



**Topical Areas**

2D Materials  
Biomaterials  
Environmental S&T  
Magnetic Materials  
Manufacturing S&T  
Materials Characterization  
Materials Processing  
MEMS  
Microelectronic Materials  
Nanoscale S&T  
Plasma S&T  
Quantum Science  
Spectroscopic Ellipsometry  
Surface Engineering  
Surface Science  
Thin Films  
Vacuum Technology

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**AVS Announces Its Major Award Winners of 2023**

New York, November 8, 2023 —The AVS has selected its major award winners for 2023. The AVS established an annual awards program to encourage excellence in research and innovation in technical areas of interest to the AVS. Listed below are the major award winners:

**Medard W. Welch Award**— Sergei Kalinin, University of Tennessee, Knoxville, “In recognition of transformational contributions to atomic- and nanoscale control of matter and development of machine-learning driven automated microscopy “The award recognizes and encourages outstanding accomplishments in the fields of interest to AVS. The award consists of a cash award, a medal, a plaque, and an honorary lectureship at a regular session of the International Symposium.

**John A. Thornton Memorial Award and Lecture**— Lars Hultman, Linköping University, Sweden, “For outstanding research and technological innovation on gas- and metal-ion-assisted PVD for controlling ceramic coatings formation” This award recognizes outstanding research or technological innovation in the areas of interest to AVS, with emphasis on the fields of thin films, plasma processing, and related topics. The award consists of a cash award, a plaque, and an honorary lectureship at a regular session of the International Symposium.

**Peter Mark Memorial Award**— Deep Jariwala, University of Pennsylvania, “For pioneering contributions to the development and characterization of heterostructures for new low-power electronic and opto-electronic devices” The award recognizes outstanding theoretical or experimental work by an early career scientist or engineer, at least part of which must have been published in an AVS Journal. The nominee must have worked in a scientific/technical field(s) for no more than 10 years (cumulative) after receiving their Ph.D. The award consists of a cash award, a plaque, and an honorary lectureship at a regular session of the International Symposium.

A complete list of the Fellows as well as the 2023 national graduate student winners is attached. Nominations for the 2024 awards are currently being solicited. For more information, please contact Angela Klink, AVS, 212-248-0200, fax 212-248-0245, e-mail [angela@avs.org](mailto:angela@avs.org).

## Additional Awards

### 2023 AVS Fellows

AVS Fellows are Platinum Members who have made outstanding contributions in areas of interest to AVS.

Líney Árnadóttir, Oregon State University, “For pioneering research contributions to understanding atomic-scale surface processes during materials degradation and catalysis, leadership in research collaborations, mentorship, educational excellence, and service to the community”

Kenan Fears, U.S. Naval Research Laboratory, “For contributions to biomolecule-surface interactions at scales ranging from single molecule to organism level”

Michael J. Gordon, University of California, Santa Barbara, “For advances in synthesis, characterization, engineering, and simulation of nanostructured materials for applications in optoelectronics, energy, chemical conversion, and biology”

Nan Jiang, University of Illinois Chicago, “For significant advances in sub-nanometer spatially resolved Raman spectroscopy of adsorbed molecules and low-dimensional materials”

Tiffany Kaspar, Pacific Northwest National Laboratory, “For outstanding contributions to the synthesis and characterization of epitaxial oxide thin-films leading to enhanced understanding of structure-property relationships, and significant STEM educational outreach”

Daniel R. Killelea, Loyola University Chicago, “For contributions to the fundamental understanding of metal oxide surface chemistry, surface science and catalysis, outstanding service to AVS and exceptional mentorship to junior scientists”

Svitlana Pylypenko, Colorado School of Mines, “For outstanding contributions to surface and interface analysis of energy materials and impactful commitment to education and outreach”

Yabing Qi, Okinawa Institute of Science and Technology Graduate University (OIST), “For pioneering works on the surface science of energy materials and development of next-generation solar cell technologies”

Fred Roozeboom, University of Twente, The Netherlands, “For outstanding contributions in the fields of semiconductor manufacturing and thin film processing, and for enduring service to AVS and to the scientific community”

Julia Scherschligt, NIST

“For outstanding contributions to vacuum science and metrology as a scientific manager, leader, and researcher”

Randy Shul, Retired, Sandia National Labs., “For pioneering research in plasma etching of wide-bandgap semiconductors for power device applications and dedicated service as an AVS short-course instructor and local chapter leader”

Xiao-Ying Yu, Oak Ridge National Laboratory, “For inventions and significant contributions to advancing *in situ* and *operando* chemical imaging of condensed-phase surfaces and interfaces using vacuum-based instruments”

## **2023 AVS National Student Awardees**

There are five (5) top-level named Graduate Student Awards and three (3) Graduate Research Awards, described below. The recipients of these awards are determined after a general competition with all the graduate research applicants and a presentation to the Awards Committee.

### **Russell and Sigurd Varian Award**

The Russell and Sigurd Varian Award was established in 1982 to commemorate the pioneering work of Russell and Sigurd Varian. It is presented to recognize and encourage excellence in graduate studies in the sciences and technologies of interest to AVS. The award is supported by Agilent Technologies Vacuum Products Division. It consists of a cash award, a certificate, and reimbursed travel support to attend the International Symposium.

- Asir Intisar Khan, Stanford University

### **Nellie Yeoh Whetten Award**

The Nellie Yeoh Whetten Award was established in 1989, in the spirit of Nellie Yeoh Whetten, to recognize and encourage excellence by women in graduate studies in the sciences and technologies of interest to AVS. A fund to support the award was established by Timothy J. Whetten, friends and family of Nellie Yeoh Whetten, and AVS. The award consists of a cash award, a certificate, and reimbursed travel support to attend the International Symposium.

- Yanjun Yang, University of Georgia

### **Dorothy M. and Earl S. Hoffman Award**

The Dorothy M. and Earl S. Hoffman Award was established in 2002 to recognize and encourage excellence in graduate studies in the sciences and technologies of interest to AVS. It is funded by a bequest from Dorothy M. Hoffman, who was president of AVS in 1974 and held other positions of responsibility in the Society. The award consists of a cash award, a certificate, and reimbursed travel support to attend the International Symposium.

- Ranjitha K. Hariharalakshmanan, University of Arkansas at Little Rock

### **Dorothy M. and Earl S. Hoffman Scholarships**

The Dorothy M. and Earl S. Hoffman Scholarships were established in 2002 to recognize and encourage excellence in graduate studies in the sciences and technologies of interest to AVS. They are funded by a bequest from Dorothy M. Hoffman. The scholarships consist of a cash award, a certificate, and reimbursed travel support to attend the International Symposium.

- Lidia Kuo, Northwestern University
- Yixin Xiao, University of Michigan, Ann Arbor

## **2023 Graduate Research Awards**

The Graduate Research Awards were established in 1984 to recognize and encourage excellence in graduate studies in the sciences and technologies of interest to AVS. Each consists of a cash award, a certificate, and reimbursed travel support to attend the International Symposium.

- Dairong Liu, University of Illinois Chicago
- Arjun Subedi, University of Nebraska-Lincoln
- Sneha Upadhyay, Ohio University

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