

2021 EUVL Supplier Showcase

August 16 - 17, 2021

Held Online

Supplier Showcase Proceedings

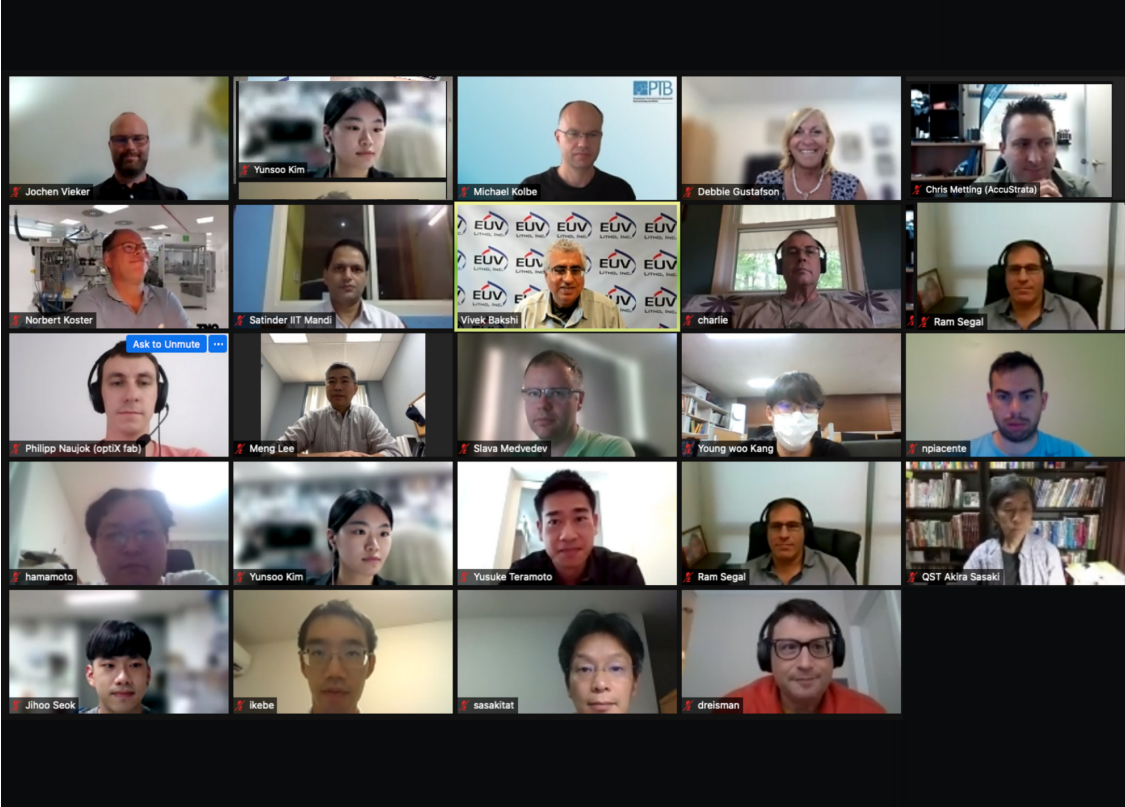
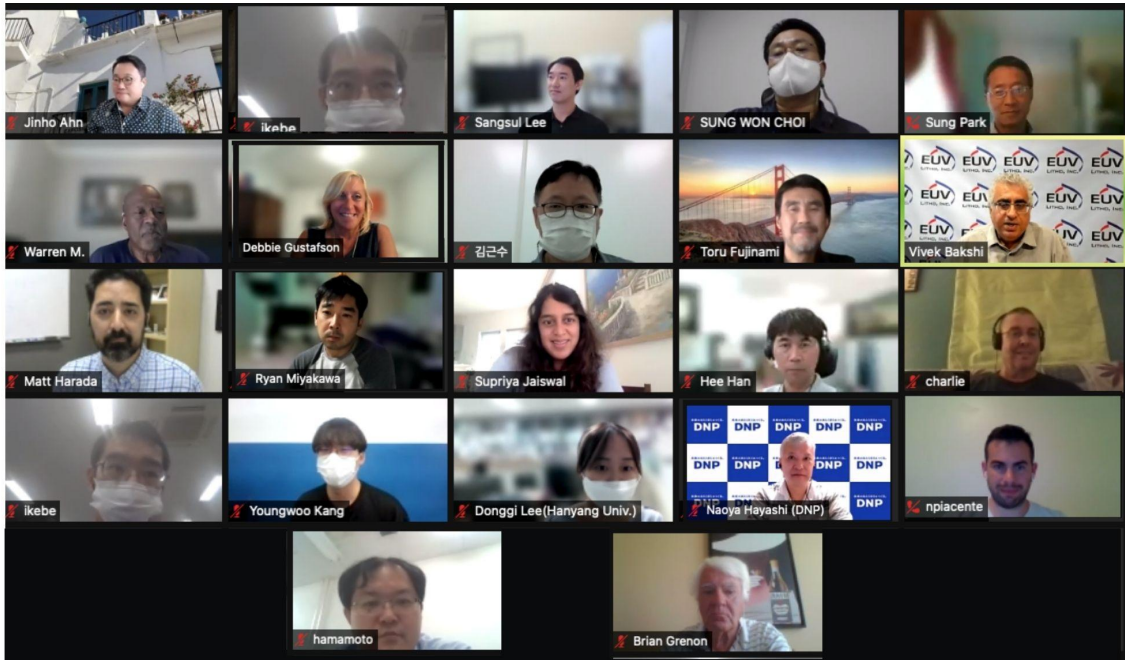
2021 EUVL Supplier Showcase

August 16 - 17, 2021

Held Online. Info at www.euvlitho.com



Group Photos



Sponsors

2021 EUVL Supplier Showcase

Sponsors



Organized by



Vivek Bakshi (EUV Litho, Inc.), Chair

Jinho Ahn (EUV-IUCC and Hanyang University), Co-Chair

WORKSHOP PROCEEDINGS

2021 EUVL Supplier Showcase

August 16 - 17, 2021

Held online

Day 1: Monday, August 16th ([Video Recording](#))

7:00 PM- 7:05 PM Welcome and Announcements

7:05 PM Session 1: US & Asia

[Building a Success Company in EUVL - Growth of Energetic Technology, Inc. \(SS1\)](#)

Debbie Gustafson

Energetic, Wilmington, MA USA

[Recent research activities in EUV-IUCC \(Industry-University Collaboration Center\) \(SS2\)](#)

Jinho Ahn

EUV-IUCC, 222 Wangshimri-ro, Seongdong-gu, Seoul 04763, Korea

[PAL-EUV synchrotron construction progress and EUV infrastructure operation plan \(SS4\)](#)

Sangsul Lee

Pohang Accelerator Laboratory, POSTECH, 80 Jigokro-127-beongil, Nam-gu, Pohang, Gyeongbuk 37673, Korea

[Preparing For The Next Generation of EUV Lithography at the Center for X-ray Optics \(SS5\)](#)

Ryan Miyakawa

CXRO, Lawrence Berkeley National Laboratory

Mail Stop 2R0400, 1 Cyclotron Road, Berkeley, CA 94720 USA

8:20 PM Break (20 min.)

[Multitrigger \(MTR\): An Irresistible Photoresist \(SS15\)](#)

Warren Montgomery¹, Mark Shepherd¹, David Ure¹, Alex Robinson¹, Alexandra McClelland¹, Carmen Popescu¹ and Alan Brown¹, Tom Lada², John Roth², Ed Jackson², and Todd Smith³

¹*Irresistible Materials Ltd., Langdon House, Swansea Waterfront, Swansea SA1 8QY, United Kingdom*

²*Nano-C, 33 Southwest Park, Westwood, MA 02090*

³*MERCK KGAA, Frankfurter Strasse 250, Darmstadt, 64293, Germany*

[IR PiFM – Potential for EUV Metrology \(SS16\)](#)

Sung Park

Molecular Vista, 6840 Via Del Oro, Suite 110, San Jose, CA 95119, USA

[Developments in KMLabs EUV Laser sources \(SS24\)](#)

Matthew Harada, Henry Kapteyn

K&M Lab, 4775 Walnut St., Suite 102, Boulder, CO 80301, USA

Product Differentiation in EUV Photomasks (SS23)

Supriya Jaiswal

Astrilux, 4225 Executive Sq Ste 490., La Jolla, CA 92037-8411, USA

EUV Mask Technology: Ready for 5nm and beyond (SS6)

Yusuke Suzuki

Dai Nippon Printing, 1-1-1, Ichigaya-Kagacho, Shinjuku-Ku, Tokyo, Japan 162-8001

Automated EUV tools for HVM – Pellicle Mounter/Demounter, Pellicle & Pod Inspection Systems (SS7)

Sung Won Choi

FINE SEMITECH CORP. ("FST"), 15-23, Dongtansandan 6-gil, Hwaseong-si, Gyeonggi-do, Republic of Korea 18487

Day 2: Tuesday, August 17th, 2021 [\(Video Recording\)](#)

Held Online

8:00 AM Welcome and Announcements

Vivek Bakshi
EUV Litho, Inc.

8:05 AM Session 2: Europe

[**EUV interference lithography and metrology at PSI \(SS8\)**](#)

Iacopo Mochi
PSI, Forschungsstrasse 111, 5232 Villigen PSI, Switzerland

[**Synchrotron-radiation based EUV metrology at PTB \(SS9\)**](#)

Michael Kolbe, Victor Soltwisch, Frank Scholze
PTB, Bundesallee 100, D-38116 Braunschweig

[**TNO, R&D service provider for the EUV Semiconductor Industry \(SS10\)**](#)

Norbert Koster
TNO, Radarweg 60, 1043 NT Amsterdam

[**Irradiation systems for accelerated testing of EUVL components \(SS11\)**](#)

Jochen Vieker and Klaus Bergmann
Fraunhofer, Fraunhofer Institute for Laser Technology ILT, Steinbachstr. 15, 52074 Aachen

[**NIST at-wavelength EUVL metrology \(SS12\)**](#)

Charles Tarrío, R. E. Vest, R. F. Berg
NIST, 100 Bureau Drive, Gaithersburg, MD 20899

[**Resist Technology for Single Digit Patterning: A solution for High-volume & High-throughput EUVL \(SS3\)**](#)

Mohamad G. Moinuddin ^a, Satinder K. Sharma ^{a,*}, Kenneth E. Gonsalves ^{b,**}
IIT Mandi, Centre for Design & Fabrication of Electronic Devices, (C4DFED), SCEE a, SBS b, Indian Institute of Technology (IIT)-Mandi, MANDI-175075, (Himachal Pradesh), India

09:35 AM Break (20 min.)

[**The art of fabricating high reflective multilayer coatings \(SS17\)**](#)

Philipp Naujok, Torsten Feigl
optiX fab GmbH, Hans-Knoell-Strasse 6, 07745 Jena, Germany

Rigaku EUV optics and detector technology (SS18)

Peter Oberta

Rigaku Innovative Technologies Europe s.r.o., Novodvorská 994, Praha 4, 142 21, Czech Republic

TEUS - high-brightness EUV LPP light source based on fast rotating target: product overview and specifications (SS19)

Konstantin Koshelev^{1,2}, Alexander Vinokhodov¹, Oleg Yakushev¹, Vladimir Ivanov^{1,2}, Vladimir Krivtsun^{1,2}, Alexander Lash¹, Mikhail Krivokorytov^{1,2}, Vyacheslav Medvedev^{1,2}, Vladimir Gubarev^{1,3}, Denis Glushkov⁴, Samir Ellwi⁴, Eugene Gorsky⁵, Alexey Kiselev⁵

¹ EUV Labs, Troitsk, Moscow, Russia, ² Institute of Spectroscopy of the Russian Academy of Science (ISAN), Moscow, Troitsk, Russia, ³ MIPT, Dolgoprudny, Russia, ⁴ ISTEQ, Eindhoven, The Netherlands, ⁵ TRDC, Troitsk, Moscow, Russia

Vacuum Processing Equipment for EUVL Optics - deposition, etching and cleaning (SS20)

Marcel Demmler

scia Systems GmbH, Annaberger Str. 240, 09125 Chemnitz, Germany

AtOMS - Combined Atomic Absorption /Optical Emission Spectroscopy for In-Situ Control of EUVL Thin Films (SS13)

Christopher Metting, George Atanasoff

AccuStrata, Inc., 11900 Parklawn Drive, Rockville, MD 20852

Veeco Ion Beam Technology for EUV Mask (SS21)

Meng Lee

Veeco, 1 Terminal Drive, Plainview, New York 11803, USA

Workshop Adjourned

