



Preview: 2019 Materials Research Society Fall Meeting & Exhibit

Hynes Convention Center and Sheraton Boston Hotel, Boston, Massachusetts
Meeting: December 1–6 • Exhibit: December 3–5 • mrs.org/fall2019

The Materials Research Society (MRS) will hold its 2019 MRS Fall Meeting and Exhibit at the Hynes Convention Center and the Sheraton Boston Hotel in Boston, Mass., December 1–6. The Meeting will include technical programming, tutorials, an award ceremony, poster sessions, a career fair, and other special activities.

MRS meetings focus on leading interdisciplinary materials research in both fundamental and applied areas, coordinated by more than 200 scientists from both academia and industry worldwide. The Meeting's core is its technical program, which includes 54 symposia that are organized into eight clusters.

Symposium clusters

Broader Impact includes a symposium on Materials Data Science—Transformations in Interdisciplinary Education. Topics will include interdisciplinary communications, teaching data science skills at the undergraduate and graduate levels, and data life cycle and duration.

The **Electronic, Photonic and Magnetic Materials** cluster focuses on a broad

range of advanced functional materials for electronics, multiferroics, and magnetoelectrics. The five symposium topics range from emerging material platforms and approaches for plasmonics, metamaterials, and metasurfaces to molecular and organic ferro- and piezoelectrics.

The **Energy and Environment** cluster includes 17 selected topics that highlight everything from challenges in battery technologies for next-generation electric vehicles, to green electrochemical energy-storage solutions, and nanomaterials for sensing and control of energy systems.

The **Fabrication of Functional Materials and Nanomaterials** cluster covers six topics from 2D materials beyond graphene, to crystal engineering of functional materials, to advanced atomic layer deposition.

The **Materials for Quantum Technology** cluster features three symposia on materials for quantum computing applications, coherent and correlated magnetic materials for hybrid quantum interfaces, and predictive synthesis and advanced characterization of emerging quantum materials.

Materials Theory, Computation and Characterization features seven symposia that cover diverse topics such as advanced atomistic algorithms, using machine learning in high-throughput discovery of new materials, and *in situ/operando* studies of dynamic processes in ferroelectric, magnetic, and multiferroic materials.

Mechanical Behavior and Structural Materials includes four symposia that cover a diverse range of topics, including extreme mechanics, high-entropy alloys and other novel high-temperature structural alloys, and mechanics of nanocomposites and hybrid materials.

The **Soft Materials and Biomaterials** cluster has 11 symposia that focus on advanced neural materials and devices, bioelectrical interfaces, hydrogel materials, and bringing mechanobiology to materials.

Plenary session and awards

The **Plenary Session Featuring The Fred Kavli Distinguished Lectureship in Materials Science** presentation will be held on Monday, December 2, at 6:30 pm in the Sheraton Boston Hotel, Grand

2019 MRS FALL MEETING & EXHIBIT

MEETING CHAIRS

Bryan D. Huey
University of Connecticut

Stéphanie P. Lacour
École Polytechnique
Fédérale de Lausanne

Conal E. Murray
IBM T.J. Watson
Research Center

Jeffrey B. Neaton
University of California,
Berkeley, and Lawrence
Berkeley National Laboratory

Iris Visoly-Fisher
Ben-Gurion University
of the Negev

Ballroom. This year's plenary speaker is **Sharon C. Glotzer**, University of Michigan.

The **MRS Awards and Recognition Program Featuring the Von Hippel Presentation** will convene on Wednesday, December 4, from 5:30 pm to 7:30 pm in the Sheraton Grand Ballroom. The Von Hippel Award, David Turnbull Lectureship, MRS Medal, Materials Theory Award, The Kavli Foundation Early Career Lectureship in Materials Science, the MRS Nelson "Buck" Robinson Science and Technology Award for Renewable Energy, *MRS Bulletin* Postdoctoral Publication Prize, MRS Postdoctoral Awards, Graduate Student Gold and Silver Awards, and the Arthur Nowick Graduate Student Award will be presented. For up-to-date award recipient information, visit mrs.org/fall2019.

Join us for an evening of **Special Talks and Panel Discussion Featuring MRS Award Recipients** on Tuesday, December 3, at 6:15 pm. This event will feature flash talks (10-minute summaries explaining current research topics) from the following 2019 MRS Fall Meeting Award recipients: EU-40 Materials Prize (E-MRS Award); The Kavli Foundation Early Career Lectureship in Materials Science; Materials Theory; MRS Medal; and David Turnbull Lectureship.

Special sessions and events

Symposium X talks provide Meeting attendees with an overview of leading-edge topics. Featured speakers are Brian Litt, University of Pennsylvania (Monday); Evelyn Wang, Massachusetts Institute of Technology (Tuesday); Francesco Stellacci, École Polytechnique Fédérale de Lausanne (Wednesday); and Alessandra Lanzara, Lawrence Berkeley National Laboratory and University of California, Berkeley (Thursday).

Artificial intelligence/machine learning is featured in two **LATE NEWS—HOT TOPIC symposia** for the Fall Meeting: MT02, Closing the Loop—Using Machine Learning in High-Throughput Discovery of New Materials; and MT03, Automated and Data-Driven Approaches to Materials Development—Bridging the Gap Between Theory

HOTELS IN BOSTON

MRS receives meeting space at a greatly discounted rate as a result of contracting a large block of sleeping rooms at the official meeting hotels. In order to keep meeting costs as low as possible and minimize the financial risk to MRS, we encourage you to utilize official MRS housing while you are attending an MRS meeting.

Hotels offering discounted rates for the Meeting are listed below. **When making your reservation, please make sure you are doing so through the 2019 MRS Fall Meeting website at mrs.org/fall2019/hotels.***

<p>◆ Sheraton Boston Hotel 39 Dalton St., Boston, Mass. 02199 617.236.2000 or 888.627.7054 Group Rate: \$212 single, \$222 double Additional persons: \$20 ea.** Deadline: November 11, 2019</p> <p>◆ Boston Marriott Copley Place 110 Huntington Ave., Boston, Mass. 02116 617.236.5800 Group rate: \$206 single, \$223 double, Additional persons: \$20 ea.** Deadline: November 6, 2019</p> <p>◆ The Westin Copley Place 10 Huntington Ave., Boston, Mass. 02116 617.262.9600 Group Rate: \$208 single, \$218 double Additional persons: \$20 ea.** Deadline: November 8, 2019</p> <p>◆ The Colonnade Hotel 120 Huntington Ave., Boston, Mass. 02116 617.424.7000 Group Rate: \$209 single, \$209 double, \$239 triple, \$269 quad** Deadline: November 11, 2019</p>	<p>◆ Hilton Boston Back Bay Hotel 40 Dalton St., Boston, Mass. 02115 617.236.1100 Group Rate: \$219 single/double, \$239 triple/quad** Deadline: November 8, 2019</p> <p>◆ Boston Park Plaza 50 Park Plaza at Arlington St., Boston, Mass. 02116 800.225.2008 or 617.426.2000 Group Rate: \$180 single, \$200 double, \$220 triple, \$240 quad** Deadline: November 8, 2019</p> <p>◆ Embassy Suites Boston at Logan Airport 207 Porter St., Boston, Mass. 02128 617.567.5000 Group Rate: \$159 single Additional persons: \$10 ea.** Deadline: November 10, 2019</p>
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* Unofficial housing bureaus have contacted exhibitors and potential attendees and/or created websites with housing options. These companies are not affiliated with the 2019 MRS Fall Meeting. Only the MRS website will have official housing for the Meeting.

** plus applicable taxes and fees

mrs.org/fall2019/hotels

and Industry. In addition, a **Quantum Materials Panel Discussion**, organized jointly among the three symposia (MQ01, MQ02, MQ03) in the Materials for Quantum Technology cluster, is planned for Wednesday, December 4, from 3:30 pm to 5:00 pm in Room 202 of the Hynes Convention Center.

Essentials of Getting Your Work Published, a professional development offering, is planned as a Hub Stage event on Sunday, December 1.

Poster sessions will be held in the evenings. The Meeting chairs will award

prizes of up to \$500 for the best posters during each evening session.

The **Materials Voice Booth** will be in The Hub—Hall D on Tuesday and Wednesday from 11:00 am to 5:30 pm and Thursday from 10:00 am to 1:30 pm. **Tell your US legislators why support of the physical sciences and science education is necessary**—for national security, quality of life, and a strong economy. We invite you to utilize Materials Voice to ensure your message is heard on science policy issues.

The **Government Affairs Committee** will host **Research Funding**



Opportunities sessions on Tuesday and Thursday. These sessions provide interaction between government agency presenters and the MRS Membership. Invited talks will be followed by roundtable Q&A sessions with individual program managers.

The **Congressional Science and Engineering Fellowship Program Information Session** will be held on Tuesday, December 3, from 4:15 pm to 5:15 pm. MRS offers exciting opportunities for scientists to learn about the field of science policy by spending one year as a special legislative assistant in the US Congress in Washington, DC. Come learn about the MRS/OSA and MRS/TMS Congressional Science and Engineering Fellowships and hear from current and former Fellows about their experiences as scientists in the US Senate and House of Representatives.

The **iMatSci Innovation Showcase** provides a platform for independent technology leaders and those at universities, research laboratories, and startup companies to demonstrate the

practical applications of their materials-based technologies. The entities behind these innovations will generally be pre-revenue and seed-stage innovators that are actively seeking partners, funding, or avenues for moving toward product commercialization. iMatSci will take place on Tuesday, December 3, from 8:00 am to 9:30 pm.

Green Cards for Scientific Researchers: How to Win Your EB-1/NIW Case will take place on The Hub Stage–Hall D on Tuesday from 12:00 pm to 12:45 pm. This presentation will cover and compare the criteria for EB-1A classification for foreign nationals of extraordinary ability in the sciences; EB-1B classification for foreign nationals who are outstanding researchers and professors; and the National Interest Waiver (“NIW”) Category.

Throughout the week, **Science in Video (SciVid)**, a high-impact materials science video competition, will showcase the finalists as they compete for recognition and prizes. Members will be asked to vote on their favorite videos from the SciVid

Competition finalists to determine the People’s Choice winner. A viewing station will be located at the Public Outreach Center in The Hub–Hall D and in several locations throughout the Meeting. The SciVid awards presentation will take place on The Hub Stage on Wednesday, December 4, at 1:00 pm. For more information, visit mrs.org/sci-vid.

Creating an Effective IP Strategy: What Startups Need to Know will be held in the Sheraton, Constitution A, from 12:00 pm to 12:45 pm on Tuesday.

The Meeting will also include the **Women’s Workshop and Reception** (Sunday, December 1) and the **Women in Materials Science & Engineering Breakfast** (Wednesday, December 4). Additional information will be available via the MRS website and the MRS Meeting App. Preregistration is required.

The **Careers at Government Laboratories and User Facilities—Panel Discussion** will be held on The Hub Stage–Hall D on Monday, December 2 (4:30 pm–5:30 pm). This discussion is intended for students and early-career

TUTORIALS

The 2019 MRS Fall Meeting will feature 13 tutorials held on Sunday, December 1, Hynes Convention Center, Level 2.

Tutorials cover a variety of topics to complement the symposium sessions and are free of charge for all registered attendees. Tutorial notes will be available for purchase at the preregistration price of \$35 until November 15. After the preregistration period ends, notes will be available for purchase for \$45 on Sunday at Registration and then at the MRS/Cambridge Publications Booth 100 in the Exhibit Hall during Exhibit hours.

<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">EL01</div> Optical Metasurfaces— Materials, Designs and Advanced Applications 8:30 am–5:00 pm	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">FF03</div> Aggregation-Induced Emission 8:30 am–5:00 pm
<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">EL04</div> Introduction to Chalcogenide Discovery and Design 8:30 am–12:00 pm	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">FF06</div> Advanced Manufacturing and Computational Tools for Reactive Materials Science 8:30 am–5:00 pm
<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">EN08</div> Processing and Device Optimization Strategies for High Efficiency Solar Cells 1:30 pm–5:00 pm	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">MQ01</div> Introduction to Quantum Spintronics 1:30 pm–5:00 pm
<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">EN11</div> Silicon Photovoltaics— Device Concepts, Materials and Interfaces Engineering, Fabrication, Testing and Applications 1:30 pm–5:00 pm	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">MQ02</div> Introduction to Ion Trap and Superconducting Qubits and Their Material Challenges 8:30 am–12:00 pm
<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">EN17</div> Nuclear Materials and Damage— Design and Impact 1:30 pm–5:00 pm	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">MT02/ MT03</div> Applied Machine Learning for Materials Research and Development 8:30 am–5:00 pm
<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">FF01</div> Advances in Large-Scale Synthesis of Beyond Graphene 2D Materials 1:30 pm–5:00 pm	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">MT04</div> Advanced Materials Exploration with Neutrons 8:30 am–5:00 pm
	<div style="background-color: #4f7942; color: white; padding: 2px 5px; font-weight: bold; margin-bottom: 5px;">SB06</div> Molecules and Materials in Mechanobiology 1:30 pm–5:00 pm

mrs.org/fall2019/symposium-sessions/tutorial-sessions

professionals interested in learning more about potential career paths at national laboratories.

The **How to Develop an Effective Proposal for User Facilities** workshop on Tuesday, December 3 (4:00 pm–8:00 pm), will help guide students through the proposal writing process to conduct research at a user facility or national laboratory. Representatives from various user facilities and students who have already completed research will give advice to prospective students regarding the submission process, seeking funding, and preparation for their visit.

The **How to Prepare for Your ABET Accreditation** session will help materials departments prepare for their ABET visit. The training will be held on Tuesday, December 3, from 7:15 pm to 9:30 pm, and the session may be attended without registering for the Meeting. Remote access will be available if unable to attend in person. Preregistration is recommended via mrs.org/ABET-training.

Meet Your New Faculty Candidate—Poster Session is a new poster session being held in The Hub–Hall D on Wednesday, December 4 (4:00 pm–7:00 pm), for those who are seeking a faculty position. This poster session will offer a unique and interactive setting that will help faculty candidates and recruiting departments find their best matches more efficiently. Faculty candidates registered for the MRS Fall Meeting are invited to submit an abstract for this poster session by October 15, 2019. Search committees and current faculty are encouraged to attend to meet this year’s faculty candidates. Additional information is available at mrs.org/fall2019/meet-your-new-faculty-candidate.

The **Frontiers Reception–Building Communities** featuring **PowerPoint Karaoke** will be held on Thursday, December 5. Attendees are invited to participate in PowerPoint Karaoke from 5:30 pm to 6:45 pm, where they can showcase their research in an interactive and fun way. Preregister to be a presenter or submit a slide. Information can be found at mrs.org/fall2019/powerpoint-karaoke.

Following PowerPoint Karaoke, from 7:00 pm to 8:00 pm, attendees can join in the Frontiers Reception–Building

2019 MRS FALL MEETING REGISTRATION RATES		
	PREREGISTRATION before 11:59 pm (ET) November 15, 2019	ON-SITE REGISTRATION after 11:59 pm (ET) November 15, 2019
Meeting Registration	\$750	\$890
Meeting Registration with MRS Member Discount	\$590	\$740
Student Registration (Proof of student status required.)	\$180	\$210
Student Registration with MRS Member Discount	\$140	\$170
Retired	\$190	\$215
Unemployed	\$160	\$200

2019 MRS Fall Meeting registration includes a complimentary one-year membership to MRS beginning January 1, 2020, through December 31, 2020.

Communities. “Quantum! Sustainability! Artificial Intelligence! Bio! Responsive & Adaptive Materials! YOUR Emerging Areas of Interest!” Will these emerging frontiers change the process of materials research? Help MRS chart a course to build new materials communities. Be a part of this interactive brainstorming mixer. Appetizers and beverages are included.

During the **Real-Life Challenges and Opportunities in Sustainable Product Design Seminar**, attendees will learn how to incorporate sustainability principles into research in a more comprehensive way while considering real-world applications in product design and manufacturing. This popular seminar will be held on Sunday, December 1, from 6:30 pm to 7:30 pm and Tuesday, December 3, from 5:30 pm to 6:30 pm, and is aimed at materials researchers at all career stages.

The **“Materials Needs for Energy Sustainability by 2050”** series of panel sessions is jointly organized by the MRS Focus on Sustainability Subcommittee and the *MRS Energy and Sustainability* journal. The program, planned for Monday, December 2, from 5:15 pm to 6:15 pm, focusing on plastics, will convene top experts to discuss scientific, technological, and sociological complexities relating to energy, the environment, and sustainability. This event will include an audience Q&A as well as real-time interactive audience polling, so bring your smartphone and be ready to participate

in this provocative session. This event is sponsored by the National Science Foundation and Thermo Fisher Scientific.

The **National Science Foundation (NSF)** will be participating at the Public Outreach Center. The Division of Materials Research will be present to schedule personal interviews with program directors to discuss diversity, sustainability, funding opportunities, and how to write a successful proposal.

Speed Coaching with the NSF Division of Materials Research will be featured in The Hub–Hall D on Tuesday from 9:00 am to 5:00 pm.

For more information

Registration for the 2019 MRS Fall Meeting includes a complimentary one-year membership to MRS beginning January 1, 2020, through December 31, 2020. **The deadline to preregister for the Meeting is November 15, 2019, 11:59 pm (ET).** International travelers are reminded to allow ample time to obtain a visa, if needed.

For additional details about the Meeting, contact MRS Member Services: info@mrs.org (email) or 724-779-3003 (phone). Details of various events and activities will be available via the MRS Meeting App and in the Meeting & Exhibit Guide available on-site. The MRS website can also be accessed for updated information on confirmed talks, details of special events, information on obtaining a visa, and preregistration: mrs.org/fall2019.



2019 MRS® FALL EXHIBIT

mrs.org/fall2019/exhibit

HYNES CONVENTION CENTER, LEVEL 2

Tuesday, December 3 11:00 am – 5:30 pm

Wednesday, December 4 11:00 am – 5:30 pm

Thursday, December 5 10:00 am – 1:30 pm



abcr GmbH
 Accurion, Inc.
 Across International LLC
 ACS Publications
 Admiral Instruments
 AdValue Technology, LLC
 Advanced Polymer Materials Inc.
 Advanced Research Systems, Inc.
 AIP Publishing
 AJA International, Inc.
 Alemnis AG
 Allevi, Inc.
 Allwin21 Corp.
 American Physical Society
 ANCORP
 Andeen-Hagerling, Inc.
 Angstrom Engineering Inc.
 Angstrom Sciences, Inc.
 Angstrom Scientific Inc.
 Anton Paar
 Applied Surface Technologies
 Asahi Spectra Co., Ltd.
 Asylum Research,
 an Oxford Instruments Company
 attocube systems Inc.
 Barnett Technical Services
 BASi
 Bio-Logic USA, LLC
 Blue Wave Semiconductors, Inc.
 Bruker
 Bruker—AFM Probes
 Bruker Nano
 Cambridge University Press/
 Materials Research Society
 Carl Zeiss Microscopy, LLC
 Cell Press
 CELLINK
 Chemat Scientific
 Cobolt by HUBNER Photonics
 CRAIC Technologies, Inc.
 CrystalMaker Software Ltd.
 CVD Equipment Corporation
 DataPhysics Instruments USA Corp.
 DCA Instruments, Inc.
 DE GRUYTER
 Delcom Instruments
 Delong America Inc.
 Digital Surf
 Duniway Stockroom Corporation
 Ebara Technologies, Inc.
 Ebatco
 Ecopia Corp.
 ECS—The Electrochemical Society
 EDAX Inc., AMETEK Materials
 Analysis Division
 Edinburgh Instruments Ltd.
 Electron Microscopy Innovative
 Technologies
 Electron Microscopy Sciences
 Electron Optics Instruments LLC |
 EmCrafts

Elsevier
 Energetiq Technology, Inc.
 Enli Technology Co., Ltd.
 Ereztech LLC
 ETRI (Electronics and
 Telecommunications Research
 Institute)
 Evactron® by XEI Scientific, Inc.
 Extrel CMS, LLC
 FemtoTools AG
 Fischione Instruments
 Frontiers
 Furuya Metal Americas, Inc.
 Gamry Instruments
 Gatan
 Geib Refining Corporation
 Geowell Vacuum Co., Ltd.
 Goodfellow Corporation
 Graphene Square Inc.
 Hamamatsu Corporation
 HeatWave Labs, Inc.
 Heidelberg Instruments Inc.
 Herzan LLC
 Hitachi High Technologies America, Inc.
 HORIBA Scientific
 Hummingbird Scientific
 Huntington Vacuum Products
 ID Quantique SA
 InRedox LLC
 Instec, Inc.
 Integrated Dynamics Engineering
 Integrated Surface Technologies
 International Centre for Diffraction Data
 (ICDD)
 International Union of Crystallography
 IONTOF
 IOP Publishing
 ISS, Inc.
 Janis Research Company, LLC
 Japan Science and Technology Agency
 JASCO
 JEOL USA, Inc.
 JoVE
 KA Imaging
 Kaufman & Robinson, Inc.
 Keysight Technologies
 KLA Corporation
 Kleindiek Nanotechnik
 KP Technology USA Inc.
 Kurt J. Lesker Company
 Lake Shore Cryotronics, Inc.
 Linkam Scientific Instruments
 LTS Research Laboratories, Inc.
 M. Braun Inc.
 Mad City Labs, Inc.
 Malvern Panalytical
 Materials Analysis Technology Inc.
 (MA-tek Inc.)
 Matheson Tri-Gas, Inc.
 MilliporeSigma
 MIT Press

MKS Instruments
 Montana Instruments
 MSE Supplies LLC
 MTI Corporation
 Naieel Technology
 Nano-Master, Inc.
 NanoAndMore USA Corp.
 NanoMagnetics Instruments
 Nanosurf, Inc.
 NANOVEA
 NBM Design, Inc.
 neaspec GmbH
 Neocera, LLC
 NETA
 NETZSCH Instruments
 North America, LLC
 Nor-Cal Products, Inc.
 NT-MDT America, Inc.
 OptiGrate, An IPG Photonics Company
 OriginLab Corporation
 Oxford Instruments America, Inc.
 Park Systems Inc.
 Photothermal Spectroscopy Corp.
 PicoQuant Photonics
 North America, Inc.
 Pine Research Instrumentation, Inc.
 Pittcon 2020
 Plasmaterials, Inc.
 Princeton Scientific Corp.
 PROTO
 Protochips, Inc.
 PVD Products, Inc.
 Qnami GmbH
 Quantum Design, Inc.
 R.D. Mathis Company
 Radiant Technologies, Inc.
 Raith America, Inc.
 Renishaw Inc.
 Rigaku
 Rocky Mountain Vacuum Tech, Inc.
 Royal Society of Chemistry
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 SAGE Publishing Ltd.
 Science/AAAS
 Scienta Omicron, Inc.
 Scribner Associates Inc.
 Seki Diamond Systems
 Semilab USA LLC
 Sensofar Metrology
 Sine Scientific Instruments
 SmarAct Inc.
 Software for Chemistry & Materials
 SPECS-TII, Inc.
 SPEX SamplePrep
 SPI Supplies, Division of Structure
 Probe, Inc.
 Springer Nature
 SPS-America
 STAIB Instruments, Inc.
 Strem Chemicals, Inc.
 Super Conductor Materials, Inc.
 Synton-MDP AG
 TA Instruments
 Taylor & Francis Group
 TDK-Lambda Americas—Neptune
 Ted Pella, Inc.
 TESCAN-USA
 Thermo Fisher Scientific
 THINKY USA, Inc.
 Toshiba Manufacturing Co., Ltd.
 Trion Technology, Inc.
 UC Components Inc.
 ULVAC Technologies, Inc.
 Vacuum Technology Inc.
 VAT Group
 Verder Scientific, Inc.
 Vigor Tech USA, LLC
 Wafer World Inc.
 Wiley
 WITec Instruments Corp.
 J.A. Woollam Company, Inc.
 World Scientific Publishing
 Zurich Instruments USA, Inc.

USER FACILITIES

DIII-D National Fusion Facility
 Environmental Molecular Sciences Laboratory (EMSL)
 High Flux Isotope Reactor/Spallation Neutron Source
 ISS U.S. National Laboratory
 nanoHUB
 Nanoscale Science User Facilities
 National High Magnetic Field Laboratory
 National Nanotechnology Coordinated Infrastructure
 Nuclear Science User Facilities (NSUF)
 PARADIM/Cornell NanoScale Facility
 Penn State Materials Research Institute
 Society for Science at User Research Facilities (SSURF)
 Synchrotron Light Sources
 UMass Lowell Core Research Facilities

