

DMP NEWSLETTER

Division of Material Physics

A Division of the American Physical Society

> IN THIS ISSUE

In this issue the new Chair of DMP, **Jim Roberto**, presents an open letter to DMP members.

Deadlines also are announced for the annual call for focussed session topics (June 1 deadline), fellowship nominations (Feb. 15 deadline) and Adler award nominations (July 1 deadline).

Election results and news updates on DMP activities also appear.

ARTICLES

- [Message from the Chair](#)
- [Call for Proposals for 1998 Focussed Session Topics](#)
- [Liaison to APS and the Scientific Community](#)
- [Call for Nominations for the 1998 Adler Award and APS Fellowship](#)
- [The Challenge Ahead](#)
- [APS Centennial Celebration](#)
- [Election Results](#)
- [By-law Amendments Approved](#)
- [New APS Fellows who were Sponsored by DMP](#)
- [Visit the DMP Homepage](#)
- [Urge Colleagues to Join DMP](#)
- [Executive Committee Roster](#)

Message from the Chair

This year marks the thirteenth anniversary of the Division of Materials Physics of the American Physical Society. DMP, which is an outgrowth of an earlier APS Topical Group on Materials Physics, has grown steadily (7% last year) to a current membership of approximately 2000. Together with the Division of Condensed Matter Physics, DMP allows APS to span the physics of materials from fundamental concepts to the latest research underpinning important materials applications. It is this applications focus which has been strengthened by the creation of DMP, a focus which complements and extends the traditional boundaries of DCMP and provides increased visibility for the broader impact of materials research on society.

DMP has also become an important part of the APS March Meeting. Approximately 25% of the papers at the 1997 March Meeting were in DMP sessions. DMP "Focussed Sessions" are particularly popular. These are topical symposia within the meeting which focus on a particular aspect of a research topic. Each symposium involves several invited talks and 30-100 contributed talks spanning several sessions at the March Meeting. This allows a coherent and interdisciplinary treatment of important topics in materials physics and complements the traditional invited and contributed

sessions at the meeting.

Call for Proposals for 1998 Focussed Session Topics

The success of the Focussed Sessions depends critically on suggestions for appropriate topics from the membership and on the efforts of energetic volunteers who organize the symposia. The selection of Focussed Session topics and organizers is the primary responsibility of the DMP Executive Committee. This process has already begun for the 1998 March Meeting with feedback from the organizers of the 1997 Focussed Sessions. Over the next month, the Executive Committee will be soliciting new ideas for Focussed Sessions from the membership. The format is freestyle, but please include the full mailing address, phone, fax and e-mail of the proposed co-organizers, and a title and description of the topic. Send these idea statements and suggestions for organizers for Focussed Sessions no later than June 1, 1997, directly to:

Jim Roberto, DMP Chair
Solid State Division
Oak Ridge National Laboratory
Oak Ridge, TN 37831-6033
e-mail: robertojb@ornl.gov

Once topics are selected, it's the responsibility of the Focused Session organizers to arrange the program for their particular symposium, including soliciting recommendations and submitting suggestions for invited speakers, and sorting abstracts at the December sorters meeting at APS Headquarters. The commitment and perspective of the organizers are essential to organizing a compelling program. At the 1997 March Meeting, there were 22 DMP Focussed Session symposia on topics ranging from superconductivity to magnetoresistive oxides.

Liaison to APS and the Scientific Community

The DMP Executive Committee also provides liaison to the APS Council (through our divisional councillor, Howard Birnbaum) and to other organizations within APS and in the broader community. This gives materials physicists a voice in APS affairs and in interactions with other organizations. DMP has been active in public affairs activities, participating in annual informational visits to key Congressional staffers and agency leaders and in the APS membership in the Federation of Materials Societies, a Washington-based consortium of materials-related professional societies. The impact of many of these activities is greatly enhanced through cooperation with DCMP.

Call for Nominations for the 1998 Adler Award and APS Fellowship

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. Recent recipients of this award include John Joannopoulos (1997), Brian Maple (1996), and Marc Kastner (1995). Adler Award nominations should be sent to Jim Roberto no later than **July 1, 1997**. DMP can also recommend 8-10 individuals each year for designation as Fellows of the APS. Nomination forms and instructions are available on the APS homepage. Fellowship nomination packages are due at APS no later than **February 15, 1998**.

The Challenge Ahead

This is an exciting and challenging time for all of science including materials physics. We are being asked to respond to unprecedented change, to take a more active role in communicating the benefits of science, and to find ways to maintain the vigor of our field within the constraints of a balanced federal budget. At the same time, there are seemingly endless opportunities for exciting and impactful research. DMP provides a forum to respond, helping to sustain the excitement and vigor of materials physics through programs at the March Meeting, and communicating the importance of science through constructive participation in public affairs activities. I urge you to become active in DMP and to encourage others to do so. We look forward to your Focused Session proposals, invited speaker suggestions, Adler Award and APS Fellowship nominations, and suggestions on how DMP may better serve you.

Jim Roberto

APS Centennial Celebration

APS will be celebrating its 100th year in 1999 and has planned a Centennial Celebration which will include a joint March/April meeting of the APS in Atlanta, with special plenary sessions, and a variety of year-long events. The various units of APS have been asked to assist with some of these events. We are asking your input as DMP members in the areas listed below.

Suggestions are solicited for:

1. Speakers for a booklet featuring general talks on materials physics and in particular its history and major developments in the last century. This booklet will be distributed by APS all over to academic, government, and industrial institutions to provide suggested colloquium speakers for the Centenary year (fall 1998/1999). The APS would like our suggestions by June, so suggestions received by DMP by the end of May will be of the most use.
2. Speakers and/or Symposia for the 1999 Centenary Meeting in the area of Materials Physics, or as joint sessions with other divisions/units. These sessions will be in addition to the regular sessions DMP usually sponsors and should therefore have a particular significance or historical perspective. Topics can also be suggested, but will be more useful accompanied by suggested names and addresses of speakers. We do not

yet know when this information will be needed, but please begin thinking about suggestions for this.

3. Exhibits or special events. The APS is NOT planning to develop exhibits for the Centenary meeting, but APS will assist DMP in displaying appropriate materials-related exhibits at the meeting. Information on materials-related exhibits is solicited.

Please send suggestions by e-mail or fax to Frances Hellman (fhellman@ucsd.edu, 619-534-0173).

Election Results

Frances Hellman was elected **Vice Chair** and **Max Lagally** and **Julia Phillips** were elected **members at large**. We wish all three good luck and thank all participants in the election for their contributions. With the passing of the 1997 March Meeting we bid farewell to **Past Chair Murray Gibson** and to **members-at-large Lynn Rehn and Andy Zangwill**. We thank them for their sustained outstanding service. The new roster of DMP Executive Committee members appears at the end of this newsletter.

By-Law Amendments Approved

The By-Laws Amendments were unanimously approved by those present at the DMP Business Meeting on March 18, 1997 in Kansas City. The amendments make minor changes to put current practices on a formal basis. The amendments can be found in the November 1996 issue of this newsletter on the DMP Homepage. The full DMP By-laws also are posted on the homepage.

New APS Fellows who were sponsored by DMP:

Philip Edward Batson (IBM T. J. Watson Res. Ctr.) -

For the development of both the experimental and interpretative aspects of high spatial resolution, high-energy resolution energy loss spectroscopy as a valuable addition to electron microscopy studies of matter.

Fenton Read McFeely (IBM T. J. Watson Res. Ctr.) -

For his creative applications of photoemission techniques to the understanding of materials processes, interfaces and electronic structure, including etching and deposition reactions underlying microelectronics technology.

Michael Raymond Melloch (Purdue Univ.) -

For innovative epitaxial growth of semiconductor epilayers, quantum wells, and superlattices which have led to new materials, novel devices, and important advances in the physics of nanostructures.

Karl L. Merkle (Argonne National Lab) -

For his contributions to the basic understanding of radiation-induced defects in solids and internal solid interfaces.

Charles Steven Rosenblatt (Case Western Reserve Univ.) -

For his use of intense magnetic and electric fields in the study of liquid crystals and other soft materials.

Robert F. Sekerka (Carnegie-Mellon Univ.) -

For outstanding and significant contributions to the theory of crystal growth, especially for explaining the role of morphological instabilities.

Arthur Marshall Stoneham (Univ. Coll. of London) -

For seminal and extensive contributions to the theory of defects and defect processes in solids through research articles and books, and for the promotion of physics research through effective management.

Gwo-Ching Wang (Rensselaer Polytech. Inst.) -

For her contributions to the fundamental understanding of ordering and scaling in surfaces and overlayers, and for her pioneering work in ultrathin-film magnetic scaling.

Hartmut Zabel (Ruhr Univ. Bochum) -

For his seminal contributions to our understanding of the structure and dynamics of hydrogen-metal systems, graphite intercalation compounds and magnetic metallic multilayers.

Visit the DMP Homepage on the Web at: </units/dmp>

Also contribute to its "Images of Materials" sections by sending electronic images for posting with a short description and credit citation to Sam Bader (Bader@ANL.gov). Use the posted images as a guideline for content and format. Our goal is to assemble a visual representation of the topics of interest to DMP.

Urge Colleagues to Join DMP

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. You may also fax (301) 209-0867 or mail the information to APS at:

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The American Physical Society
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Division of Materials Physics 1997-98 Executive Committee

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