Division of Materials Physics

A Division of The American Physical Society

May 2000

Message from the Chair...

The March Meeting in Minneapolis was by all measures a complete success with more than 5000 registered participants. The Division of Materials Physics sponsored or cosponsored more than 100 sessions, approximately 25% of the meeting. Our 23 Focussed Sessions were well attended as was the special symposium on "The FY2001 Nanotechnology Initiative: What's in Store for the Future". The McGroddy Prize for New Materials was awarded to Brian Maple of UCSD, and the Adler Lectureship Award was given to Bertram Batlogg of Bell Laboratories. New APS Fellows sponsored by DMP received their Certificates of Fellowship at the DMP Business meeting. The meeting was followed by a reception to recognize the new Fellows and the McGroddy Prize and Adler Award winners and to express our appreciation to all the Focused Session organizers and others who helped make this meeting such a success. We are counting on you, the members of DMP, to propose Focus Topics (see announcement below) for March 2001!

As many of you are aware, this is a critical year for science research funding and I urge all of you to participate in the federal budget process in whatever ways you can. The President's FY2001 budget proposal includes substantial increases in funding for fundamental research in the physical sciences and engineering through various federal agencies including the NSF, DOE and DOD. However, science research competes with many other federal programs for funds and also with proposals for tax cuts for businesses and for individuals. Therefore, it is very important that all of us make our voices heard. Your Senators and Members of Congress need to understand that increased investment in materials physics research is essential for continued technological advances that will enable the United States to remain competitive in the global economy (see the article below on Congressional Visits Day).

In this Issue ...

The new Chair of DMP, Pat Mooney, presents an open letter to DMP members. Deadlines are announced for (i) Annual call for Focus Topics (June 15) (ii) James C. McGroddy Prize for New Materials nominations (July 1) (iii) David Adler Lectureship Award nominations (July 1).

ARTICLES

- Message from the Chair
- Congressional Visits Day 2000
- Call for proposals for Focus Topics for March 2001
- Call for Nominations for James C. McGroddy Prize for New Materials
- Call for Nominations for the Adler Lectureship Award
- DMP 2000-2001 Executive Committee Roster

Congressional Visits Day 2000

Frances Hellman, DMP Past Chair, Pat Mooney, DMP Chair, Len Feldman, DMP Vice Chair, and Dan Pierce, Member-at Large of the DMP Executive Committee, together with others from DMP and DCMP participated in the fifth annual Science-Engineering-Technology Congressional Visits Day on April 4-5, 2000. Congressional Visits Day is cosponsored by two groups: the Science-Technology Work Group and the Coalition for Technology Partnerships. The goal was "to make Congress aware of the important role that research and development plays in developing new competitive technologies and how essential these efforts are to the strength and growth of our nation". The "core messages" are that balanced federal investment in science, engineering and technology is vital to our Nation's prosperity and that partnerships between government, universities and industries mean progress, economic growth and jobs. In other words, increasing the federal funding for the physical sciences and engineering is critical, since progress in the life sciences and medical technology depends on advances in these other fields.

More than 300 scientists and engineers met on the afternoon of April 4th for Administration and Congressional briefings. Speakers from the NSF, DOE and DOD discussed the President's budget proposal and a panel of congressional staffers discussed their views of the budget process. These meetings were followed by a reception at which George E. Brown, Jr. Science-Engineering-Technology Leadership Awards were presented to The Honorable Bill Frist (R-TN) and The Honorable John D. "Jay" Rockefeller (D-WV). The next day began with a breakfast meeting with remarks by The Honorable Curt Weldon who chairs the House subcommittee on Military R&D. Representative Weldon reminded us that politicians respond to constituents and emphasized how important it is for scientists and engineers to participate in the political process. After breakfast, Mike Lubell and Brian Bonnar of the APS Washington Office organized us into teams to visit the offices of Senators and Members of Congress to ask them to support increased funding for the physical science and engineering as well as for the life sciences. Members of the APS visited the offices of at least 8 Senators and 19 Members of Congress.

Call for Proposals for Focus Topics for March 2001

The DMP Executive Committee has begun to plan for the March 2001 APS meeting to be held in Seattle. Each year the committee selects approximately 20 Focus Topics (previously called Focus Sessions) of current interest. Each Focus Topic typically includes from 30 to 100 contributed talks presented in a series of sessions, most of which also include an invited talk. Focus Topics allow the coherent treatment of important topics in materials physics and complement the other invited symposia and contributed sessions at the meeting.

The success of the Focus Topics depends on suggestions from the members of DMP for appropriate topics and organizers and on the efforts of the volunteer organizers. Organizers propose invited speakers, advertise their Focus Topic, and participate in the Sorters Meeting where the submitted abstracts are put together with the invited papers into sessions. Proposals should include a title, the names and contact information for at least two organizers (from different institutions), a brief call for papers, the estimated number of sessions, and a discussion of the merits of the proposal. Proposals should be sent no later than June 15, 2000 to the DMP Chair:

Pat Mooney IBM T.J. Watson Research Center PO Box 218 Yorktown Heights, NY 10598 phone: 914-945-3445 FAX: 914-945-4581 email: mooneyp@us.ibm.com

Visit the DMP Homepage: www.aps.org/units/dmp

Our homepage on the World Wide Web contains all types of Divisional information, including profiles of our award winners, citations of new Fellows sponsored by DMP, and current and back issues of the DMP Newsletter with the program of Focussed Sessions for the March Meeting.

CALL FOR NOMINATIONS FOR JAMES C. MCGRODDY PRIZE FOR NEW MATERIALS

This prize was previously called the International Prize for New Materials (from 1975-1994). Its purpose is to honor and encourage outstanding achievement in the science and application of new materials. This includes the discovery of new classes of materials, the observation of novel phenomena in known materials leading to both fundamentally new applications and scientific insights, and also includes theoretical and experimental work contributing significantly to the understanding of such phenomena. Previous award winners are listed on the APS prize web site. The prize consists of \$5,000 and an allowance for travel to the meeting of the Society at which the award is presented, plus a certificate citing the contribution of the recipient . The prize is open to scientists of all nationalities irrespective of where their work has been carried out. Nominations are active for 3 years. The deadline for submission of nominations for the 2000 Prize is: JULY 1, 2000. Nominations should be sent to the Chair of the 2000 Selection Committee: Alan B Fowler, IBM T J Watson Research Center, PO Box 218, Yorktown Heights, NY 10598. Details on how to make a nomination are available on the DMP web page. Previous winners are listed below by year:

2000: M. Brian Maple 1999: Thomas. R. Anthony & Eugene E. Haller

administered as "INTERNATIONAL PRIZE FOR NEW MATERIALS"

1994: Peter Grünberg, Albert Fert, Stuart Parkin 1993: Gordon C. Osbourn 1992: Robert E. Curl, Harold W. Kroto, & Richard E. Smalley 1991: Francis J. DiSalvo, Jr., & Frederic Holtzberg 1990: James L. Smith, Hans R. Ott, Frank Steglich, & Zachary Fisk 1989: J. B. MacChesney, R. D. Maurer, & K. C. Kao 1988: J. Georg Bednorz 1987: Dan Schechtman 1986: John Croat, Jan Herbst, Norman C. Koon, & Masato Sagawa 1985: Leroy L. Chang, Leo Esaki, & Raphael Tsu 1984: J. P. Remeika 1983: David Turnbull 1982: John R. Arthur. Jr., & Alfred Y. Cho 1981: LeGrand G. van Uitert 1980: Pol E. Duwez, & William Klement, Jr. 1979: J. Eugene Kunzler, Bernd T. Matthias, & John K. Hulm 1978: J. H. Sinfelt 1977: Francis Bundy, H. Tracy Hall, Herbert Strong, & Robert H. Wentoff, Jr 1976: William G. Pfann & Henry C. Theurer 1975: Heinrich Welker

CALL FOR NOMINATIONS FOR ADLER LECTURESHIP

DMP administers the APS David Adler Lectureship Award, given annually to an outstanding contributor to the field of materials physics who is noted for his or her research, review articles, and lecturing. This lectureship was endowed in 1988 by contributions from friends of David Adler, in honor of his distinction both in research and in his ability to communicate the results of this research. The Lectureship consists of a \$1,000 honorarium and a certificate citing the contribution made by the recipient. The award will be made at the March APS meeting where the lecturer will present an invited talk before the appropriate focused session of the Division of Materials Physics. Adler Award nominations should be sent Pat Mooney, address below, no later than JULY 1, 2000. Details on how to make a nomination are available on the DMP homepage. Previous winners are listed below by year:

2000: Bertram Batlogg 1999: Leonard C. Feldman 1998: Joe Greene 1997: John D. Joannopoulos 1996: M. Brian Maple 1995: Marc A. Kastner 1994: Max Lagally 1993: Simon C. Moss 1992: Robert A. Street 1991: John R. Smith 1990: Michael Schluter 1989: Robert W. Balluffi 1988: Jan Tauc

Recruit New DMP Members

Encourage a colleague or friend to affiliate with DMP. The annual cost is \$6 added to the regular APS membership dues. As we build our membership base, we increase the visibility of the materials physics presence as a vibrant part of APS, and we also strengthen the impact of our numerous outreach efforts, such as to Washington and to related Societies. Instructions on how to become a member of DMP (or any other APS unit) appear on our homepage, or simply call (301) 209-3280 with your APS membership number (from the mailing label of a recent publication sent to you) and a credit card for the \$6/year dues. Or fax (301) 209-0867 or mail the information to APS at:

Accounting Department The American Physical Society One Physics Ellipse College Park, MD 20740-3844

DMP ROSTER

Division of Materials Physics 1999-2000 Executive Committee

Patricia Mooney, Chair

IBM T.J. Watson Research Center P.O. Box 218 Yorktown Heights, NY 10598 Tel: (914) 945-3445 FAX: (914) 945-4581 e-mail: mooney@us.ibm.com

Leonard C Feldman, Chair Elect

Dept. of Physics & Astronomy Vanderbilt University Box 1807 Stat B Nashville, TN 37235 Tel: (615) 343-7273 FAX: (615) 343-1708 e-mail: feldman@ctrvax.vanderbilt.edu

Dennis McWhan, Vice Chair

Basic Energy Sciences Bldg. 460 Brookhaven National Laboratory P.O. Box 5000 Upton, NY 11973 Tel: (631) 344-3927 FAX: (631) 344-5584 e-mail: mcwhan@bnl.gov

Samuel D. Bader, Sec./Treas. (96-02)

Materials Science Division, Bldg. 223 Argonne National Laboratory 9700 S. Cass Ave. Argonne, IL 60439 Tel: (630) 252-4960 FAX: (630) 252-9595 email: bader@anl.gov

Slade Cargill, Councillor (2001-2005)

Dept. Materials Science & Engineering Lehigh University 5 E. Packer Dr. Bethlehem, PA 18015-3195 Tel: (610) 758-4207 FAX: (610) 758-4244 e-mail: gsc3@lehigh.edu

Francis Hellman, Past Chair

Dept. of Physics 3019 University of California, San Diego 9500 Gilman Drive LaJolla, CA 92093 Tel: (858) 534-5533 FAX: (858) 534-0174 e-mail: fhellman@uscd.edu

Members at Large

Mike Aziz (2001-2003)

DEAS Harvard University 29 Oxford St. Cambridge, MA 02138-2901 Tel: 617.495.9884 FAX: 617.495.9837 e-mail: maziz@harvard.edu

Esther Conwell (2000-2002)

Department of Chemistry University of Rochester Rochester, NY 14627 Tele: 716.275.5841 FAX: 716.242.9485 e-mail: conwell@chem.chem.rochester.edu

Eric Fullerton (2001-2003)

IBM Almaden Research Center K63-E3 650 Harry Rd. San Jose, CA 95120 Tel: 408.927.2430 FAX: 408.927.2100 e-mail: eef@almaden.ibm.com

Joseph Greene (2000-2002)

Director, Frederick Seitz MRL University of Illinois 2015 MRL, MC 230 104 South Goodwin Ave. Urbana, Illinois 61801 Tel: 217.333.1370 Fax: 217.244.2278 e-mail: jegreene@uiuc.edu

Jeffrey W. Lynn (2000-2002)

Ctr. for Neutron Research NIST, Bldg. 235 Gaithersburg, MD 20899 Tele: 301.975.6246 FAX: 301.921.9847 e-mail: jeff.lynn@nist.gov