

. Workshops & Meetings

ISSP workshop “Research outputs and future prospects at the outstation beamline of the University of Tokyo (SPring-8 BL07LSU)”

Date: February 17, 2012

Place: Room429, bldg14, Faculty of Engineering, the University of Tokyo

The soft X-ray beamline, SPring-8 BL07LSU, generates high-brilliant photon beams of $h\nu=250\sim 2000$ eV and it is designed for the advanced solid state spectroscopy. The beamline and the end-stations have recently shown high performances in optics and instruments that were beyond expectations in the original plan. New interesting results have been obtained from the four beamline endstations, the three-dimensional (3D) nano-ESCA, the soft X-ray emission spectroscopy (XES), the time-resolved photoemission spectroscopy (TR-PES), and the free-port. The aim of the workshop is to present the recent outputs, obtained at the beamline under the research proposals by construction teams and general users, and to discuss them with participants.

After a brief report on the present status of the beamline, results from the TR-PES, free-port, 3D nano-ESCA, and XES stations were presented. The new long-term proposals (S2 proposals), accepted for beamtime from October in 2012, were announced and the main proposers have explained details of their experiments. From the coming their beamtime, *in situ* observation of operations in devices and catalysts for modern technology will mainly be carried out at the 3D nano-ESCA, XES, and TR-PES stations. At the workshop, 44 researchers, including many young scientists and students, gathered. The participants were excited with the presentations and made constructive discussion for new science from the beamline.

Program

10:00- Introduction

Masaharu Oshima (Department of Applied Chemistry, the University of Tokyo, SRRO)

10:05- Guests' address

Katushiko Hara (Ministry of Education, Culture, Sports, Science and
Technology)

Hideo Ohno (JASRI)

10:15- BL07LSU Beamline at SPring8 and its cooperative use.

Akito Kakizaki (ISSP, the University of Tokyo)

10:30- Present status of undulator and beamline at SPring-8 BL07LSU

Susumu Yamamoto (ISSP, the University of Tokyo)

10:50- Time-resolved photoemission experiments at SPring-8 BL07LSU

Iwao Matsuda (ISSP, the University of Tokyo)

11:20- Carrier dynamics at semiconductor surfaces

Iwao Matsuda (ISSP, the University of Tokyo)

11:40- Development of high-energy-resolution wide-acceptance-angle 2D

photoelectron micro-analyzer (DELMA)

Hiroshi Daimon (Naist)

12:10- lunch

13:20- **Present status and research activity of 3D nano-ESCA station**

Kohji Horiba (Department of Applied Chemistry, the University of Tokyo SRRO)

13:50- **Depth profiling of MOS device structures studied by 3D-NanoESCA**

Satoshi Toyoda (Department of Applied Chemistry, the University of Tokyo SRRO)

14:10- **The present condition and the future view of a x-ray emission experiment at BL2C in Photon Factory**

Hirokazu Fukidome (Tohoku University)

14:30- ***Fabrication of Metal Nanosheets: Expectation for Nano-ESCA***

Katsutoshi Hukuda (Kyoto University)

15:50- **Coffee Break**

15:00- **In situ ultrahigh resolution soft X-ray emission spectroscopy**

Yoshihisa Harada (ISSP, the University of Tokyo)

15:30- **Spin resolved ARPES of topological materials**

Jun Yoshinobu (ISSP, the University of Tokyo)

15:50- **Orbital and spin excitations in iron pnictides revealed by Fe-L resonant inelastic x-ray scattering**

Ignace Jarrige (Japan Atomic Energy Agency)

16:10- **Preparation for soft X-ray emission spectroscopy on metal hydrides**

Daichiro Sekiba (Tsukuba University)

16:30- Projects of new S2 research program

17:30- **Closing address**

Masaharu Oshima (Department of Applied Chemistry, the University of Tokyo SRRO)