



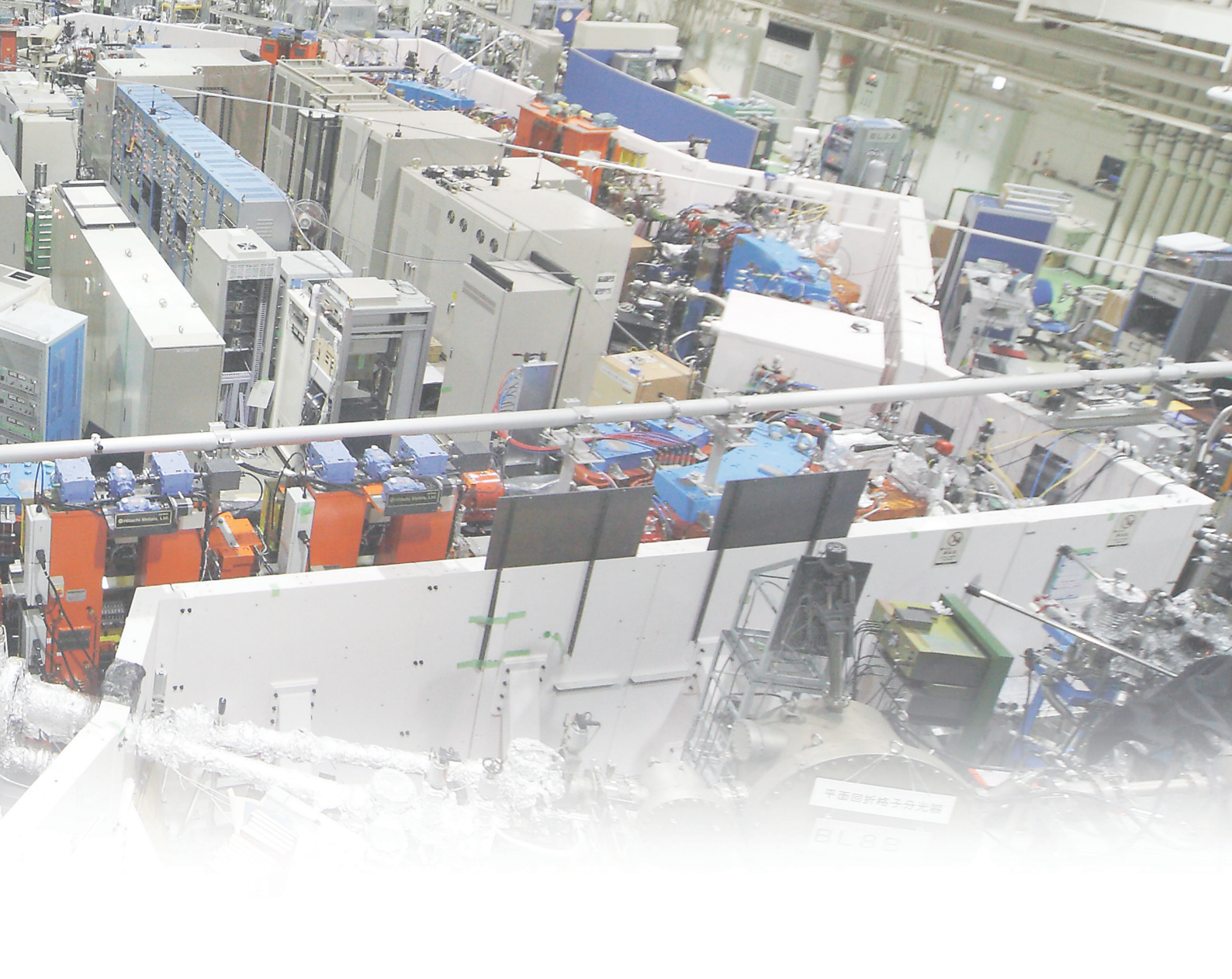
## Preface

This Activity Report covers scientific and technological activities carried out using the UVSOR-III Synchrotron in FY2017 (April 2017-March 2018). We present examples of how the users study at the UVSOR Synchrotron Facility.

The present UVSOR-III Synchrotron is one of the most advanced low-energy SR facilities of the 3<sup>rd</sup> generation SR 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.

The total number of users is about 1,200 people/year; this means ca. 100 people/beamline/year and ca. 30 people/week. Most users stay for one or two weeks for the experiment. 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. The FY2018





would be a challenging year for the UVSOR staff, because many active members moved including the previous director of Prof. Kosugi who had conducted the UVSOR Synchrotron Facility with great efforts for a long time.

We created a new position title, Senior Researcher, who is working for beamline science, aiming at the development and upgrade of new methods using highly brilliant SR, according to the international direction of electronic structure analysis and is also planning future developments ranging for 10-20 years in the UVSOR Synchrotron Facility. Dr. Fumihiko Matsui from NAIST joined with this position.

After the two-major upgrade from UVSOR-I to UVSOR-III Synchrotron, now we aim continuously for serving the high-quality light sources and for developing the stability in use. On the experimental side, technology development will not stop, hence we will make a progress on the imaging-related techniques to encourage the advanced molecular science. The advanced SR-related instruments will offer opportunities to reveal the nature of properties and functions of them.

We look forward to receiving your feedback and suggestions on the continuing evolution of the UVSOR Synchrotron Facility. And 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.

April 2018

Satoshi Kera

Director of the UVSOR Synchrotron Facility