

FIRST CALL FOR PAPERS

2027 Extreme Ultraviolet Lithography (EUVL) and Source Workshop

The 2027 EUVL and Source Workshop, organized by EUV Litho, Inc. and the Advanced Research Center for Nanolithography (ARCNL) at the KIT Royal Tropical Institute, Mauritskade 63, Amsterdam, The Netherlands, will bring together the international community advancing EUV lithography, EUV and soft X-ray sources, and technologies supporting future semiconductor manufacturing. The workshop will cover High-NA and Hyper-NA lithography, advanced sources, optics, masks, resists, metrology, and lithography at wavelengths below 13.5 nm. Emerging topics include fluid and flow physics, metrology for 3D integration and hybrid bonding, and novel light sources for advanced metrology and inspection.

With EUVL established in advanced semiconductor manufacturing and High-NA systems progressing toward implementation, the workshop will address imaging and patterning challenges, scanner performance, infrastructure readiness, and future lithography architectures. The program will also explore Hyper-NA lithography at 13.5 nm and Blue-X lithography at wavelengths from 2 to 7 nm, along with applications of modeling, artificial intelligence, and machine learning in semiconductor technology development. To this end, the workshop will also host the annual meeting of the Blue-X TWG, with a joint reception on June 7th.

The workshop will feature a Supplier Showcase as part of the Poster Session, providing an opportunity for suppliers to present their latest technologies and capabilities and interact directly with researchers and end-users, supporting collaboration.

List of Topics

Abstracts are invited across all areas of relevance to EUVL, EUV and Soft X-ray Sources, and Next-Generation Lithography. Topics include, but are not limited to:

• High-NA EUV lithography implementation, scanner performance, imaging, stitching, and manufacturing readiness

• Future lithography architectures, including Hyper-NA, wavelength and NA trade-offs, optical design, and scanner concepts
• EUV and soft X-ray source technologies, including LPP, DPP, HHG, FEL, synchrotrons, drive lasers, and new concepts
• High-power source performance, conversion efficiency, diagnostics, debris mitigation, and collector lifetime
• Fluid and flow physics in lithography, including tin droplet dynamics, laser-plasma interactions, debris transport, hydrogen gas flows, wetting, and thin-film behavior
• Advanced projection and illumination optics, multilayer coatings, contamination control and metrology
• EUV mask technology, including larger-format masks, substrate fabrication, mask writing, handling, inspection, pellicles, and mask 3D effects
• EUV photoresists, underlayers, stochastic defects, pattern collapse, line-edge roughness, and pattern transfer
• Computational lithography, source-mask optimization, curvilinear patterning, process integration, and edge-placement error control
• Actinic and non-actinic metrology, inspection, defect characterization, and process control for masks, wafers, sources, and optics
• Metrology for 3D integration and hybrid bonding, including overlay, wafer distortion, surface characterization, buried-interface inspection, and lithography-based correction
• Lithography below 13.5 nm (Blue-X, 2–7 nm), including source development, optical systems, masks, resists, and imaging demonstrations
• Novel EUV and soft X-ray light sources for metrology, inspection, imaging, microscopy, and analytical instrumentation
• Modeling, simulation, artificial intelligence, and machine learning for lithography, source science, materials, and manufacturing

Agenda Overview

The June 5-6, 2027 short courses will be held online only. The June 7-9, 2027 workshop will be held in person at KIT Royal Tropical Institute in Amsterdam, The Netherlands

- June 5–6, 2027: Two online short courses
- June 7, 2027 (morning and afternoon): Blue-X Technical Working Group (TWG) meeting (members only)
- June 7, 2027 (evening): Joint Welcome Reception and Poster Session for Blue-X TWG and EUVL and Source Workshop attendees, including the Supplier Showcase.
- June 8-9, 2027: In-person technical presentations and conference dinner

Instructions for Submissions

- Submit an abstract of fewer than 200 words using the template available at euvlitho.com.
- Indicate whether you prefer an oral or poster presentation.
- Email abstracts to info@euvlitho.com. For logistical questions, use the same address.

Abstract Submission Deadline: March 19, 2027

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