PTB
Physikalisch-Technische Bundesanstalt
Nationales Metrologieinstitut

328. PTB Seminar
VUV and EUV Metrology

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2025, October 13-15

13th PTB, Willy-Wien-Laboratory, Magnusstr. 9, 12489 Berlin-Adlershof (Visit MLS)

14th & 15th Helmholtz-Building of the Berlin-Charlottenburg campus site of PTB (Workshop)

Programme

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Quantum Design EUROPE
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Monday, October 13

⌂ PTB, Willy-Wien-Laboratory, Magnusstr. 9, 12489 Berlin-Adlershof

Please note!
Registration with further data for the radiation protection office required –
no onsite registration

Visit to the Willy-Wien-Laboratory at the Metrology Light Source (MLS)

- Berlin-Adlershof -

16:00	Arrive & Welcome
16:30	Visit to the Willy-Wien-Laboratory at the Metrology Light Source (MLS)
17:30	Get together
18:30	End

Location for today

PTB, Willy-Wien-Laboratory, Magnusstr. 9, 12489 Berlin-Adlershof

Entrance: Max-Planck-Strße

The coordinates are: 52.42802966405525, 13.534526171109958 (Adlershof, Berlin)

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Tuesday, October 14

Helmholtz-Building of the Berlin-Charlottenburg campus site of PTB (Abbestr. 2-12, 10587 Berlin)

8:30	Registration & Poster Set-up & Coffee
9:30	Opening and overview ***Michael Kolbe & Alexander Gottwald (PTB)***

Session I Session Chair: Michael Kolbe

10:00	**Keynote Talk:** Present and Future of EUV lithography ***Mark van de Kerkhof (ASML)***
10:40	EUV-induced oxidation of thin CrOx films on SiNk free-standing windows ***Duncan Ramsamoedj (U Twente)***
11:00	Latent images in EUV photoresists measured with a lab-scale EUV scatterometry setup ***Sophia Schröder (RWTH Aachen)***
11:20	Quantitative characterization of angstrom-scale roughness via diffuse scatter at near-grazing geometry using a table-top 92eV HHG source ***Vitaly Krasnov (imec)***
11:40	Conference photo
12:00	Lunch break
13:00	Poster & Sponsor Presentation

Session II Session Chair: Alexander Gottwald

14:30	Metrology Light Source: Current Achievements and Future Horizons ***Carsten Mai (HZB)***
15:00	Holography is growing along with the requirements of new beam line gratings ***Matthias Burkhardt (CZ Jena)***
15:20	The BEAR beamline at Elettra 2.0 ***Angelo Giglia (CNR)***
15:40	Coffee break

Session III Session Chair: Michael Krumrey

16:20	Invited: High speed optical inspection of wafers ***Larissa Juschkin (KLA)***
16:50	Updated Optical Data for Transition Metals in the EUV Range ***Qais Saadeh (PTB)***
17:10	Influence of the model selection in analysis of EUV reflectometry data ***Sven Glabisch (RWTH Aachen)***
17:30	VUV-Ellipsometry on graphene on Ge(111) ***Mattia Mulazzi (PTB)***
18:00 - 21:00	Dinner & get together

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Wednesday, October 15

⌂ Helmholtz-Building of the Berlin-Charlottenburg campus site of PTB (Abbestr. 2-12, 10587 Berlin)

8:30	Morning coffee
9:00	**Keynote Talk:** Optics for EUV-Lithography, now and then ***Hartmut Enkisch (CZ SMT)***
Session IV	Session Chair: Frank Scholze
9:40	Development of a Compact Capillary Discharge for Actinic EUV Metrology Applications ***Norbert Böwering (U Bielefeld)***
10:00	High repetition rate, high average power XUV sources based on High Harmonic Generation ***Bastian Manschwetus (class5 photonics)***
10:20	Coffee break
Session V	Session Chair: Analía Fernández Herrero
10:50	Invited: Development and Characterization of Wide-Bandgap Photodetectors Tailored for the EUV-VUV Solar Radiometer SoSpIM ***Marie Dominique (ROB)***
11:20	Invited: Observing the sun at short wavelengths – Optical coatings for the solar telescopes MUSE and EUVST ***Marcus Trost (OptiXfab)***
11:50	Very thin layers for state-of-the-art x-ray mirrors ***Michael Störmer (Hereon)***
12:10	Agnostic compensation of periodic errors in interferometric position sensing ***Christian Schwemmer (IISB)***
12:30	Lunch
Session VI	Session Chair: Christian Laubis
13:50	High-Resolution, High-Efficiency Spectrometers in the EUV and Soft X-ray Range ***Jürgen Probst (NOB)***
14:10	A lab-scale EUV high intensity exposure setup for small-spot exposures and angular resolved photoelectron spectroscopy ***Linus Nagel (RWTH Aachen)***
14:30	CD SEM measurements on EUV photomasks ***Torben Heins (AMTC Dresden)***
14:50	High throughput AFM metrology for high-NA EUV lithography ***Po Cheng Wu (NearField Instruments)***
15:10	Wrap-up and Closing Remarks
15:30	End of the Seminar

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Poster Session

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No.	Title	Presenter & Institute
1	Reminisce - Refurbishment of Mirrors to Increase Sustainability at Light Sources - Introduction of a European collaboration project	Silja Schmidtchen ***(EuXFEL)***
2	New online polarization diagnostics for 3rd harmonic afterburner radiation	Markus Braune ***(DESY)***
3	In-situ Cryogenic Cleaning of Tin-Contaminated EUV Optics	Norbert Böwering ***(U Bielefeld)***
4	Ultra-compact inline transmission grating spectrograph for extreme ultraviolet wavelengths	Sascha Brose ***(RWTH Aachen)***
5	Stand-alone extreme ultraviolet (EUV) metrological system for optical characterization of lithography materials	Wooram Kim ***(KRISS)***
6	Influence of experimental conditions on EUV / X-ray fluorescence yields investigated with the WDSX-300	Valentin Stoytschew ***(IAP-Adlershof)***
7	Enhanced thin film characterization through combined S- and P-polarized EUV reflectometry	Samira Naghdi ***(PTB)***
8	Investigation of the Optical Constants of Amorphous SiO_2 and Y-Cut Quartz from the Extreme to the Vacuum Ultraviolet Spectral Region	Najmeh Abbasirad ***(PTB)***
9	Simulated XUV spectroscopy in the laboratory with a polycapillary half lens and reflection zone plates	Jürgen Probst ***(NOB)***
10	X-ray standing wave coherence length in grazing exit geometry	Timur Terentev ***(U Twente)***
11	Exploring the soft X-ray energy range for next generation nanostructure metrology	Analía Fernández Herrero ***(PTB)***
12	Scatterometry Applications: Addressing Model Inaccuracies	Maren Casfor ***(PTB)***
13	Calibration of a broadband reflective spectrometer for high-resolution spectral characterization of radiation sources	Sophia Schröder ***(RWTH Aachen)***
14	Using Monte Carlo-based Uncertainty Quantification for Free-Form XRR	Hendrik Willem Lokhorst ***(University of Twente)***
15	On the way to automatized optics adjustment at FEL sources	Klaus Mann ***(Ifnano)***