



Preface

This Activity Report covers scientific and technological activities carried out at the UVSOR-III Synchrotron Facility in FY2015 (April 2015-March 2016). This is the third volume in the blue series for the fourth decade of UVSOR Synchrotron, corresponding to the third year after the success of the second major upgrade project UVSOR-III in 2012. The UVSOR-III Synchrotron is a diffraction limit light source in the VUV region and is one of the most advanced low energy synchrotron radiation (SR) facilities in the world.

The UVSOR-III Synchrotron has a small electron storage ring of approximately 50 m-circumference with only 6 undulator beamlines (3 VUV and 3 in-vacuum soft X-ray undulators) and 8 dipole beamlines. The UVSOR Synchrotron belongs to the Institute for Molecular Science (IMS), one of the inter-university research institutes supported by MEXT (the Ministry of Education, Culture, Sports, Science and Technology in Japan), and has been leading chemical applications of SR-based VUV and soft X-rays since 1983, the beginning of UVSOR-I. Molecular science is growing up as an interdisciplinary science covering not only chemical and physical



sciences but also biosciences, and is now one of the most important targets of the low energy SR.

The total number of users is about 1,200 people · week; this means ca. 100 people/beamline/year and ca. 30 people/week. Most users stay for one or two weeks for the experiment. To support them at the high level of science and technology, staff members are always essential. Fortunately, in Accelerator Physics Division, two new staff scientists joined: Assistant Professor Dr. Masaki Fujimoto from Osaka University in April 2016 and Dr. Najmeh Sadat Mirian from the Institute for Research in Fundamental Sciences, Tehran, in July 2015. In addition, two new staff engineers joined in April 2016: Mr. Takayuki Yano from the Equipment Development Center of IMS and Mr. Yuichi Inagaki. They will work for the development of precise handling devices of various types of samples and the operation and upgrade of soft X-ray microscopies.

I hope many users will perform excellent work by fully utilizing UVSOR-III Synchrotron as a unique international hub for the SR research in advanced molecular science.

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