



Preface

This Activity Report covers scientific and technological activities carried out using the UVSOR-III Synchrotron in FY2016 (April 2016-March 2017). This is the fourth volume in the blue series for the fourth decade of the UVSOR Synchrotron Facility. We are proud of our successful progress in the fourth year after the second major upgrade project UVSOR-III in 2012.

The UVSOR Synchrotron Facility belongs to the Institute for Molecular Science (IMS), one of the inter-university research institutes fully supported by MEXT (the Ministry of Education, Culture, Sports, Science and Technology in Japan), and has been leading chemical applications of synchrotron radiation (SR)-based VUV and soft X-rays since 1983, the very beginning of the second generation SR facilities in Japan. Molecular science is growing up as an interdisciplinary science combined with meso- and nano-scale spectroscopic approaches covering not only chemical and physical sciences but also biosciences, and is one of the most important targets of the low emittance synchrotron radiation.



The present UVSOR-III Synchrotron is one of the most advanced low energy SR facilities of the third generation in the world and is now one of the critical resources in doing molecular science. The UVSOR-III Synchrotron has a small electron storage ring but has powerful 6 undulator beamlines (3 VUV and 3 in-vacuum soft X-ray undulators) with 8 dipole beamlines. We never stop improving and upgrading our micro- and nano-scale photoabsorption and photoemission approaches and in situ/operando measurements in the VUV and soft X-ray regions, based on our strategic international collaboration program in molecular science.

We are grateful to all the people who use our facility and support our efforts. In late November 2016, we encountered a serious water leak inside the storage ring, but we could restart steady-state top-up operation for users just after New Year. To continue high-level achievements in science and technology at the UVSOR-III Synchrotron, we in-house staff are always working hard to maintain and improve our high-performance accelerators and beamlines.

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

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Director of the UVSOR-III Synchrotron