

DMP Winter Newsletter, Jan. 2007

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March Meeting: Symposia & Special Events

Mar 5 2007 8:00AM, Monday

Session A4 [Responsive and Adaptable Polymeric Materials](#)

Room: *Colorado Convention Center Korbel 2B-3B*

Invited Speakers: *Vaia, Zauscher, Hansma, Wirtz, Grosberg*

Mar 5 2007 2:30PM, Monday

Session D3 [DMP Prize Symposium](#)

Room: *Colorado Convention Center Korbel 2A-3A*

Invited Speakers: *Miller (McGroddy Prize), Epstein (McGroddy Prize), Harris (Onsager Award), Bader (Adler Award)*

Mar 5 2007 5:45PM, Monday

Session E1 [APS Prizes and Awards Presentations](#) Chair: *Leo Kadanoff, APS President*

Room: *Colorado Convention Center 205*

Mar 5 2007 8:00PM, Monday

Session G1 [Fifty Years of BCS Theory](#) (Sponsored by DCMP)

Room: *Adam's Mark Plaza Ballrooms A-B*

Invited Speakers: *Scalapino, Rowell, Baym*

Mar 6 2007 8:00AM, Tuesday

Session H4 [Recent Advances in Quantum Monte Carlo Simulations](#)

Room: *Colorado Convention Center Korbel 2B-3B*

Invited Speakers: *Zhang, Casula, Mitas, Needs, Sorella*

Mar 6 2007 11:15AM, Tuesday

Session J3 [Emerging Science of Solid State Lighting](#)

Room: *Colorado Convention Center Korbel 2A-2B*

Invited Speakers: *Craford, Burrows, Simmons, Malliaras, Misewich*

Mar 6 2007 2:30PM, Tuesday

Session L1 [Basic Research Needs for Superconductivity](#)

Room: *Colorado Convention Center Four Seasons 2-3*

Invited Speakers: *Sarrao, Eckstein, Kwok, Pickett, Malozemoff*

Mar 6 2007 5:30PM, Tuesday

DCMP/DMP/DCOMP New Fellows and Awards Reception (5:30pm-7pm)

Open reception; invitations not required.

Room: *Adam's Mark Governor's Square 12*

Mar 6 2007 7:00PM, Tuesday

Session M46 [DMP Business Meeting](#)

Room: *Adam's Mark Hotel Plaza Court 7*

March Meeting: Bulletin

Buying the full printed program was optional last year, but only about 5% of attendees chose to do so. As a result, it was decided that the full printed program will no longer be available this year. Instead, all registrants will receive a short printed program containing titles and authors, but no abstracts. The full bulletin will continue to be available electronically.

March Meeting: Student Lunch With the Experts

“The Students Lunch with the Experts” will again be featured at the APS March Meeting on Wednesday, March 7 from 1:00 pm - 2:30 pm in the Four Seasons Ballroom 1 in the Denver Convention Center. This year the DMP will sponsor two tables at this event, featuring Jeffrey Lynn of the National Institute of Standards and Technology, whose topic is “*Highly Correlated Electrons: Cuprate superconductors, Colossal MagnetoResistance oxides, & Multiferroics*” and Vasili Perebeinos of IBM T.J. Watson Research Center, whose topic is “*Optoelectronics with Carbon Nanotubes*”.

Participating students will receive a complimentary box lunch and will take part in an informal discussion with an expert on a topic of interest. All of the topics and “experts” for the 21 available tables, including tables sponsored by other APS units, will be listed on the APS March Meeting web page at <http://www.aps.org/meetings/march/special/lunch.cfm>. Sign-up will take place beginning on Monday, March 5, at 1:00 p.m. at the APS registration desk, and will be on a first-come, first-served basis, with attendance limited to eight students per topic. Please encourage your students to take part in this interesting event.

March Meeting: Student Membership Recruitment

Current plans call for a special booth at the APS meeting where anyone can join the APS or APS units – including the Division of Materials Physics. Please encourage your students to take advantage of this booth to affiliate with the APS and especially with the DMP.

For undergraduate and graduate students in the US, Canada, and Mexico, the APS offers a **free one-year Trial Student Membership** to first-time applicants. Three units (like DMP!) can also be added for free. After the initial year, students may retain membership at a special low rate. For more information students can visit:

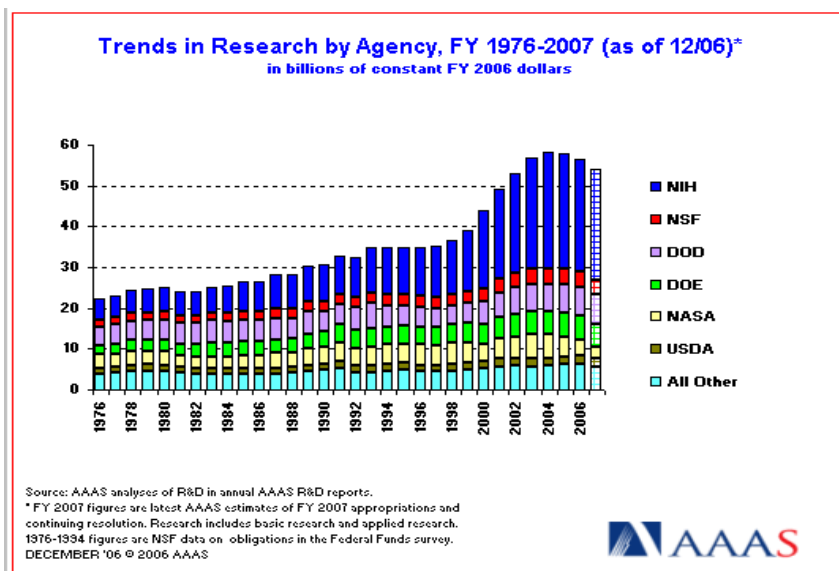
<http://www.aps.org/memb/students.cfm>

As we build our DMP membership base, we increase the visibility of the materials physics presence as a vibrant part of APS. We also strengthen the impact of our numerous outreach efforts, such as those to Washington and to other materials-related societies. Instructions on how to become a regular (i.e. non-student!) member of DMP can be found at:

<http://units.aps.org/units/dmp/join-dmp.cfm>

March Meeting: Congressional Letter Writing

Every year at the APS March Meeting, the APS Washington Office organizes a letter-writing campaign to Congress, called Contact Congress, where persons attending the conference write to their Senators and Representatives to ask for support of science. Over the last few years the number of APS members who have sent letters has steadily increased, and we are hoping to keep that trend going. This year is particularly important, as it currently looks as though Congress will pass a continuing resolution that would keep science funding at 2006 levels.



Please participate in this campaign in Denver this year. Computer stations are provided that make it very easy, and you do not have to be a US citizen or permanent resident to take part. Please help us advocate for appropriate science funding in the US!

Finally, if you would like to volunteer to be one of the smiling people who stand near the Contact Congress booth and encourage passers-by to participate, please contact Allen Goldman, goldman@physics.umn.edu, Vice Chair of DCMP, who is organizing this activity.

DMP Election Results

The DMP thanks all who participated in the election. We had a great turnout of 26% of members voting, which is well above historical norms. The new officers and members-at-large of the DMP Executive Committee will assume office following the March Meeting. They are:

Vice Chair: Ramamoorthy Ramesh, University of California, Berkeley

Member at Large: Laura H Greene, University of Illinois at Urbana-Champaign

Member at Large: Franz Himpsel, University of Wisconsin-Madison

Many thanks are due to Lynn Boatner, who will be stepping down as Past Chair, and to Art Hebard and Julia Hsu, who will be stepping down as Members at Large. The current DMP Executive Committee roster can always be found at <http://www.aps.org/units/dmp/dmpcommittee.cfm>.

Award and Prize Winners

2006 David Adler Lectureship Award: Samuel D. Bader, Argonne National Laboratory

Sam Bader is an Argonne Distinguished Fellow. He also serves as Group Leader of the Magnetic Films Group, an Associate Director of Argonne's Materials Science Division, and Chief Scientist of the new Center for Nanoscale Materials.

Citation: "For spirited lectures, writing and experimental research in the area of nanomagnetism, magnetic films, multilayers and surfaces of metallic systems, including championing the surface magneto-optic Kerr effect approach."

2006 James C. McGroddy Prize For New Materials: Arthur J. Epstein, Ohio State University, and **Joel S. Miller**, University of Utah

Art Epstein is Professor of Physics and Professor of Chemistry at The Ohio State University, and was appointed Distinguished University Professor in 1997. He presently is the Director of the OSU Institute for Magnetic and Electronic Polymers.

Joel Miller joined the University of Utah in 1993 where he is a Distinguished Professor in the Department of Chemistry, after several positions in industry including the Xerox Corporation and Du Pont.

Citation for both: "For discovery and characterization of organic-based magnets, and for observation and study of predictable and previously unknown magnetic phenomena in these fascinating materials leading to fundamentally new science and the demonstrated potential for creative new technologies."

New APS Fellows

Simon Billinge, Michigan State University

For seminal contributions to the study of atomic-scale disorder in complex nanostructured materials by developing and applying novel x-ray and neutron scattering methods.

Cees Dekker, Kavli Institute, Delft, The Netherlands

For seminal experimental discoveries of the electronic properties of carbon nanotubes and other contributions to nanoscience.

Ricardo Garcia, Institute of Microelectronics, Madrid

For his contributions to the development of scanning probe microscopes into multipurpose tools for nanoscale imaging, patterning and compositional analysis of polymers, biomolecules and semiconductors.

David Mandrus, Oak Ridge National Laboratory

For significant contributions to the discovery and elucidation of new properties of correlated electron materials.

Michael Nastasi, Los Alamos National Laboratory

For seminal contributions to the fields of ion-solid interactions, including ion enhanced and plasma synthesis of novel materials with applications to energy, manufacturing, nanotechnology, and advanced microelectronics.

David Norton, University of Florida

For pioneering work in the area of epitaxial oxide thin films, including superlattice formation and heteroepitaxy.

Bradford Orr, University of Michigan

For contributions to the fundamental understanding of heteroepitaxial and homoepitaxial thin film growth.

Martin Stutzmann, Schottky Institute, Munich, Germany

For contributions to the microscopic understanding of electronic processes in semiconductors and the development of novel semiconductor devices.

Thomas Vogt, University of South Carolina

For original contributions to the development and dissemination of neutron and synchrotron x-ray powder diffraction and their use in probing structure-property relationships.

Arthur Voter, Los Alamos National Laboratory

For original contributions to the theory of chemical and surface dynamics, especially through the pioneering development of accelerated molecular dynamics.

Wladyslaw Walukiewicz, Lawrence Berkeley National Laboratory

For seminal contributions in the areas of amphoteric defects in semiconductors; Group-III nitrides; the effect of Mn interstitials in ferromagnetic semiconductors; and the formulation of the band structure of highly-mismatched semiconductor alloys.

Yimei Zhu, Brookhaven National Laboratory

For outstanding and innovative development and implementation of advanced electron beam experiments to understand electronic and magnetic structures and the physical behavior of functional materials such as superconductors and ferromagnetics.

Call for Award and Fellowship Nominations

The deadline for APS Fellowship nominations made through DMP is February 23, 2007. For information on the nomination procedure, see <http://www.aps.org/programs/honors/fellowships/nominations.cfm>. Please keep diversity issues in mind (note, in particular, that we have had a disappointing number of female nominees in some recent years).

Nominations for the Adler Lectureship Award and the McGroddy Prize for New Materials will be due on or about July 1, 2007. Please see <http://www.aps.org/programs/honors/nomination.cfm> for the further information about the deadlines and nomination requirements. Again, diversity is to be encouraged in the nomination process.

Outreach and Public Policy

A Sackler Colloquium on the topic of “*Nanomaterials in Biology and Medicine: Promises and Perils*” is being organized at the National Academy of Sciences in Washington, DC, April 10-11, 2007. For more information, see http://www.nasonline.org/site/PageServer?pagename=Sackler_nanoprobes.

DMP supports APS membership in the Federation of Materials Societies (FMS). See the FMS website at <http://www.materialsocieties.org> for very useful information about policy and funding in the full range of materials sciences. The website of the American Association for the Advancement of Science (AAAS) also contains much useful guidance about R&D budgetary and policy issues more generally; see, e.g., <http://www.aaas.org/spp/rd/guide.htm>.