



Science and Technology of Materials, Interfaces, and Processing

MEDIA RELEASE

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212-248-0200, ext. 222

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530-896-0477

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AVS
125 Maiden Lane, 15th Floor
New York NY 10038

Phone: 212-248-0200
Fax: 212-248-0245
E-mail: avsnyc@avs.org
Web: www.avs.org

AVS Announces Its Major Award Winners of 2022

New York, November 9, 2022 —The AVS has selected its major award winners for 2022. 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— Susan B. Sinnott, The Pennsylvania State University, “For outstanding contributions to the development and utilization of computational methods to advance atomic-scale insights into the mechanisms associated with surface chemistry, thin-film growth, and materials discovery” 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.

Gaede-Langmuir Award— Robert Madix, Harvard University, “For ground-breaking research that advanced the development of surface science for understanding complex surface reactions and their relationship to heterogeneous catalysis” This award recognizes outstanding discoveries and inventions in the fields of interest to AVS. 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— Rudy J. Wojtecki, IBM Almaden Research Center, “For outstanding contributions towards the future of computing through the application of supramolecular and dynamic covalent chemistries in the design of surfaces for area selective depositions” 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 2022 national graduate student winners is attached. Nominations for the 2022 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.

Additional Awards

2022 AVS Fellows

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

David Adams, Sandia National Labs, “For outstanding contributions in the field of reactive materials and thin-film technologies, and for sustained commitment and contributions to national and local AVS and the field of vacuum science”

Andy Antonelli, Onto Innovation, “For outstanding contributions to the fields of semiconductor metrology, picosecond laser ultrasonics, low dielectric constant materials, and the continued advancement of Moore’s law”

Daniel J Graham, University of Washington, “For development of ToF-SIMS methods to investigate important problems in biology and medicine, especially the application of multivariate analysis methods for the interpretation of complex ToF-SIMS datasets”

Eric Joseph, IBM T.J. Watson Research Center, “For outstanding contributions in atomic layer processing and novel phase change materials, from fundamental plasma surface interactions through industrial implementation, and for dedicated service to the AVS and PSTD”

Hendrik Ohldag, Lawrence Berkeley National Laboratory, “For exploring complex magnetic phenomena using novel x-ray techniques with unprecedented spatial and temporal resolution”

Olga Ovchinnikova, Thermo Fisher Scientific, “For development of nanoscale multimodal chemical imaging platforms and analysis workflows for understanding coupled chemical and physical phenomena in complex materials”

Gareth S. Parkinson, TU Wien, Austria, “For outstanding contributions to our understanding of surface chemical processes using well-defined model systems, particularly in single-atom catalysis, and for outstanding work on iron-oxide surfaces”

Petra Reinke, University of Virginia, “For contributions to materials science at surfaces of relevance to electronic, and magnetic applications, and oxidation of technical alloys, and for lifelong and very impactful commitment to AVS”

Alexander Shard, National Physical Laboratory, UK, “For innovative procedures to improve the quantitative reliability of SIMS and XPS measurements and international leadership to increase confidence in surface analyses”

Steven L. Tait, Indiana University, “For the development of metal-ligand strategies for on-surface assembly and for single-atom catalyst design and for service in the Surface Science Division and Prairie Region”

Scott G. Walton, Naval Research Laboratory, “For outstanding contributions to the science of ultra-low temperature plasma source development, characterization, and use for atomic scale precision processing applications”

Geun-Young Yeom, SungKyunKwan University, South Korea, “For outstanding contributions in the areas of plasma-assisted materials processing, atomic-scale processing, and their applications to the semiconductor and display industry by developing novel plasma sources”

2022 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.

- Tzu-Ling Liu, 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.

- Julia Murphy, University of Chicago

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.

- Erik Cheng, The University of Texas at Austin

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.

- Kiyong Jo, University of Pennsylvania
- Xiao Zhao, University of California, Berkeley

2022 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.

- Annaëlle Demaude, Université libre de Bruxelles
- Dhruval Patel, University of Illinois at Urbana-Champaign
- Saima Aktar Sumaiya, University of California, Merced

Marketing Communications Contact: Della Miller, AVS West, 110 Yellowstone Dr., Suite 120 Chico CA 95973, Phone: 530-896-0477, Fax 530-896-0487, E-mail della@avs.org