

UVSOR
ACTIVITY REPORT
2007

edited by
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Preface

This Activity Report covers the research activities carried out at the UVSOR facility in FY2007 (April 2007-March 2008). This is the fifth volume in the new series for the third decade of UVSOR, corresponding to the fifth year of the use of the low-emittance UVSOR-II storage ring. The UVSOR-II ring has been very stable in operation at the initial beam current of 350 mA for every 6-hour 0.75-GeV full-energy injection and the beam emittance of 27 nm-rad for these three years. We will start the top-up operation as a daily routine soon in FY2008.

The UVSOR facility is exclusively responsible for the high-brilliant VUV light source as a low-energy third generation ring of the three major SR facilities (SPring-8 and Photon Factory) which are supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT). There are four 4 m-long long straight sections and four 1.5 m-long short straight sections in the present UVSOR-II ring of 53 m in circumference. We already installed three long undulators at BL3U, BL5U and BL7U, all of which are internationally competitive beamlines. We are now constructing a new short-undulator beamline BL6U. After successful beamline commissioning of BL6U, in order to keep the total number of beamlines reasonable, we will shut down a dipole beamline BL8B1 covering the same photon energy range. The next plan may be to construct BL1U with a long straight section after change of the injection point.

In UVSOR, we have four research positions for accelerator physics (1 full prof., 1 assoc. prof., and 2 assist. profs.) and four research positions for photophysics and photochemistry (2 assoc. profs. and 2 assist. profs.). In the accelerator physics division, there have been two vacancies for 1 assoc. prof. and 1 assist. prof. In addition, Assist. Prof. Dr. Akira Mochihashi moved to the SPring-8 accelerator team in August 2007. Fortunately, in March 2008, Dr. Masahiro Adachi joined the accelerator division as a new assistant professor from JAEA.

It is our pleasure to report two awards regarding outstanding achievements carried out in UVSOR (see this back page). In December 2007, Assist. Prof. Dr. Yasumasa Hikosaka of UVSOR was awarded The Young Scientist Award of the Physical Society of Japan for his multiple photoionization study of atoms and molecules. In April 2008, Prof. Dr. Takao Nanba of Kobe University and Assoc. Prof. Dr. Shin-ichi Kimura of UVSOR were awarded The Prize for Science and Technology, by Minister of MEXT Mr. Kisaburo Tokai, for their pioneering development of the highly brilliant infrared synchrotron radiation including realization of the world's first infrared beamline at UVSOR and its application to materials science.

We look forward to more exciting achievements in the coming years of UVSOR-II.

April, 2008

Nobuhiro Kosugi
Director of UVSOR