

## Advances in X-Ray/EUV Optics and Components XIII

Monday 20 August 2018

### Conference Sessions At A Glance

SHOW | HIDE

1: Metrology  
2: Multilayers  
3: Gratings and Mirrors  
4: Sources and Crystal Optics  
Posters-Monday

### Important Dates

SHOW | HIDE

Abstract Due:  
7 February 2018

Author Notification:  
16 April 2018

Manuscript Due Date:  
25 July 2018

### Conference Committee

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#### Conference Chairs

[Shunji Goto](#), Japan Synchrotron Radiation Research Institute (Japan)  
[Christian Morawe](#), ESRF - The European Synchrotron (France)  
[Ali M. Khounsary](#), Illinois Institute of Technology (United States)

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#### MONDAY 20 AUGUST

[Show All Abstracts](#)

### Session 1: Metrology

Monday 20 August 2018

9:00 AM - 10:00 AM

Location: Conv. Ctr. Room 24A


Session Chairs: [Ali M. Khounsary](#), Illinois Institute of Technology (United States) ; [Fredrik Eriksson](#), Linköping Univ. (Sweden)

#### The ALS OSMS: Optical Surface Measuring System for high accuracy two-dimensional slope metrology with state-of-the-art x-ray mirrors

Paper 10760-2

Time: 9:00 AM - 9:20 AM

Author(s): Ian Lacey, Kevan Anderson, Lawrence Berkeley National Lab. (United States); Gary P. Centers, Helmholtz-Institut Mainz (Germany), Johannes Gutenberg Univ. Mainz (Germany); Gevorg S. Gevorgyan, Lawrence Berkeley National Lab. (United States); John Grossiord, Theo Nicolot, Institut Univ. de Technologie Le Creusot (France); Brian V. Smith, Valeriy V. Yashchuk, Lawrence Berkeley National Lab. (United States); Ralf D. Geckeler, Physikalisch-Technische Bundesanstalt, Bundesallee 100 (Germany); Andreas Just, Physikalisch-Technische Bundesanstalt, D-38116 (Germany)

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#### Design and demonstration of tunable soft x-ray lateral shearing and Hartmann wavefront sensors

Paper 10760-3

Time: 9:20 AM - 9:40 AM

Author(s): Antoine Wojdyla, Diane Bryant, Weilun Chao, Lawrence Berkeley National Lab. (United States); Lahsen Assoufid, Argonne National Lab. (United States); Daniele Cocco, SLAC National Accelerator Lab. (United States); Mourad Idir, Brookhaven National Lab. (United States); Kenneth A. Goldberg, Lawrence Berkeley National Lab. (United States)


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**Testing of soft X-ray and EUV grazing incidence optics using compact laser plasma light sources**

Paper 10760-4

Time: 9:40 AM - 10:00 AM

Author(s): Henryk Fiedorowicz, Andrzej Bartnik, Przemyslaw Wachulak, Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland)

[Add To My Schedule](#) **Coffee Break 10:00 AM - 10:30 AM****Session 2:  
Multilayers**

Monday 20 August 2018

10:30 AM - 11:50 AM


Location: Conv. Ctr. Room 24A

Session Chairs: [Shunji Goto](#), Japan Synchrotron Radiation Research Institute (JASRI) (Japan) ; [Yuri V. Shvyd'ko](#), Argonne National Lab. (United States)**The new ESRF thin-film x-ray reflectometer**

Paper 10760-5

Time: 10:30 AM - 10:50 AM



Author(s): Christian Morawe, Jean-Christophe Peffen, ESRF - The European Synchrotron (France); Phakkhananan Pakawanit, Synchrotron Light Research Institute (Thailand), ESRF - The European Synchrotron (France)

[Add To My Schedule](#) **Ion-assisted magnetron sputter deposition of B4C-doped Ni/Ti multilayer mirrors**

Paper 10760-6

Time: 10:50 AM - 11:10 AM


Author(s): Fredrik Eriksson, Naureen Ghafoor, Linköping Univ. (Sweden); Daniel Ostach, Norbert Schell, Helmholtz-Zentrum Geesthacht (Germany); Jens Birch, Linköping Univ. (Sweden)

[Add To My Schedule](#) **Improving the thermodynamic stability and EUV reflectance in Mo/Si multilayer mirrors by rubidium incorporation** 

Paper 10760-7

Time: 11:10 AM - 11:30 AM


Author(s): Amirmehdi Saedi, Leiden Univ. (Netherlands); Cristina Sfiligoi, Joost W. M. Frenken, Jan Verhoeven, Advanced Research Ctr. for Nanolithography (Netherlands)

[Add To My Schedule](#) **Depth-graded multilayers for broadband imaging applications in the hard x-ray regime**

Paper 10760-8

Time: 11:30 AM - 11:50 AM

Author(s): Tommaso Pardini, Jennifer Alameda, Catherine Burcklen, Jeff Robinson, Stefan Hau-Riege, Regina Soufli, Lawrence Livermore National Lab. (United States)

[Add To My Schedule](#) **Lunch Break 11:50 AM - 1:40 PM****Session 3:  
Gratings and Mirrors**

Monday 20 August 2018

1:40 PM - 3:00 PM


Location: Conv. Ctr. Room 24A

Session Chairs: [Christian Morawe](#), ESRF - The European Synchrotron (France) ; [Jean-Claude Kieffer](#), Institut National de la Recherche Scientifique (Canada)**Design and realization of a grazing-incidence plane-grating monochromator**

Paper 10760-9

Time: 1:40 PM - 2:00 PM


Author(s): Nicola Fabris, CNR-IFN Padova (Italy), Univ. degli Studi di Padova (Italy); Fabio Frassetto, CNR-IFN Padova (Italy); Paolo Miotti, CNR-IFN Padova (Italy), Univ. degli Studi di Padova (Italy); Carlo Spezzani, ELETTRA Sincrotrone Trieste (Italy); Luca Poletto, CNR-IFN Padova (Italy)

[Add To My Schedule](#) **Forming an ultrathin and lightweight Wolter type-1 x-ray micropore optics into a single substrate**

Paper 10760-10

Time: 2:00 PM - 2:20 PM

Author(s): Kentaro Nomoto, Ryosuke Hata, Kiyomasa Doi, Yohei Nawaki, Daisuke Yajima, Ryuta Furuya, Shinoda Kazuhiko, Kazuyuki Tsuruoka, Hiroki Kodaka, Ushio Inc. (Japan)


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**Precision Wolter mirrors for future x-ray observations of the Sun**

Paper 10760-11

Time: 2:20 PM - 2:40 PM

Author(s): Taro Sakao, Institute of Space and Astronautical Science (Japan); Satoshi Matsuyama, Takumi Goto, Jumpei Yamada, Takato Inoue, Kentaro Hata, Hiroyuki Yamaguchi, Kazuto Yamauchi, Osaka Univ. (Japan); Yoshiki Kohmura, RIKEN SPring-8 Ctr. (Japan); Ayumi Kime, Japan Aerospace Exploration Agency (Japan); Yoshinori Suematsu, Noriyuki Narukage, National Astronomical Observatory of Japan (Japan); Shin-nosuke Ishikawa, Institute of Space and Astronautical Science (Japan)

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**Fast fabrication of 1.26-meter-long optic for elliptical x-ray bending mirror (Canceled)**

Paper 10760-12

Time: 2:20 PM - 2:40 PM


Author(s):

**Optics design of a micro-focusing protein crystallography beamline using a wave calculation**

Paper 10760-13

Time: 2:40 PM - 3:00 PM

Author(s): Shunji Goto, Japan Synchrotron Radiation Research Institute (JASRI) (Japan)

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**Coffee Break 3:00 PM - 3:30 PM**

## Session 4: Sources and Crystal Optics

Monday 20 August 2018

3:30 PM - 5:10 PM

Location: Conv. Ctr. Room 24A


Session Chairs: [Ali M. Khounsary](#), Illinois Institute of Technology (United States) ; [Henryk Fiedorowicz](#), Wojskowa Akademia Techniczna im. Jaroslawa Dabrowskiego (Poland)

**Laser wakefield driven x-ray sources in Canada: a brilliant future for agriculture and global food security**

Paper 10760-14

Time: 3:30 PM - 3:50 PM

Author(s): Jean-Claude Kieffer, Sylvain Fourmaux, Institut National de la Recherche Scientifique (Canada); Emil Hallin, Univ. of Saskatchewan (Canada)


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**Current status the soft x-ray FEL beamline at SACLA**

Paper 10760-15

Time: 3:50 PM - 4:10 PM

Author(s): Shigeki Owada, Japan Synchrotron Radiation Research Institute (JASRI) (Japan); Kazuaki Togawa, Takahiro Inagaki, Toru Hara, Takashi Tanaka, RIKEN SPring-8 Ctr. (Japan); Yasumasa Joti, Takahisa Koyama, Kyo Nakajima, Haruhiko Ohashi, Yasunori Senba, Tadashi Togashi, Kensuke Tono, Mitsuhiro Yamaga, Hirokatsu Yumoto, Makina Yabashi, Japan Synchrotron Radiation Research Institute (JASRI) (Japan); Hitoshi Tanaka, RIKEN SPring-8 Ctr. (Japan)


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**Fabrication method of speckle-free channel-cut crystal monochromators for low-emittance x-ray sources**

Paper 10760-16

Time: 4:10 PM - 4:30 PM

Author(s): Takashi Hirano, Yuki Morioka, Yasuhisa Sano, Osaka Univ. (Japan); Taito Osaka, Japan Synchrotron Radiation Research Institute (JASRI) (Japan), Osaka Univ. (Japan); Tetsuo Katayama, Japan Synchrotron Radiation Research Institute (JASRI) (Japan); Satoshi Matsuyama, Osaka Univ. (Japan); Makina Yabashi, Japan Synchrotron Radiation Research Institute (JASRI) (Japan); Kazuto Yamauchi, Osaka Univ. (Japan)


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**Diamond channel-cut crystals**

Paper 10760-17

Time: 4:30 PM - 4:50 PM

Author(s): Yuri V. Shvyd'ko, Tomasz Kolodziej, Argonne National Lab. (United States); Sergey Terentiev, Vladimir Blank, Technological Institute for Superhard and Novel Carbon Materials (Russian Federation)


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**Monochromatic hard X-ray backlighting based on transmission logarithmic spiral crystals**

Paper 10760-18

Time: 4:50 PM - 5:10 PM

Author(s): Dongbing Liu, Qingguo Yang, Bozhong Tan, China Academy of Engineering Physics (China); Shali Xiao, Chongqing Univ. (China)

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## Session PMon: Posters-Monday

Monday 20 August 2018  
5:30 PM - 7:30 PM  
Location: Conv. Ctr. Room 20C

Conference attendees are invited to view the posters, enjoy light refreshments, ask questions, and network with colleagues in your field. Authors of poster papers will be present to answer questions concerning their papers. Attendees are required to wear their conference registration badges to the poster sessions. Poster authors, view poster presentation guidelines at <http://spie.org/OPPosterGuidelines>.


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**A dual-bandwidth multilayer monochromator system**

Paper 10760-19

Time: 5:30 PM - 7:30 PM

Author(s): Ali M. Khounsary, Carlo Segre, Thomas Irving, Illinois Institute of Technology (United States); Raymond Conley, ANL (United States)

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