## Upshift in the Soft X-ray Science of Synchrotron Radiation

Date: 2018/11/30 (Fri.), 2018/12/01 (Sat.) Place: Lecture Room (A632), 6<sup>th</sup> Floor, ISSP, the University of Tokyo

## Program

20	18/	11/	30

13:00	<b>Opening Address</b>	Hatsumi Mori (ISSP, the University of Tokyo)		
	Guest Address	Atsushi Oku (MEXT)		
	Guest Address	Wataru Utsumi (QST)		
	Guest Address	Tadahiro Hayasaka (Tohoku University)		
13:15	To Map the Next Generation S	SR Facility in the Academic Community in IMRAM,		
	Tohoku Univ.			
	Atsushi Muramatsu (Institute	of Multidisciplinary Research for Advanced		
	Materials, Tohoku University)			
13:45	A Role of Next Generation Synchrotron Radiation Facility to Build a New Range of			
	Innovation			
	Masaki Takata (PhoSIC / Inst	itute of Multidisciplinary Research for Advanced		
	Materials, Tohoku University)	1		
14:15	Activities of the University of	Tokyo for the next-generation synchrotron radiation		
	facility			
	Taka-hisa Arima (Department	of Advanced Materials Science, University of Tokyo)		
14:45	Future of coherent diffractive	imaging pioneered by the next-generation synchrotron		
	radiation source			
	Yukio Takahashi (Graduate S	chool of Engineering, Osaka University)		
15:15	Photo & Coffee break			
15:30	Facilitating protein microcrys	tallography by automated data processing		
	KeitaroYamashita (The Unive	rsity of Tokyo / RIKEN SPring-8 Center)		
16:00	Expectation for Next Generati	on Synchrotron Radiation Facilities:		
	From the Viewpoint of Physical Chemistry and Surface Science			
	Jun Yoshinobu (The Institute	for Solid State Physics, The University of Tokyo)		
16:30	The potential of next generation	on light sources to promote the soft X-ray science		
	Yusuke Tamenori (Japan Syno	chrotron Radiation Research Institute (JASRI) /		
	Tohoku University)			
17:00	Contributing advanced techno	logy through precision manufacturing		
	Yuko Akabane (TDC Corporat	ion)		

## 18:00 **Banquet**

## <u>2018/12/01</u>

9:30	Transfers of the Techniques from SPring-8 BL07LSU			
	Iwao Matsuda (The institute for Solid State Physics, the University of Tokyo)			
10:00	Current status of development of micro- and nano- focusing mirrors for soft x-rays			
	Hidekazu Mimura (Graduate school of engineering, The University of Tokyo)			
10:30	A two-color BL brings new colors of a SR facility			
	Hitoshi Abe (Institute of Materials Structure Science, High Energy Accelerator			
	Research Organization / Dept. of Materials Structure Science, Sch. of High Energy			
	Accelerator Science, SOKENDAI)			
11:00	Development of soft x-ray polarization switching for studying spin dynamics			
	Hiroki Wadati (Institute for Solid State Physics, University of Tokyo)			
11:30	Lunch			
13:00	Combining Nano-focus, Operando, Machine Learning, Enough for further progress?			
	Hirokazu Fukidome (Research Institute of Electrical Communication,			
	Tohoku University)			
13:30	Catalysis science by <i>operando</i> soft X-ray spectroscopy:			
	Present status and future prospect at next generation synchrotron radiation facility			
	Susumu Yamamoto (The Institute for Solid State Physics, The University of Tokyo)			
14:00	Solid state physics and its future development with nano-spin ARPES			
	Takeshi Kondo (ISSP, The University of Tokyo)			
14:30	Poster Session			
15:00	Coffee Break			
15:30	Crystal structure prediction by data assimilation			
	Synge Todo (Department of Physics, University of Tokyo / Institute for Solid State			
	Physics, University of Tokyo / MaDIS, National Institute for Materials Science)			
16:00	Recent status and future of a scanning transmission X-ray microscope in			
	UVSOR-III)			
	Takuji Ohigashi (UVSOR Synchrotron Facility, Institute for Molecular Science /			
	Sokendai)			
16:30	Development for high-speed magnetic imaging by fusion of coherent soft X-ray and			
	information technology)			
	Yuichi Yamasaki (NIMS-MaDIS, JST-PRESTO, RIKEN-CEMS)			
17:00	Strategy for resonant inelastic soft X-ray scattering using next-generation			
	synchrotron radiation)			
	Yoshihisa Harada (Institute for Solid State Physics, University of Tokyo)			

17:30 Closing Address

Nobuhiro Kosugi (JSSRR)

The conference was organized on November 30 and December 1 to promote scientific and technological innovations of soft X-ray synchrotron radiation, motivated by the announcement on the next-generation facility by the Minister of Education, Culture, Sports, Science and Technology on July 3, 2018. It has successfully brought together more than 200 participants, including the presidents and the outstanding researchers of synchrotron radiation institutes and societies from all over Japan. The presentations at the ISSP lecture room were broadcast live to a conference room in SPring-8 through the internet. On the first day, the program focused on science and technology to be evolved at the new facility, while, on the second day, it featured experimental methods and information technologies to be developed toward researches with the light source.

With the next-generation soft X-ray synchrotron radiation, measurements are expected to be made with multi-dimensional data acquisitions or with ultra-high resolutions that have never been possible at the existing facilities. The attendance interdisciplinarily argued research topics to respond to needs in academic and industrial fields today. There was also vigorous discussion on the cutting-edge informatics to be applied in the data analysis. We were confident that the workshop was very timely and that all the arguments would become seeds of the novel science and technology.

The conference was hosted by the Institute for Solid State Physics (the University of Tokyo), Synchrotron Radiation Research Organization (the University of Tokyo), Tohoku University, and User Community of VUV·SX high-brilliant light sources.

(I. Matsuda, T. Arima, Y. Harada, H. Wadati, T. Kondo, S. Shin)

