

3. Workshops & Meetings

ISSP workshop: *Innovations to the Next-Generation Synchrotron Radiation*

Date: 2020/2/14(Fri)

Place: Lecture Room (A632), 6th Floor, ISSP, The University of Tokyo

Program:

10:30- **Address**

Hatsumi Mori (ISSP, The University of Tokyo)

10:35- **Conceptual design of public beamlines at the next generation synchrotron facility**

Takahasi Masamitu (National Institutes for Quantum and Radiological Science and Technology)

11:05- **Overview of the partner beamlines design in the next generation synchrotron radiation facility**

Tetsuya Nakamura (Tohoku University, PhoSIC)

11:35- **Poster short presentation**

12:00- **lunch**

13:00- **Poster session**

14:15- **AI-Robot-driven inorganic materials research**

Ryota Shimizu (Tokyo Institute of Technology, JST-PRESTO)

14:45- **Expanding Availability of Spectromicroscopy by Informatics**

Naoka Nagamura (National Institute for Materials Science, JST-PRESTO)

15:15- **Soft X-ray Focusing using Ellipsoidal mirrors**

Hiroto Motoyama (Center for Ultrafast Intense Laser Science, School of Science, The University of Tokyo)

15:45- **Coffee Break**

16:00- **Operando spectroscopic studies of heterogeneous catalysts by soft X-ray ambient-pressure XPS**

Takanori Koitaya (Institute for Molecular Science, JST-PRESTO)

16:30- **Challenges towards Ultrahigh Resolution Resonant Inelastic Soft X-ray Scattering**

Jun Miyawaki (ISSP, The University of Tokyo)

17:00- **High-Brilliance Soft-X-Ray Beamline for Magnetic and Spintronic Materials Science**

Tetsuro Ueno (National Institutes for Quantum and Radiological Science and Technology)

17:30- **Closing Address**

Takahisa Arima (SRRO, The University of Tokyo)

A plan for the next-generation synchrotron radiation facility was launched in Japan and the user-experiments are expected from 2023. Ten beamlines are planned by the Photon Science Innovation Center (PhoSIC) and the National Institutes for Quantum and Radiological Science and Technology (QST). There have been vigorous discussions on experimental methods for the individual beamlines that are expected to innovate our science and technology, including novel X-ray optics, advanced measurements, informatics analyses and automatic controls by AI robots.

To promote our project toward the new synchrotron radiation facility, we organized this workshop at the ISSP lecture room with broadcast live at SPring-8. It has successfully brought together 91 participants with fruitful discussion on these new technologies and foresights of the coming science. The program started with invite talks by Dr. Tetsuya Nakamura (PhoSIC) and Dr. Masamitsu Takahashi (QST), introducing their beamlines. In the following, there were invited talks by leading young researchers who made presentations on technical innovations for synchrotron radiation. We had a poster session by graduate students and postdocs who shared their new results and actively discussed with each other. Participants were confident to find that our next-generation synchrotron radiation facility would be developed by our next generations.

