

AVS

72

INTERNATIONAL SYMPOSIUM & EXHIBITION



NOVEMBER 8-13, 2026 | PITTSBURGH, PENNSYLVANIA



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Spectroscopic Ellipsometry (EL)

Call for Abstracts Due: May 18, 2026

Submit your abstract and select EL sessions!

EL1: Spectroscopic Ellipsometry Oral Session

EL2: In-Situ Ellipsometry for Atomic Scale Processing Oral Session

*This session will be part of the **Atomic Scale Processing (AP) Mini Symposium**, in collaboration with the **Thin Film (TF) Division**, the **Plasma Science & Technology (PS) Division**, the **Electronics Materials & Photonics (EM) Division**, and the **Spectroscopic Ellipsometry (EL) Technical Group***

EL3: Spectroscopic Ellipsometry Poster Session



Submit Abstract!

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The program of the Spectroscopic Ellipsometry (EL) Technical Group covers ellipsometry as an optical, polarization-resolved metrology technique to study & understand materials, thin films, and interface systems across fabrication, characterization, and application-driven research. Abstracts must emphasize how ellipsometry provides quantitative access to optical, electronic, and/or structural properties or reveals direct connections between optical response, material growth, and/or functional performance. Highlights include advances in ellipsometry instrumentation & analysis methods that improve sensitivity or offer novel insights across a range of studies, including atomic-scale thin-film evolution, interface processes, photochromic transitions, complex anisotropic systems, or optical chirality of spatially heterogeneous nanostructures. The EL program will further encompass real-time growth monitoring, detailed optical modeling, emerging application spaces, etc., to reflect the evolving role of ellipsometry as an enabling platform for modern materials science & engineering.



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Invited Speakers



Gottlieb Oehrlein
University of Maryland



Eva Schubert
University of
Nebraska-Lincoln



Matthew Hilfiker
Onto Innovation



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Invited Talk

**“Spectroscopic Ellipsometry
for Advanced Semiconductor
Metrology Applications”**



Matthew Hilfiker

Onto Innovation



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Invited Talk



Gottlieb Oehrlein
University of Maryland

“In-Situ Ellipsometry for Atomic Scale Processing”



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Invited Talk

**“Atomic Processes in
Surface-Limited ALD Growth
Studied by Real-Time
Spectroscopic Ellipsometry”**



Eva Schubert

University of Nebraska–Lincoln



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Awards & Attendance Support

The Spectroscopic Ellipsometry (EL) Technical Group,
through the generous financial support of J.A. Woollam Co., Inc.,

🏆 presents **Student Awards** for best oral presentation & best poster

🏆 provides **Student Travel Awards**

Graduate & undergraduate students with an accepted abstract to present at AVS 72 in an EL session are eligible. All accepted abstracts with a student as the presenting author are automatically considered. Multiple awards are anticipated.



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Areas of Interest

Advances in Spectroscopic Ellipsometry Methods:

noise reduction & signal processing techniques; *in situ* instrumentation & real-time process monitoring; novel ellipsometry hardware & measurement strategies; artificial intelligence & machine learning approaches for ellipsometry data analysis & modeling

Applications in Materials and Thin Films:

dielectric, semiconductor, or metal thin films; 2D materials; birefringence, optical anisotropy and/or chirality in polarization-resolved platforms; nano photonics, meta materials, or meta surfaces; energy-related materials, including solar, battery, and thermoelectric systems; emerging & quantum materials studied by ellipsometry



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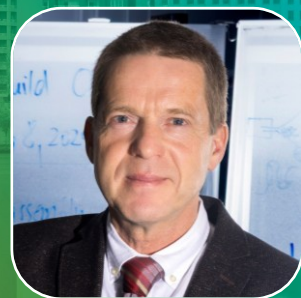
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Submit Abstract!



American Vacuum Society

Spectroscopic Ellipsometry (EL) Technical Group

The Spectroscopic Ellipsometry (EL) Technical Group promotes fundamental & applied research using ellipsometry & related techniques, ranging from classic materials science & optical thin film characterization to nano-scale science & novel sensing concepts. Topics of interest have traditionally focused on the characterization of optical coatings & inorganic thin films, relevant for many industrial applications. However, contemporary semiconductor fabrication processes, for example, face characterization challenges that permanently inspire advancements in the technique & its data analysis schemes. Recent advances range from increased accuracy & spectral ranges to novel acquisition procedures. These breakthroughs have enabled spectroscopic data acquisition in real-time and have triggered active research in analytical methods & artificial intelligence required to tackle the enormous data sets. New areas of interest have emerged in the fields of novel optical & electronic materials, as well as materials with sub-wavelength structures.



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CALL FOR ABSTRACTS

SUBMIT BY MAY 18, 2026



Call for AVS Awards Nominations

Major Awards: Due March 31, 2026

 **Medard W. Welch Award**

for outstanding theoretical and/or experimental accomplishments

 **Gaede-Langmuir Award**

for outstanding discoveries & inventions

 **Peter Mark Memorial Award**

for outstanding theoretical or experimental work by an early-career scientist

 **Fellow of the Society**

for sustained & outstanding technical contributions

 **George T. Hanyo Award**

for outstanding performance in technical support of research & development

Call for AVS Awards Nominations

Student Awards: Due May 18, 2026

for outstanding research by a graduate student:

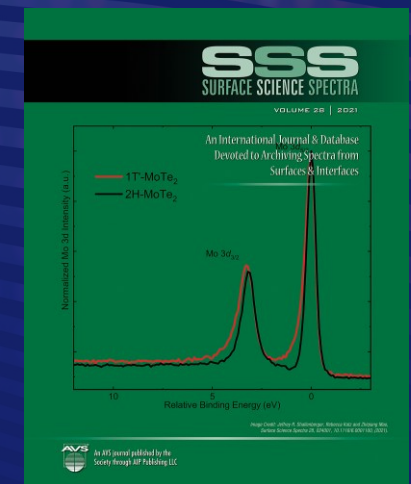
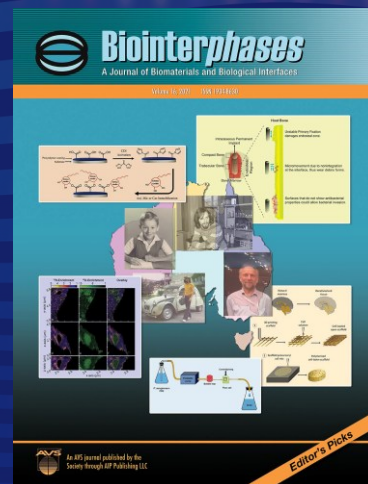
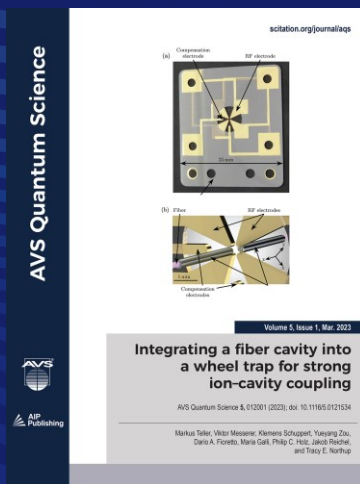
- 🏆 **Dorothy M. & Earl S. Hoffman Award & Scholarship**
- 🏆 **Nellie Yeoh Whetten Award**
- 🏆 **Russell & Sigurd Varian Award**
- 🏆 **Graduate Research Award**

Students may apply for one National Student Award & one Division/Group Award in each year.



AVS Publications

Submit your work to *AVS Quantum Science*, *Biointerphases*, *JVST A*, *JVST B*, or *SSS* !



Learn more about each journal and how to submit at:
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