

AVS TO MEET IN SEATTLE IN OCTOBER

The American Vacuum Society will hold its 46th international symposium at the Washington State Convention Center in Seattle from Monday, 25 October, to Friday, 29 October. The 1200 or so speakers at the meeting will cover a wide range of topics, from the analysis and modeling of surfaces, films, and interfaces to the fabrication and application of novel materials. Many of these individuals will focus on materials such as silicon, organics, nitride semiconductors, dielectrics, polymers, carbon nanotubes, plasmas, and proteins. Others will address the application of vacuum science to such fields as microelectronics, biology at the nanoscale, display technology, and devices for computation and communication. Parallel sessions are being organized by the society's eight divisions and three technical groups, and an unprecedented number of them will be jointly sponsored.

The four topical conferences scheduled will focus on flat-panel displays, organic electronic materials, the science of microelectromechanical systems, and emerging opportunities and issues in nanotubes and nanoelectronics. Magnetic recording is this year's special focus area and there will be a number of sessions that deal with advances in magnetic recording and related technologies. In addition, more than 50 short courses will be offered. Courses will include vacuum and surface science, thin films and coatings, and materials processing and characterization.

On the Sunday preceding the meeting, the biomaterials interfaces technical group will sponsor a plenary session on "Biomaterial Interfaces: From Devices to the Nanoscale" from 3 to 6 pm in room 6A at the convention center. The surface science division will host its postdeadline discovery session, a symposium tradition, on Thursday evening. Poster sessions will be held on Monday through Wednesday, beginning at 5:30 pm.

The plenary lecture will be held on Monday 25 October at 12:30 pm in ballroom 6A at the convention center. Marc Abrahams, editor and cofounder

of the *Annals of Improbable Research*, will give a talk entitled "Advances in Improbable Research," featuring highlights from the Ig Nobel Prize ceremonies held annually at Harvard University.

The equipment and technology exhibition, featuring over 200 companies displaying products and services, will be open on Tuesday from 11 am to

citation, his "seminal contributions to the atomic-level understanding of thin-film growth, interfacial interactions, and etching."

The Albert Nerken Award will go to **Paul H. Holloway** for his "seminal contributions to the science and technology of surface reactions, particularly low-temperature and beam-stimulated oxidation, and of ohmic contacts to compound." Holloway is a professor of materials science and engineering at the University of Florida.

Timothy J. Coutts, a research fellow at the National Renewable Energy Laboratory in Golden, Colorado, will receive the John A. Thornton Memorial Award and Lectureship. Coutts is being honored for his "innovative and outstanding research, teaching, and technical leadership in the optimization and applications of thin films as transparent conducting oxides and solar-cells."

The Peter Mark Memorial Award will be presented to **Eray S. Aydil**, an associate professor in the chemical engineering department at the University of California, Santa Barbara. His contribution consists of "pioneering work in the development and application of optical diagnostic techniques to understand the chemistry and physics associated with plasma deposition of dielectric thin films."

Robert A. Childs will garner the George T. Hanyo Award, which recognizes outstanding performance in technical support of research or development. Childs, a technical supervisor at the Alcatraz Vacuum Laboratory at MIT, is being honored for his work on the Alcatraz program as well as other projects.

The John L. Vossen Memorial Award, given for the development of demonstration experiments by a middle or high school science teacher, will go to **Chris Ann Slye**. A teacher at Norwin High School in North Huntingdon, Pennsylvania, Slye is being recognized for "developing a demonstration experiment on the characteristics of heat transfer in a vacuum."

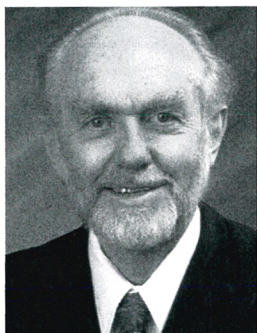
The Nellie Yeoh Whetten Award,



WEAVER



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7 pm, Wednesday from 9 am to 5 pm, and Thursday from 9 am to 3 pm.

AVS will host a job center that will be open from 2 to 7 pm on Sunday and from 8 am to 5 pm on Monday through Wednesday. On Tuesday, a job information forum will be held from noon to 2 pm, and a career workshop will be held from 6 to 9 pm at the adjoining Sheraton Hotel.

The awards assembly will be held at 6:45 pm on Wednesday at the convention center, and it will be followed by a reception at the Sheraton. AVS will present its 1999 awards to the following individuals:

John H. Weaver, a professor of materials science at the University of Minnesota, will receive the Medard W. Welch Award for, according to the

given for excellence in graduate studies by a woman, will go to **Nerissa Taylor** of the University of Illinois at Urbana-Champaign.

The finalists for the Russell and Sigurd Varian Fellowship are **Sanjit S. Dang** of the University of Illinois at Chicago, **Brent M. Jones** of

Princeton University, and **Karen E. Waldrip** of the University of Florida. The winner of the fellowship will be announced at the meeting. ■

Sessions with Invited Speakers

Monday, 25 October

morning

Magnetic recording: Chemical integration and tribology. *Bogy, Fowler, Koka*

Imaging and small area analysis. *Prutton, Magonov*

Biosensor-biology interface. *Aizawa, Pierschbacher*

Nitride epitaxy. *Speck, Kuech*

Field emission displays and vacuum packaging issues. *Wallace, Fahlen*

New magnetic materials. *Tanaka, Bader*

Advanced design methodologies and factory modeling. *Strojwas, Bell*

Nanotechnology. *Murday, Williams*

Organic devices. *Dodabalapur, Tang*

Plasma damage. *Downey*

Chemistry on oxides. *Brown Jr*

Catalysis on metals. *Schmidt*

Water-surface interactions. *Ellison*

Advances in hard and superhard coatings I. *Matthews*

Fundamentals of PECVD. *von Keudell*

afternoon

Molecular mass spectrometry including interpretation. *Briggs*

Applied surface science for microelectronics. *Opila*

Luminescent thin films. *Singh, Sun*

Magnetic recording: Media and heads. *Clemens, Chappert, Hardner, Stohr, Suzuki*

Ultra-clean society and contamination free manufacturing. *Nakamura*

Nanoscale tribology and adhesion. *Gellman*

Quantum dots and wires. *Gammon, Takayanagi, Kouwenhoven*

Transport and nanostructures in organic films. *Whitesides, Baessler*

Plasma diagnostics. *Sugai*

Metals on oxides. *Thornton*

Reactions on metals. *Yates Jr*

Fundamentals and applications of ionized PVD. *Messier*

Tuesday, 26 October

morning

Ion beam analysis and depth profiling. *Magee*

Protein solid-surface interactions II. *Schaaf*

Si surface chemistry and etching, passivation, and oxidation. *Queeney, Maboudian*

Novel materials for field emission displays and technologies for flexible displays. *Shashidhar, Smyth*

Magnetic recording: Media. *Crawford*

New manufacturing research paradigms. *Shadman, Bindell, Hauser, Monnig, Ohmi*

Nanomechanics. *Barthel, Carpick*

Molecular electronics. *Ratner*

Interfaces and characterization of organic thin films. *Hill, Campbell*

Plasma-surface interactions I. *Herman*

Nitrides and compound semiconductors. *Feenstra*

Model catalysts. *Chorkendorff*

Advanced thin film formation chemistry. *Biederman, Carbonell*

Ionized plasma and chemical vapor deposition. *Ruzic*

Total and partial pressure gauging. *Arnold*

afternoon

Modeling in applied surface science. *Garrison, Carter*

Characterization of biomaterial interfaces. *Griesser, Lundström*

High dielectric constant materials and thin oxides. *Kwong, Monroe*

Thin film transistor materials and devices. *Frisbie, Lu*

Magnetic spectroscopies. *Kortright*

Interconnect and integration. *Moyne, Garcia-Colevatti*

Innovative nanoscale measurements. *Aono*

Organic thin film growth. *Umbach, Armstrong*

Plasma diagnostics II. *Aydil, Woods*

Semiconductor surface chemistry. *Weaver*

Diffusion on surfaces. *Rosenfeld*

Fundamentals of Si and dielectric PVD. *Abelson*

Magnetic recording: Head/disk interface and overcoats. *Menon, Marchon, Stupp*

Vacuum contributions to the semiconductor industry (1950-1975). *Meyer, O'Hanlon, Waits*

Wednesday, 27 October

morning

Gaede-Langmuir Award address and quantitative surface analysis. *Palmberg*

Cell solid-surface interactions. *Bertozi, Tirrell*

Nano-characterization of molecules, materials, and devices. *Ourmazd, Williams, Lauhon*

Spin-dependent tunneling and transport. *Buhrman, Zhang, Gallagher*

Metrology I. *Boumsellek*

Nanopatterning. *Vettiger*

Feature profile evolution. *Graves, Shaqfeh*

Surface structure. *Conrad*

Ion-surface interactions I. *Rabalais*

Surface electronic structure. *Louie*

Thin films in MEMS and MOEMS. *Cowan*

Advanced surface treatments and coatings. *Holleck, Petrov*

Vacuum pumping systems. *Hobson, Doherty*

afternoon

Oxides and insulators. *Baer*

Biology at the nanoscale. *Gaub, Israelachvili*

Novel materials and devices for computation and communication. *Vahala, Bell, McEuen, Williams, Tiwari*

Giant magnetoresistance. *Bussmann, Russek*

Micro-science and tribology. *Lin*

Metrology II. *Wickramasinghe*

Nanotubes: Growth, characterization, and properties I. *Dai, Smalley*

Dielectric etching. *Berruyer*

Gas-surface dynamics. *Nathanson*

Islands, clusters, and steps. *Berndt*

Transparent conductive oxides. *Coutts, Shigesato*

Dry pumping systems. *Chew, Mrotek, Barfuss, Scherbik, Watanabe*

Thursday, 28 October

morning

Real world surface analysis. *Pachuta*

Biomineralization. *Nancollas, Healy*

Cu, low-k dielectrics, and interfaces. *Murarka, Zhu*

Dielectric passivation/oxides on compound semiconductors. *Ren*

Patterned or self-assembled magnetic nanostructures. *Cowburn, Ono*

Processing and integration technology. *Allen*

Environmentally benign manufacturing. *Bowling, Langan, Jewett*

Nanotubes: Nanoelectronics and field emission. *Dekker, Saito*

Self-assembled monolayers. *Weiss*

Nucleation and growth. *Hannon*

Novel surface probes and technique enhancement. *Kizuka*

Nanophase thin films. *Haberland, Hummel*

Outgassing, leaks, and mass flow controllers. *Dayton*

afternoon

Polymer surfaces, films, and interfaces. *Beamson*

Chemical mechanical planarization. *Gutmann*

Silicon carbide and dielectrics on Si. *Soukiassian*

Magnetic imaging. *Wiesendanger*

Vacuum MEMS. *Taylor*

Nanotubes: Functionalization and metrology. *Doering*

High fidelity pattern transfer. *Kasama*

Pulsed plasmas. *Noguchi, Malyshev*

Metal/metal growth. *Schmid*

Adsorption at surfaces. *Mårtensson*

Biological surface science. *Plant, Campbell, Nørskov, Richardson*

Ex situ characterization. *Edgell*

Friday, 29 October

morning

New or improved surface related analytical techniques. *Tonner*

In situ monitoring and growth. *Floro*

Magnetic thin films. *Siegmann, Qiu*

Nanotubes: Growth, characterization, and properties II. *Lu*

Emerging plasma applications. *Sniegowski, Felch*

In situ characterization and material process imaging. *LeClair*

Vacuum systems, design, and engineering. *Matheisen, Ash*