were presented. It was reported that main apparatuses, three-dimensional (3D) nano-ESCA, soft X-ray emission spectroscopy (XES) and time-resolved photoemission apparatuses, achieved high performances as they initially expected: (3D) nano-ESCA shows the spatial resolution below 70 nm, XES spectra with energy resolution larger than 10,000 was obtained and time- and momentum-resolved photoemission spectra were measured synchronized with femto-second laser pulses. The results of soft X-ray diffraction experiments to investigate characteristics of hidden surfaces and interfaces and photoelectron diffraction experiments were also presented in the workshop. In the workshop, more than 40 participants including many young scientists intensively discussed on the new scientific opportunities and future research works not only at BL07LSU, but other undulator beamlines at SR facilities such as UVSOR, KEK-PF and HiSOR.

### **Program**

#### **March 8**

10:00- **Opening Address**

Shik Shin (ISSP, the University of Tokyo)

10:05- **A New Undulator for Polarization Control at SPring-8 BL07LSU:**

**Present Status**

Susumu Yamamoto (ISSP, the University of Tokyo SRRO, the University of Tokyo)

10:20- **Present status of BL07LSU beamline monochromator**

Yasunori Senba (SPring-8)

- 10:40- **Polarization Measurement at BL07LSU**  
Masami Fujisawa (ISSP, the University of Tokyo SRRO, the University of Tokyo)
- 10:55- **Status of time-resolved soft X-ray spectroscopy station at BL07LSU and the recent achievement**  
Iwao Matsuda (ISSP, the University of Tokyo SRRO, the University of Tokyo)
- 11:25- **Present Status and Future Prospects of 3D nano-ESCA**  
Koji Horiba (Department of Applied Chemistry, the University of Tokyo SRRO)
- 11:55- **Performance and application of an ultrahigh resolution soft X-ray emission spectrometer**  
Yoshihisa Harada (Department of Applied Chemistry, the University of Tokyo SRRO)
- 12:25- **lunch**
- 13:30- **Development and prospect of two-dimensional display-type spectrometer for photoelectron diffraction spectro-microscopy**  
Fumihiko Matsui (Naist)  
Kanta Ono (KEK)
- 13:50- **Coherent soft X-ray imaging**
- 14:10- **The present condition and the future view of a x-ray emission experiment at BL2C in Photon Factory**  
Yasuhisa Tezuka (Hirosaki University)
- 14:30- **In-situ Photoemission Studies on Oxide Heterostructures**  
Hiroshi Kumigashira  
(Department of Applied Chemistry, the University of Tokyo SRRO)
- 15:00- **Present Status of Fast Polarization Switching Beamline PF-BL-16A**  
Kenta Amemiya (KEK)
- 15:30- **Coffee Break**
- 15:50- **Angle-resolved photoemission study of high-Tc superconductors: Results from PF BL-28A**  
Teppey Yoshida(Graduate School of Science, the University of Tokyo)
- 16:20- **Spin resolved ARPES of topological materials**  
Akio Kimura (Hiroshima University)
- 16:50- **High-resolution ARPES study of solids: present status and future plan of HiSOR**  
Kenya Shimada (Hiroshima University)
- 17:20- **Present Status of Low-Energy Undulator Beamlines at UVSOR**  
Masaharu Matsunami (UVSOR)
- 17:50- **Closing address**  
Masaharu Oshima (Department of Applied Chemistry, the University of Tokyo SRRO)



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