

Preface

The Synchrotron Radiation Laboratory (SRL) consists of solid state spectroscopy and accelerator groups. The SRL has been taking part in the Synchrotron Radiation Research Organization (SRRO) of the University of Tokyo since 2005 and operating a new beamline (BL07LSU) at the SPring-8 and experimental apparatuses in SX region. The beamline has a 27m-long polarization-controlled undulator and a monochromator covering the photon energy range from 250 eV to 2 keV, which was fully opened to users since 2009. The members of solid state spectroscopy group of SRL play an essential role to promote advanced materials sciences utilizing high brilliance SR from the new undulator, especially in the field of time resolved soft X-ray spectroscopy. In FY 2010, they have succeeded to measure time-resolved photoelectron spectroscopy of the surface photo-voltage in Si surface with the time-resolution of 30 ps by utilizing the time-structure of synchrotron radiation and an ultra-fast laser. The members of the accelerator group SRL have been working in collaboration with High Energy Accelerator Research Organization (KEK) to develop an energy recovering linac (ERL), a prototype of which is in construction at KEK as a new light source in VUV region.

The staff members of SRL also maintain three beamlines (BL18A, BL19A and 19B) in the Photon Factory (PF). After improving the quality of the monochromator at BL19A in 2009, the spin- and angle-resolved photoelectron spectroscopy at this beamline attracted much attention of many users. The beamlines at PF were damaged by the earthquake occurred on 11.03.2011. We had to dedicate to check and to overhaul the undulator, beamlines, monochromators and experimental apparatuses, which was almost finished till the end of May, 2011. At the moment, the characteristics of the beamlines and the quality every experimental apparatus are restored, and the beamlines are opened to users.

August 12, 2010

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