

**International Conference on X-ray Optics,  
Detectors, Sources, and their Applications  
2016**

**XOPT2016**

**Wednesday, May 18**

**9:00-12:10 OPIC Plenary Session** Room 501+502

---- Lunch (12:10-13:30) ----

**13:30-15:30 ALPS, HEDS & XOPT Joint Session I**

Room 302

**Chairs: M. Yabashi**, SPring-8/SACLA, Japan

**T. Hosokai**, Osaka University, Japan

**XOPTj-1 (Invited) X-rays as a Subject for Optics Research**  
13:30

T. Ishikawa  
RIKEN SPring-8 Center, Japan

**XOPTj-2 (Invited) LCLS-II: A High Repetition Rate X-ray Laser Facility**  
14:00

D. M. Fritz  
SLAC National Accelerator Laboratory, USA

**HEDSj-1 (Invited) Exploration of New fields of High Energy Density Science**  
14:30

R. Kodama  
Osaka University, Japan

**ALPSj-1 (Invited) HiLASE100: a cryo-cooled 100 J, 10 Hz DPSSL System**  
15:00

A. Lucianetti  
HiLASE Centre, Institute of Physics CAS, Czech Republic

---- Break (15:30-15:45) ----

**15:45-16:45 ALPS, HEDS & XOPT Joint Session II**

Room 302

**Chair: J. Itatani**, Univ. Tokyo, Japan

**ALPSj-2 (Invited) Current status of PW laser at CoReLS and applications**  
15:45

S. K. Lee  
GIST, Korea

**HEDSj-2 (Invited) High-energy Density Science and plasma physics at ELI Beamlines**  
16:15

G. Korn  
Director of ELI Beamlines, Czech Republic

---- Break / Move (16:45-18:00) ----

**18:00-20:00 OPIC Reception** Room 501+502

**Thursday, May 19**

**8:55-9:00 Opening** Room 313+314

**XOPT Opening Remarks**

**8:55** Kazuto Yamauchi  
Osaka University, Japan

**9:00-9:30 XOPT1: X-ray source** Room 313+314

**Chair: M. Yabashi**, SPring-8/SACLA, Japan

**XOPT1-1 (Invited) Frontline and future perspectives in X-ray light source development**  
9:00

H. Tanaka  
RIKEN SPring-8 Center, Japan

**9:30-12:00 XOPT2: X-ray optics for advanced light sources**

Room 313+314

**Chair: M. Yabashi**, SPring-8/SACLA, Japan

**XOPT2-1 (Invited) Nanofocusing mirror optics developments for the ESRF ID-16 beamlines**  
9:30

R. Barrett  
ESRF, France

**XOPT2-2 (Invited) X-ray mirrors at the European XFEL**  
10:00

H. Sinn  
European XFEL, Germany

---- Break (10:30-11:00) ----

**Chair: H. Sinn**, European XFEL, Germany

**XOPT2-3 (Invited) Status and Development of hard X-ray optics and diagnostics at the Linac Coherent Light Source**  
11:00

A. Robert  
SLAC National Accelerator Laboratory, USA

**XOPT2-4 (Invited) Optics for XFEL at SACLA**  
11:30

K. Tono  
SPring-8/SACLA, Japan

---- Lunch Break (12:00-13:00) ----

**13:00-15:00 XOPT3: X-ray microscopy & imaging**

Room 313+314

**Chair: H. Mimura**, The University of Tokyo, Japan

**XOPT3-1 (Invited) Ptychography for x-ray nano-optics characterization at synchrotron radiation sources and x-ray free-electron lasers**  
13:00

C. G. Schroer<sup>1,2</sup>  
<sup>1</sup>Deutsches Elektronen-Synchrotron DESY, Germany, <sup>2</sup>Universität Hamburg, Germany

**XOPT3-2 (Invited) Recent Developments in X-ray Phase Imaging**  
13:30

A. Momose<sup>1,2,3</sup>  
<sup>1</sup>Tohoku University, Japan, <sup>2</sup>ERATO, JST, Japan, <sup>3</sup>JASRI/SPring-8, Japan

**XOPT3-3 Achromatic and high-resolution full-field X-ray microscopy based on four total-reflection mirrors**  
14:00

S. Matsuyama<sup>1</sup>, S. Yasuda<sup>1</sup>, H. Okada<sup>2</sup>, Y. Kohmura<sup>3</sup>, Y. Sano<sup>1</sup>, M. Yabashi<sup>3</sup>, T. Ishikawa<sup>3</sup>, and K. Yamauchi<sup>1</sup>

<sup>1</sup>Osaka University, Japan, <sup>2</sup>JTEC Corporation, Japan, <sup>3</sup>RIKEN SPring-8 Center, Japan

**XOPT3-4 Development of a compact x-ray imaging optical system using two pairs of concave and convex mirrors**  
14:15

J. Yamada, S. Matsuyama and K. Yamauchi  
Osaka University, Japan

**XOPT3-5 Grating-Based Ultra-Small-Angle X-ray Scattering Imaging and its Application to Grazing-Incidence Case**  
14:30

W. Yashiro<sup>1,2</sup> and A. Momose<sup>1,2</sup>

<sup>1</sup>Tohoku University, Japan, <sup>2</sup>ERATO, JST, Japan

**XOPT3-6 X-ray Laser Diffraction Imaging of Samples in Solution Using Micro-Liquid Enclosure Array**  
14:45

T. Kimura<sup>1</sup>, Y. Joti<sup>2</sup>, Y. Bessho<sup>3</sup>, and Y. Nishino<sup>1</sup>  
<sup>1</sup>Hokkaido University, Japan, <sup>2</sup>JASRI, Japan, <sup>3</sup>Academia Sinica, Taiwan

----- Break (15:00-15:30) -----

**15:30-16:45 XOPT4:**

**X-ray optics (I): refractive optics & applications**

Room 313+314

**Chair: H. Yumoto, JASRI/SPring-8, Japan**

**XOPT4-1 (Invited) 20 years of X-ray refractive optics. New promising perspectives for diffraction limited X-ray sources.**

A. Snigirev

Immanuel Kant Baltic Federal University, Russia

**XOPT4-2 Diamond refractive lenses as the breakthrough optic tool for high heat flux X-ray beams**

**16:00**  
M.V. Polikarpov<sup>1</sup>, S.A. Terentiev<sup>2</sup>, S.N. Polyakov<sup>2</sup>, S.I. Zholudev<sup>2</sup>, V.A. Yunkin<sup>3</sup>, I.Snigireva<sup>4</sup>, Y. Shvyd'ko<sup>5</sup>, V.D. Blank<sup>2</sup>, and A. Snigirev<sup>1</sup>

<sup>1</sup>Immanuel Kant Baltic Federal University, Russia, <sup>2</sup>FSBI TISNCM, Russia, <sup>3</sup>Institute of Microelectronics Technology RAS, Russia, <sup>4</sup>ESRF, France, <sup>5</sup>Advanced Photon Source, Argonne National Laboratory, USA

**XOPT4-3 Coherent hard X-ray microscopy for the characterization of mesoscopic materials**

**16:15**  
I. Snigireva<sup>1</sup>, A. Snigirev<sup>2</sup>  
<sup>1</sup>ESRF, France, <sup>2</sup>Immanuel Kant Baltic Federal University, Russian Federation

**XOPT4-4 Design of quasicrystal structure for X-ray focusing**

**16:30**  
T. Hoshino<sup>1</sup>, T. Fukamizu<sup>1</sup>, W. Li<sup>1</sup>, J. Sugisaka<sup>2</sup>, N. Watanabe<sup>1</sup>, S. Aoki<sup>1</sup>, M. Itoh<sup>1</sup>  
<sup>1</sup>University of Tsukuba, Japan, <sup>2</sup>Kitami Institute of Technology, Japan

**16:45-17:30 XOPT5: X-ray detectors** Room 313+314

**Chair: H. Yumoto, JASRI/SPring-8, Japan**

**XOPT5-1 (Invited) Requisites of X-ray Imaging Detectors for X-ray Free-electron lasers and future Synchrotron Radiation Sources**

T. Hatsui

RIKEN SPring-8 Center, Japan

**XOPT5-2 Development of gallium nitride devices for X-ray detection**

**17:15**  
Q. Xu<sup>1</sup>, W. Chuirazzi<sup>1</sup>, P. Mulligan<sup>1</sup>, J. Wang<sup>1,2</sup>, and L. Cao<sup>1</sup>

<sup>1</sup>The Ohio State University, USA, <sup>2</sup>Stanford University, USA

----- Break / Move (17:30-18:30) -----

**18:30-20:30 XOPT Banquet** TBD (outside of conference center)

**Friday, May 20**

**9:00-10:30 XOPT6:**

**X-ray optics (II): reflective optics & applications**

Room 313+314

**Chair: R. Barrett, ESRF, France**

**XOPT6-1 (Invited) Progress of mirror-based optical system for X-ray nanofocusing and imaging**

**9:00**  
K. Yamauchi  
Osaka University, Japan

**XOPT6-2 3D surface measurement of spherical mirror by nanop profiler using normal vector tracing method**

H. Shiraji<sup>1</sup>, Y. Tokuta<sup>2</sup>, T. Kitayama<sup>1</sup>, M. Nakano<sup>2</sup>, R. Kudo<sup>1</sup>, K. Yamamura<sup>1</sup>, K. Endo<sup>1</sup>

<sup>1</sup>Osaka University Research Center for Ultra-Precision Science and Technology, Japan, <sup>2</sup>Graduate School of Osaka University, Japan

**XOPT6-3 Current status of the development of two-staged focusing system for soft x-ray lasers**

H. Motoyama<sup>1</sup>, T. Sato<sup>1</sup>, A. Iwasaki<sup>1</sup>, Y. Takeo<sup>1</sup>, Y. Senba<sup>2</sup>, H. Ohashi<sup>2</sup>, K. Yamanouchi<sup>1</sup> and H. Mimura<sup>1</sup>

<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>JASRI/SPring-8, Japan

**XOPT6-4 (Invited) Ellipsoidal mirror for two-dimensional nanofocusing in the hard x-ray region**

H. Yumoto  
JASRI/SPring-8, Japan

----- Break (10:30-11:00) -----

**11:00-12:00 XOPT7:**

**X-ray optics (III): optics for various spectroscopic methods**

Room 313+314

**Chair: A. Robert, SLAC National Accelerator Laboratory, USA**

**XOPT7-1 Wavelength-tunable hard X-ray split-and-delay optics at SACLA**

**11:00**  
T. Osaka<sup>1</sup>, T. Hirano<sup>1</sup>, Y. Sano<sup>1</sup>, Y. Inubushi<sup>2</sup>, S. Matsuyama<sup>1</sup>, K. Tono<sup>2</sup>, T. Ishikawa<sup>3</sup>, K. Yamauchi<sup>1</sup> and M. Yabashi<sup>3</sup>

<sup>1</sup>Osaka University, Japan, <sup>2</sup>JASRI, Japan, <sup>3</sup>RIKEN SPring-8 Center, Japan

**XOPT7-2 Progress on the High Resolution hard X-ray single shot spectrometer (HIREX spectrometer) for the European XFEL photon diagnostics**

N. G Kujala, W. Freund, and J. Grünert  
European XFEL, Germany

**XOPT7-3 A Medium-resolution, non-resonant, IXS Spectrometer at BL43LXU of SPring-8**

**11:30**  
D. Ishikawa<sup>2,1</sup> H. Uchiyama<sup>2,1</sup> and A.Q.R Baron<sup>1</sup>

<sup>1</sup>RIKEN SPring-8 Center, Japan, <sup>2</sup>JASRI, Japan

**XOPT7-4 An energy dispersive bent Laue monochromator for K-edge subtraction imaging**

**11:45**  
N. Samadi<sup>1</sup>, M. Martinson<sup>1</sup>, B. Bassey<sup>1</sup>, G. Belev<sup>2</sup>, D. Chapman<sup>2</sup>

<sup>1</sup>Univeristy of Saskatchewan, Canada, <sup>2</sup>Canadian Light Source, Canada

----- Lunch Break (12:00-13:00) -----

**13:00-14:30 XOPT8: Poster Session**

Exhibition Hall

**XOPTp8-1 Multilayer-based X-ray optics for advanced light source applications**

Q. Huang<sup>1</sup>, Z. Zhang<sup>1</sup>, Z. Wang<sup>1</sup>, F. Bijkerk<sup>2</sup>, E. Louis<sup>2</sup>, R. Kruijs<sup>2</sup>, F. Senf<sup>3</sup>, A. Erko<sup>3</sup>

<sup>1</sup>Tongji University, Shanghai, China, <sup>2</sup>University of Twente, Netherlands, <sup>3</sup>Institut für Nanometeroptik und Technologie, Germany

- XOPTp8-2 Metrology of the parabolic profile of X-ray refractive lens**  
A. Narikovich <sup>1</sup>, I. Lyatun <sup>1</sup>, D. Zverev <sup>1</sup>, S. Savelyev <sup>1</sup>, I. Snigireva <sup>2</sup>, A. Snigirev <sup>1,2</sup>  
<sup>1</sup>Immanuel Kant Baltic Federal University, Russia, <sup>2</sup>ESRF, France
- XOPTp8-3 Optimization of the optical performance of compound refractive X-ray lens**  
D.A. Serebrennikov <sup>1</sup>, E.S. Clementyev <sup>1,2</sup>, A.A. Snigirev <sup>1</sup>  
<sup>1</sup>I .Kant Baltic Federal University, Russia, <sup>2</sup>Institute for Nuclear Research RAS, Russia
- XOPTp8-4 Wavefront measurement of sub-10-nm XFEL nanobeam produced by multilayer focusing mirrors**  
S. Kawai <sup>1</sup>, S. Matsuyama <sup>1</sup>, A. Nishihara <sup>1</sup>, H. Yumoto <sup>2</sup>, Y. Inubushi <sup>2</sup>, T. Koyama <sup>2</sup>, K. Tono <sup>2</sup>, H. Ohashi <sup>2</sup>, T. Katayama <sup>3</sup>, S. Goto <sup>2</sup>, T. Ishikawa <sup>3</sup>, M. Yabashi <sup>3</sup>, K. Yamauchi <sup>1</sup>  
<sup>1</sup>Osaka University, Japan, <sup>2</sup>JASRI, Japan, <sup>3</sup>RIKEN SPring-8 Center, Japan
- XOPTp8-5 A variable-numerical-aperture x-ray focusing system using a two-stage adaptive Kirkpatrick-Baez mirrors based on piezo electric deformable mirrors**  
H. Hayashi <sup>1</sup>, T. Goto <sup>1</sup>, H. Nakamori <sup>1,2</sup>, S. Matsuyama <sup>1</sup>, T. Kimura <sup>3</sup>, K. P. Khakure <sup>1</sup>, Y. Sano <sup>1</sup>, Y. Kohmura <sup>4</sup>, M. Yabashi <sup>4</sup>, Y. Nishino <sup>3</sup>, T. Ishikawa <sup>4</sup>, K. Yamauchi <sup>1</sup>  
<sup>1</sup>Osaka University, Japan, <sup>2</sup>JTEC Corporation, Japan, <sup>3</sup>Hokkaido University, Japan, <sup>4</sup>RIKEN SPring-8 Center, Japan
- XOPTp8-6 Size-controllable X-ray beam collimation using a two-stage adaptive Kirkpatrick-Baez mirror system based on piezoelectric deformable mirrors**  
T. Goto <sup>1</sup>, H. Nakamori <sup>1,2</sup>, S. Matsuyama <sup>1</sup>, H. Hayashi <sup>1</sup>, Y. Sano <sup>1</sup>, Y. Kohmura <sup>3</sup>, M. Yabashi <sup>3</sup>, T. Ishikawa <sup>3</sup>, K. Yamauchi <sup>1</sup>  
<sup>1</sup>Osaka University, Japan, <sup>2</sup>JTEC Corporation, Japan, <sup>3</sup>RIKEN Spring-8 Center, Japan
- XOPTp8-7 High-resolution imaging XAFS using advanced Kirkpatrick-Baez mirror optics**  
S. Yasuda <sup>1</sup>, S. Matsuyama <sup>1</sup>, H. Okada <sup>2</sup>, Y. Sano <sup>1</sup>, Y. Kohmura <sup>3</sup>, M. Yabashi <sup>3</sup>, T. Ishikawa <sup>3</sup>, K. Yamauchi <sup>1</sup>  
<sup>1</sup>Osaka University, Japan, <sup>2</sup>JTEC Corporation, Japan, <sup>3</sup>RIKEN SPring-8 Center, Japan
- XOPTp8-8 Fabrication of Strain-Free Crystal Optics for a Hard X-ray Split-and-Delay Optical System**  
T. Hirano <sup>1</sup>, T. Osaka <sup>1</sup>, Y. Sano <sup>1</sup>, Y. Inubushi <sup>2</sup>, S. Matsuyama <sup>1</sup>, K. Tono <sup>2</sup>, T. Ishikawa <sup>3</sup>, M. Yabashi <sup>3</sup>, K. Yamauchi <sup>1</sup>  
<sup>1</sup>Osaka University, Japan, <sup>2</sup>JASRI, Japan, <sup>3</sup>RIKEN SPring-8 Center, Japan
- XOPTp8-9 Electroforming process specialized for fabrication of x-ray ellipsoidal mirror**  
T. Kume, S. Egawa, Y. Takeo, H. Mimura  
The University of Tokyo, Japan
- XOPTp8-10 Development of figure correction system for master mandrel of ellipsoidal x-ray mirror**  
Y. Takei, T. Higashi and H. Mimura  
The University of Tokyo, Japan
- XOPTp8-11 Development of differential deposition system with a spatial resolution better than 100µm**  
M. Nagayama, H. Motoyama, H. Mimura  
The University of Tokyo, Japan
- XOPTp8-12 Current status of development of ultraprecise Wolter mirror for soft X-ray microscopy**  
S. Egawa, T. Kume, Y. Takei, Y. Takeo, H. Motoyama, H. Mimura  
The University of Tokyo, Japan
- XOPTp8-13 Evaluation of degree of spatial coherence at a soft X-ray beamline of SPring-8**  
Y. Takeo <sup>1</sup>, H. Motoyama <sup>1</sup>, Y. Senba <sup>2</sup>, H. Kishimoto <sup>2</sup>, H. Ohashi <sup>2</sup>, H. Mimura <sup>1</sup>  
<sup>1</sup>The University of Tokyo, Japan, <sup>2</sup>JASRI, Japan
- XOPTp8-14 Wavefront measurement using ptychographic phase retrieval for evaluating figure and alignment errors of ellipsoidal mirror**  
Y. Takeo, T. Saito, H. Mimura  
The University of Tokyo, Japan
- XOPTp8-15 X-ray Transmission Gratings Fabricated by Metallic Glass Imprinting Technique**  
W. Yashiro <sup>1</sup>, K. Kato <sup>1</sup>, S. Maryam <sup>1</sup>, A. Momose <sup>1,2</sup>, T. Shinohara <sup>3</sup>, H. Kato <sup>1</sup>  
<sup>1</sup>Tohoku University, Japan, <sup>2</sup>ERATO-JST, Japan, <sup>3</sup>JAEA, Japan
- XOPTp8-16 Measurement of the Modulation Transfer Function of X-ray scintillator via scattering from random-media**  
M. Manfreda<sup>1</sup>, M.D. Alaimo<sup>2</sup>, M. Potenza<sup>3</sup>, M. Giglio<sup>3</sup>  
<sup>1</sup>Elettra, Sincrotrone Trieste, Italy, <sup>2</sup>Politecnico di Milano, Italy, <sup>3</sup>Università degli studi di Milano, Italy
- XOPTp8-17 X-ray high resolution diffractometry based on refractive optics**  
P. Ershov <sup>1</sup>, S. Kuznetsov <sup>2</sup>, I. Snigireva <sup>3</sup>, V. Yunkin <sup>2</sup>, A. Snigirev <sup>1</sup>  
<sup>1</sup>IKBFU, Russia, <sup>2</sup>IMT RAS, Russia, <sup>3</sup>ESRF, France
- XOPTp8-18 Damage on EUV multilayer optics caused by irradiation of focused pico-second soft x-ray laser pulses**  
M. Ishino <sup>1</sup>, S. Ichimaru <sup>2</sup>, M. Nishikino <sup>1</sup>, N. Hasegawa <sup>1</sup>, M. Hatayama <sup>2</sup>, T. Kawachi <sup>1</sup>, S. Oku <sup>2</sup>  
<sup>1</sup>JAEA, Japan, <sup>2</sup>NTT Advanced Technology Corporation, Japan
- XOPTp8-19 Hard X-ray in-line interferometers fabricated by Si planar technologies**  
M. Lyubomirskiy <sup>1</sup>, I. Snigireva <sup>1</sup>, S. Kuznetsov <sup>2</sup>, V. Yunkin <sup>2</sup>, V. Kohn <sup>3</sup>, A. Snigirev <sup>4</sup>  
<sup>1</sup>ESRF, France, <sup>2</sup>Institute of Microelectronics and High purity Materials RAS, Russia, <sup>3</sup>National Research Centre "Kurchatov Institute", Russia, <sup>4</sup>Baltic Federal University, Russia
- XOPTp8-20 Ultra-fast single X-ray photon detector based on tungsten silicide**  
X. Zhang  
Universität Zürich, Switzerland

- XOPTp8-21 Focus study measuring phase effects of a double bent Laue beam expanding monochromator**  
M. Martinson<sup>1</sup>, N. Samadi<sup>1</sup>, A. Gomez<sup>2</sup>, D. Chapman<sup>2</sup>  
<sup>1</sup>University of Saskatchewan, Canada, <sup>2</sup>Canadian Light Source, Canada
- XOPTp8-22 A Phase Space Beam Position Monitor for Synchrotron Radiation**  
N. Samadi<sup>1</sup>, B. Bassey<sup>1</sup>, M. Martinson<sup>1</sup>, G. Belev<sup>2</sup>, L. Dallin<sup>2</sup>, M. Jong<sup>2</sup>, D. Chapman<sup>2</sup>  
<sup>1</sup>University of Saskatchewan, Canada, <sup>2</sup>Canadian Light Source, Canada
- XOPTp8-23 A Bent Laue Energy Dispersive Monochromator: An Example Application of Speciation Imaging at the Selenium K-edge**  
P. Qi<sup>1</sup>, N. Samadi<sup>1</sup>, M. Martinson<sup>1</sup>, B. Bassey<sup>1</sup>, D. Chapman<sup>2</sup>  
<sup>1</sup>University of Saskatchewan, Canada, <sup>2</sup>Canadian Light Source, Canada
- XOPTp8-24 Ultraviolet photodetector based on a-IGO thin film**  
C. Hsu<sup>1</sup>, H. Lu<sup>1</sup>, C. Yang<sup>1</sup>, Y. Su<sup>1,2</sup>,  
<sup>1</sup>National Cheng Kung University, Taiwan, <sup>2</sup>Kun-Shan University, Taiwan
- XOPTp8-25 Ultraviolet photodetectors with Ag Nanoparticle-Decorated ZnO Nanorods**  
C. Yang<sup>1</sup>, Z. Wang<sup>1</sup>, and Y. Su<sup>1,2</sup>  
<sup>1</sup>National Cheng Kung University, Taiwan, <sup>2</sup>Kun-Shan University, Taiwan
- XOPTp8-26 X-ray microscopy and microtomography at imaging beamline of SPring-8**  
A. Takeuchi, K. Uesugi  
JASRI, Japan
- XOPTp8-27 Spatial Oscillations of High Harmonics Generated in Noble Gas Interacting with Two-Color Laser Field**  
S. Y. Stremoukhov<sup>1,2</sup>, A. A. Pudov<sup>1</sup>, A. V. Andreev<sup>1</sup>  
<sup>1</sup>Moscow State University, Russia, <sup>2</sup>National Research Centre "Kurchatov Institute", Russia
- XOPTp8-28 The influence of beryllium microstructure on the compound refractive lenses optical properties in X-ray microscopy**  
I. Lyatun<sup>1</sup>, P. Ershov<sup>1</sup>, A. Goikhman<sup>1</sup>, I. Snigireva<sup>2</sup>, A. Snigirev<sup>1</sup>  
<sup>1</sup>Immanuel Kant Baltic Federal University, Russia, <sup>2</sup>ESRF, France
- XOPTp8-29 Formation and interferometric measurements of X-ray vortices**  
Y. Kohmura<sup>1</sup>, D. Takei<sup>1</sup>, Y. Suzuki<sup>2</sup>  
<sup>1</sup>RIKEN SPring-8 Center, Japan, <sup>2</sup>The University of Tokyo, Japan
- XOPTp8-30 Development of high spatial resolution X-ray micro-tomography system at SPring-8**  
K. Uesugi, A. Takeuchi, M. Hoshino  
JASRI, Japan
- XOPTp8-31 Development of a new method of analyzing molecular orientation by soft X-ray absorption spectroscopy (XAS)**  
E. Takahashi<sup>1</sup>, K. Imanishi<sup>1</sup>, S. Suehiro<sup>1</sup>, Y. Suzuri<sup>2</sup>, Y. Muramatsu<sup>3</sup>, E. M. Gullikson<sup>4</sup>  
<sup>1</sup>Sumika Chemical Analysis Service, Ltd., Japan, <sup>2</sup>Yamagata University, Japan, <sup>3</sup>University of Hyogo, Japan, <sup>4</sup>Lawrence Berkeley National Laboratory, USA
- XOPTp8-32 4D X-ray phase-tomography using spectrum tuned synchrotron radiation**  
H. Takano<sup>1,2</sup>, Y. Wu<sup>1,2</sup>, T. Umemoto<sup>1</sup>, M. Hoshino<sup>3</sup>, W. Yashiro<sup>1,2</sup>, A. Momose<sup>1,2,3</sup>  
<sup>1</sup>Tohoku University, Japan, <sup>2</sup>JST-ERATO, Japan, <sup>3</sup>JASRI, Japan
- XOPTp8-33 Coherent diffraction imaging of non-isolated objects with apodized illumination**  
K. P. Khakurel<sup>1</sup>, T. Kimura<sup>1</sup>, H. Nakamori<sup>2,3</sup>, T. Goto<sup>3</sup>, S. Matsuyama<sup>3</sup>, K. Yamauchi<sup>3</sup>, Y. Nishino<sup>1</sup>  
<sup>1</sup>Hokkaido University, Japan, <sup>2</sup>JTEC Corporation, Japan, <sup>3</sup>Osaka University, Japan
- XOPTp8-34 Total-electron-yield measurements in the soft X-ray region of insulating organic films using conductive substrates**  
Y. Muramatsu<sup>1</sup>, T. Ouch<sup>1</sup>, E. M. Gullikson<sup>2</sup>  
<sup>1</sup>University of Hyogo, Japan, <sup>2</sup>Lawrence Berkeley National Laboratory, USA
- XOPTp8-35 Ablation of Si and Cu with capillary discharged 46.9nm x-ray laser focused by a cylinder mirror and a toroidal mirror**  
H. Cui, Y. Zhao, W. Zhang, W. Li, S. Jiang, L. Li  
Harbin Institute of Technology, China
- Break (14:30-15:30) -----
- 15:30-15:45 XOPT9: X-ray optics for advanced light sources**  
Room 313+314  
**Chair: K. Tono**, SPring-8/SACLA, Japan
- XOPT9-1 Single crystal optics at the high repetition rate European XFEL**  
15:30  
L. Samoylova and H. Sinn  
European XFEL Facility, Germany
- 15:45-16:00 XOPT10: X-ray sources**  
Room 313+314  
**Chair: K. Tono**, SPring-8/SACLA, Japan
- XOPT10-1 Demonstration of Multibunch Operation from a Compact Laser-Compton x-ray Source**  
15:45  
D. J. Gibson<sup>1</sup>, G. G. Anderson<sup>1</sup>, Y. Hwang<sup>2</sup>, R. A. Marsh<sup>1</sup>, and C. P. J. Barty<sup>1</sup>  
<sup>1</sup>Lawrence Livermore National Laboratory, USA, <sup>2</sup>UC Irvine, USA

**16:00-17:15 XOPT11: X-ray diagnostics** Room 313+314

**Chair: K. Tono**, SPring-8/SACLA, Japan

**XOPT11-1** **Using high resolution LiF crystal X-ray detector for in situ characterization of XFEL beam intensity distribution and focusability**

**16:00**

T. Pikuz<sup>1,4</sup>, A. Faenov<sup>2,3</sup>, T. Matsuoka<sup>3</sup>, B. Albertazzi<sup>4</sup>, N. Ozaki<sup>1,4</sup>, N. Hartely<sup>4</sup>, O. Muray Ricardo Arturo<sup>1,4</sup>, T. Yabuuchi<sup>6</sup>, H. Habara<sup>4</sup>, S. Matsuyama<sup>4</sup>, K. Yamauchi<sup>4</sup>, Y. Inubushi<sup>5</sup>, T. Togashi<sup>5</sup>, H. Yumoto<sup>5</sup>, Y. Tange<sup>5</sup>, K. Tono<sup>5</sup>, Y. Sato<sup>4</sup>, M. Yabashi<sup>5,6</sup>, M. Nishikino<sup>7</sup>, T. Kawachi<sup>7</sup>, A. Mitrofanov<sup>2</sup>, D. Bleiner<sup>8</sup>, A. Grum-Grzhimailo<sup>9</sup>, N.N. Rosanov<sup>10</sup>, N.V. Vysotina<sup>10</sup>, M. Harmand<sup>11</sup>, M. Koenig<sup>4,12</sup>, K. A. Tanaka<sup>1,4</sup>, T. Ishikawa<sup>5,6</sup>, R. Kodama<sup>1,3,4</sup>

<sup>1</sup>Photon Pioneers Center, Osaka University, Japan, <sup>2</sup>Joint Institute for High Temperatures, Russian Academy of Sciences, Russia, <sup>3</sup>Institute for Academic Initiatives, Osaka University, Japan, <sup>4</sup>Graduate School of Engineering, Osaka University, Japan, <sup>5</sup>JASRI/SPring-8, Japan, <sup>6</sup>RIKEN Harima Institute, Japan, <sup>7</sup>Quantum Beam Science Center, Japan Atomic Energy Agency, Japan, <sup>8</sup>EMPA Materials Science and Technology, Switzerland, <sup>9</sup>Skobeltsyn Institute of Nuclear Physics, Lomonosov Moscow State University, Russia, <sup>10</sup>Vavilov State Optical Institute, Russia, <sup>11</sup>IMPMC, Université Pierre et Marie Curie, France, <sup>12</sup>LULI, École Polytechnique, France

**XOPT11-2** **Two-dimensional Coherence Measurements of FEL Radiation: the Heterodyne Speckle Approach**

**16:15**

M. Manfredda<sup>1,4</sup>, M.D. Alaimo<sup>2,4</sup>, M. Potenza<sup>4</sup>, M. Giglio<sup>4</sup>  
<sup>1</sup>Elettra, Italy, <sup>2</sup>Politecnico di Milano, Italy, <sup>4</sup>Università degli studi di Milano, Italy

**XOPT11-3** **Wavefront Sensor based diagnostic of FERMI FEL photon beam**

**16:30**

L. Raimondi<sup>1</sup>, N. Mahne<sup>1</sup>, M. Manfredda<sup>1</sup>, C. Svetina<sup>1,6</sup>, D. Cocco<sup>2</sup>, F. Capotondi<sup>1</sup>, E. Pedersoli<sup>1</sup>, M. Kiskinova<sup>1</sup>, and M. Zangrando<sup>1,3</sup>  
<sup>1</sup>Elettra-Sincrotrone Trieste ScpA, Italy, <sup>2</sup>SLAC National Accelerator Laboratory, USA, <sup>3</sup>CNR – Consiglio Nazionale delle Ricerche Istituto Officina dei Materiali, Italy, <sup>6</sup>University of Trieste, Italy

**XOPT11-4** **Capturing ultrafast X-ray damage processes using an X-ray–X-ray pump–probe scheme**

**16:45**

I. Inoue<sup>1</sup>, Y. Inubushi<sup>1,2</sup>, K. Tono<sup>1,2</sup>, T. Hara<sup>1</sup>, and M. Yabashi<sup>1,2</sup>

<sup>1</sup>RIKEN SPring-8 Center, Japan, <sup>2</sup>JASRI, Japan

**XOPT11-5** **First result of PSI/SACLA collaborative campaign on temporal diagnostics**

**17:00**

P. N. Juranić<sup>1</sup>, G. Ishkhan<sup>1,2</sup>, C. Ernyl, R. Ischebeck<sup>1</sup>, L. Patthey<sup>1</sup>, C. Pradervand<sup>1</sup>, C. Milne<sup>1</sup>, H. Lemke<sup>1</sup>, A. Dax<sup>1</sup>, C. Hauri<sup>1,2</sup>, S. Owada<sup>3</sup>, T. Togashi<sup>3</sup>, T. Katayama<sup>3</sup>, and Makina Yabashi<sup>3</sup>

<sup>1</sup>Paul Scherrer Institut, Switzerland, <sup>2</sup>Ecole Polytechnique Federale de Lausanne, Switzerland, <sup>3</sup>RIKEN SPring-8 Center, Japan

**17:15-17:20 Closing**

Room 313+314

**XOPT Closing Remarks**

**17:15**

T. Ishikawa

RIKEN SPring-8 Center