



# CHEMISTRY

The Division of Chemistry (CHE)

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## NSF Town Hall

### National Meeting of the American Chemical Society in New Orleans to Discuss U.S. NSF Division of Chemistry Strategic Directions

We invite you to meet and speak with National Science Foundation (NSF) staff members at the NSF Town Hall to be held at the National Meeting of the American Chemical Society (ACS) in New Orleans, La., Monday, April 7, 2008, from 4:30 – 6:30 p.m. in the New Orleans Morial Convention Center, Room 243. The following NSF staff members will be available to meet with you informally at the Town Hall:

Carol Bessel  
Michael Clarke  
Luis Echegoyen  
Gerald 'GB' Hammond  
Janice Hicks  
George Kenyon  
Tingyu Li  
Tyrone Mitchell  
Carlos Murillo  
Khaleelah Po Rome

The Town Hall will provide a forum to discuss the U.S. NSF Division of Chemistry Strategic Directions 2008-2012. Dr. Luis Echegoyen, Director of the NSF Division of Chemistry, will give a presentation describing the current status of the Division of Chemistry.

### U.S. National Science Foundation Division of Chemistry Strategic Directions 2008-2012

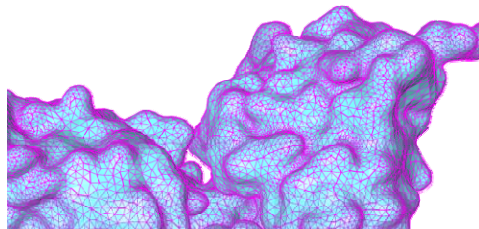


Advancing American Competitiveness  
Communicating the Value of Chemistry and Chemical Research to the Public  
Increasing Global Engagement  
Increasing Grand Challenge Research through Centers  
Broadening Participation  
Addressing Funding Needs of Investigators Across Career Stages  
Assessing the Impact of the Broader Impacts Review Criterion  
Updating the Division of Chemistry Structure

Click on image for larger version.

The Town Hall is an excellent opportunity to share information and perspectives on developments in the chemistry community and at NSF. We look forward to seeing you there.

# Institute for Mathematics and its Applications: Thematic Year on Mathematics and Chemistry



Computational chemistry has reached a stage of development where many chemical properties of both simple and complex systems may now be computed more accurately, more economically, or more speedily than they can be measured. Further advances in accuracy and practicality will depend on the development of both new theory and new algorithms. Mathematical techniques will play an important role in both of these areas.

Given that further progress in computational chemistry will require stronger ties between chemistry and mathematics, and that the time is ripe for the chemistry and mathematics communities to collaborate in this endeavor, the Institute for Mathematics and its Applications (IMA) annual thematic program in 2008-2009 will be on mathematics and chemistry. The IMA is an internationally-recognized research center based within the University of Minnesota's Institute of Technology.

The 2008-2009 IMA Thematic Year on Mathematics and Chemistry will run from September through June and will involve on the order of 1,000 participants including long-, medium-, and short-term visitors, coming from academia, industry, and government. The thematic year will include a number of workshops, tutorials, panel discussions, public lectures, etc., separated by periods for less structured interaction and research. The program will focus on issues in electronic structure, dynamics, and statistical mechanics, including both the mathematical underpinnings of modern molecular modeling and simulation and practical issues in state-of-the-art applications. Application areas will include organic and inorganic chemistry, biochemistry, solid-state chemistry, nanochemistry, advanced materials, photochemistry, catalysis, and environmental chemistry.

The University of Minnesota organizing committee members are Donald G. Truhlar, Chemistry Regents Professor and Institute of Technology Distinguished Professor, and Yousef Saad, Professor of Computer Science and Engineering. Applications are invited for General Memberships (one to nine months), New Directions Research Professorships (nine months), and for invitations to individual workshops. Information and application forms are available at <http://www.ima.umn.edu/docs/membership.html>. Complete program information is available at <http://www.ima.umn.edu/2008-2009/>.

## Collaborate with an NSF Principal Investigator this Summer through the "Research Opportunity Awards"

Research Opportunity Awards enable faculty members at predominantly undergraduate institutions to pursue research as visiting scientists with NSF-supported investigators at other institutions. A Research Opportunity Award (ROA) is usually funded as a supplement to the NSF grant of the host researcher, and the application is submitted by an ROA host institution. However, an ROA may be covered by rebudgeting funds already awarded or by inclusion in the original proposal to NSF by either the host or visiting researcher.

The Division of Chemistry accepts ROA supplement requests at any time throughout the year. A decision can usually be reached in 3-6 months. An ROA is intended to increase the visitor's research capability and effectiveness, to improve research and teaching at his or her home institution, and to enhance NSF-funded research of the host principal investigator (PI). Most frequently, ROA activities are summer experiences, but partial support of sabbaticals is sometimes provided.

Except for major instrumentation or equipment, any item acceptable for inclusion under a regular grant proposal may in principle be included in an ROA budget. However, most NSF programs limit support to moderate amounts, frequently including only the costs of participation (e.g., salary and fringe benefits for the visitor, travel costs, and essential supplies). Duration of support generally ranges from 2 to 12 months.

The prospective visiting ROA researcher and the NSF-supported PI at the host institution should work together to develop a research plan and budget. The nature of the research responsibility, the duration of the ROA visit, the nature of the visitor's appointment, the rate of pay, and other arrangements with respect to employment, are matters to be negotiated between the host institution, the PI, the prospective visiting scientist, and his/her home institution, as the proposal is developed.

The ROA program is described in the "Research in Undergraduate Institutions" Program Announcement NSF-00-144, at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf00144](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf00144).

## Inspire a K-12 STEM Teacher this Summer through the “Research Experiences for Teachers” Supplement Opportunity

Through the “Research Experiences for Teachers” (RET) program, NSF encourages research experiences for K-12 teachers of science, technology, engineering, and mathematics. The Division of Chemistry supports RET through supplemental funding of “Research Experiences for Undergraduates” (REU) grants. RET supplement requests may be submitted at any time throughout the year. However, arrangements for supplemental RET support to an existing REU award should be discussed with the cognizant disciplinary program officer and tentative approval obtained prior to submission of the request.

The RET program is described in the “Research Experiences for Undergraduates” Program Solicitation, NSF 07-569, at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf07569](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf07569).

## NSF Division of Chemistry Supported Workshop Reports

Building Electronic Function into Nanoscale Molecular Architectures, June 2007, <http://wtec.org/MolecularElectronics/>.

National Science Foundation-Intelligence Community Power Sources Workshop, April 2007, [http://coewww.rutgers.edu/www5/nsfic/NSF\\_IC\\_MicroPower\\_Final.pdf](http://coewww.rutgers.edu/www5/nsfic/NSF_IC_MicroPower_Final.pdf). In addition to Intelligence Community and Division of Chemistry funding, the workshop also received co-funding from the NSF Directorate for Mathematical and Physical Sciences Divisions of Materials Research, Mathematical Sciences, Physics, and the Office of Multidisciplinary Activities as well as the Directorate for Engineering Division of Chemical, Bioengineering, Environmental and Transport Systems Division.

Sustaining America's Competitive Edge: Enhancing Innovation and Competitiveness through Investments in Fundamental Research, December 2006, <http://enhancinginnovation.wustl.edu/>.

Workshop on Excellence Empowered by a Diverse Academic Workforce: Achieving Racial and Ethnic Equity in Chemistry, September 2007, <http://chemchairs.uoregon.edu/>.

## Personnel Changes and Availability of Positions within the Division of Chemistry

The Division welcomes Marsha Hawkins and Erica Pendleton as Program Assistants. Prior to joining NSF, Marsha was a Task Leader for the National Institutes of Health, Center for Scientific Review, Division of Health Population Integrated Review Group, and Erica worked at the Social Security Administration in the Office of Acquisition and Grants. Bob Kuczowski from the University of Michigan working as a rotator in the Chemistry Instrumentation Program, is also welcomed by the Division.

The Division would like to thank Wade Sisk for his service and contributions as a rotator in the Chemistry Instrumentation Program. Wade will begin employment at Brookhaven National Laboratory with a detail appointment to the Department of Energy in Germantown, Md.

A complete listing of current staff is available at [http://www.nsf.gov/staff/staff\\_list.jsp?org=CHE&from\\_org=CHE](http://www.nsf.gov/staff/staff_list.jsp?org=CHE&from_org=CHE).

The Division of Chemistry asks you to consider serving as a Program Officer should your circumstances permit it, and to help us identify other individuals who might serve in this capacity. Rotators (Program Officers) are responsible for planning, coordinating, and managing programs that support research, education, and human resource development in the chemical sciences. Applicants should have a Ph.D. or equivalent training in the chemical sciences, extensive knowledge of one or more

chemistry subfields, and at least six years of successful independent research activity. Applicants should be familiar with the chemistry community and have administrative experience. Other important attributes are strong verbal and written communication skills, organizational skills, facility in using technology tools, and the ability to work effectively on a team. If you are interested in serving as a rotator, please see <http://www.nsf.gov/pubs/2006/nsf06056/nsf06056.jsp>.

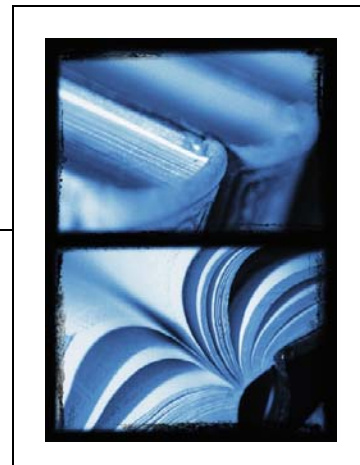
A little more than half of the Chemistry Division's 19 Program Officers are rotators, and they bring fresh insights to the Division of Chemistry's work at NSF. Rotators can maintain their research programs while working at the Foundation. NSF provides time, travel resources, and use of technology to enable rotators to stay in touch with co-workers at their home institutions. Rotator positions are typically held for one or two years, but other arrangements are possible. Rotators not only serve the community and help to shape chemistry, but they also have excellent opportunities for professional development and establishment of new research directions upon returning to their laboratories.

Applicants interested in rotational positions should send an email describing their interest and CV to the Chemistry Division Director, Luis Echegoyen, at [echegoyen@nsf.gov](mailto:echegoyen@nsf.gov). NSF is an equal opportunity employer committed to employing a highly qualified staff that reflects the diversity of our nation.

## Request for Qualified Reviewers

The Division of Chemistry seeks to enhance its pool of qualified reviewers of proposals. We invite researchers in the chemical sciences who have not previously reviewed for the Division of Chemistry but are interested in providing this service to contact us by visiting our website at [http://www.nsf.gov/mps/che/reviewer/reviewer\\_info.jsp](http://www.nsf.gov/mps/che/reviewer/reviewer_info.jsp) and completing the online registration form. Be sure to indicate that you are "willing to travel," if you are interested in serving as a panelist.

We welcome qualified reviewers from academic, industrial, and government employment, as well as from other countries. It is important to recognize that the NSF reserves the right to choose reviewers. While we are unable to assure individuals that they will be asked to review proposals, we do attempt to call upon as many qualified reviewers as possible, and we try to limit the number of requests that we make to any single individual, recognizing the many demands on our reviewers' time.



## Credits

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