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### Letter from the CHE Division Director:

*Division Leadership, Budget Update,  
Proposals & Merit Review, and Committee of Visitors*

Tanja Pietraß

Dear Colleagues,

In the last Newsletter, I introduced myself as the new Deputy Division Director. Since then, Dr. Matthew Platz has completed his term as Division Director and moved to the University of Hawaii at Hilo. Our new Division Director, Dr. Jackie Gervay-Hague from UC Davis, will join us in July 2013. In the interim, I was appointed as the Acting Division Director, and Dr. Linda Sapochak from the Division of Materials Research is filling in as the Acting Deputy Division Director.

On March 26, 2013, *the Consolidated and Further Continuing Appropriations Act, 2013* was enacted into law. It appropriates funds the Federal Government for the remainder of the fiscal year. Due to the delay in receiving our full year appropriation, as well as the implementation of sequestration, we have been proceeding with caution: we have been making award recommendations for the most competitive proposals, and proceeding with declinations of those proposals that we will not be able to fund. The tier in between will see the most significant delays, and we ask for your patience.

The Fiscal Year 2014 budget rollout by the President that typically happens on the first Monday of February took place on April 10, 2013. The President's budget includes a 10.8% increase for NSF, including 10.8% for CHE over the FY 2013 enacted levels. Of course, there is a long and uncertain path to actual appropriations.

As you may have seen in the media, the Office of Management and Budget (OMB) imposed travel restrictions on the Federal Government ([Memorandum M-12-12](#)). These restrictions not only affect staff but also our panel travel. Therefore, in Fiscal Year 2013, we transitioned to a large number of virtual panels in lieu of face-to-face meetings. Panelists are finding new ways to connect with each other through electronic means. Our staff worked very hard to make a very positive virtual panel experience, and I am grateful for their efforts as well as the willingness of the community to adapt to the new modus operandi. One positive outcome of note was the increase in participation by community members whose schedules and responsibilities had made travel difficult.

For the first time in many years, we did not have a Division-level presence at the ACS National Meeting in New Orleans. Together with my counterparts from NIH and DOE, we will host a joint session at the annual fall National ACS Meeting (this year in Indianapolis), which aligns with our upcoming submission windows. Representatives from other federal agencies have been invited, but their participation is uncertain due to the aforementioned travel restrictions.

Our move to one submission window for each disciplinary program last fall (see Dear Colleague Letter: Submission Windows: Unsolicited CHE Proposals; [http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=122986](http://www.nsf.gov/news/news_summ.jsp?cntn_id=122986)) resulted in fewer submissions, which should translate into a higher funding rate (assuming a flat Division budget), although the impact will likely be offset by sequestration. This change should benefit everyone in the community, as investigators will spend less time writing and reviewing fewer proposals – time saved on both ends of the process.

*Continued from pg. 1*

The Division conducted its tri-annual “Committee of Visitors” meeting in February (see the article by Carol Bessel in this Newsletter), chaired by Dr. Joseph Francisco of Purdue University. We had a fabulous committee who gave us a lot of food for thought. You can read the report in its entirety on the MPS Advisory Committee website together with CHE’s response. In this context, on behalf of the Division of Chemistry, I would like to extend warmest congratulations to Dr. Francisco who was recently elected to the National Academy of Sciences. Through the Committee of Visitors, I had the honor to closely collaborate with him, and I am delighted that he received this well-deserved distinction.

Lastly, I want to reiterate our long-standing offer to Skype (or other video technology) into your department meeting. We can tailor the meeting to your needs – just let us know what would work best for you!

With warm regards,  
Tanja Pietrafš  
Acting Division Director



## Staff Changes in the Division of Chemistry

*Debbie Jones*

The Division would like to thank our departing colleagues Dr. John Gilje, Dr. Lin He, Dr. Zakya Kafafi, Dr. Robert Kuczkowski, Mr. William Martin, Dr. Sharon Neal, Dr. Matthew Platz, Dr. Frank Wodarczyk and Dr. Tong Ren for their dedication and hard work. The Division of Chemistry wishes them continued success as they begin the next phase in their careers.

The Division welcomes the following new and returning staff members: Dr. Catalina Achim, Dr. George Kenyon, Dr. Fraser Fleming, Dr. Max Funk, Dr. Thomas O'Farrell, Dr. Linda Sapochak, Dr. Nora Savage, Ms. Marla Stewart, and Dr. Laren Tolbert. Dr. Catalina Achim is an Associate Professor in the Department of Chemistry at Carnegie Mellon University and Dr. Max Funk is a Distinguished University Professor in the Department of Medicinal and Biological Chemistry at the University of Toledo. Both Drs. Achim and Funk joined the Division as Program Officers working in the Chemistry of Life Processes program. Dr. Fraser Fleming, Professor of Chemistry at Duquesne University, will be joining the Division in August as a Program Officer. Dr. George Kenyon re-joined us as a part-time Expert and is currently working in the Chemistry of Life Processes Program (CLP). Dr. Kenyon is joining us from the University of Michigan, where he is a

Professor of Pharmaceutical Chemistry, Emeritus, and Dean Emeritus. Dr. Thomas O'Farrell and Dr. Nora Savage are on a part-time detail from the US Environmental Protection Agency and are working as Program Officers on two joint NSF/EPA program solicitations. Dr. Linda Sapochak is on a detail from the Division of Materials Research (DMR). Dr. Sapochak is serving as our Acting Deputy Division Director until July. Ms. Marla Stewart is a Program Assistant/Intern in the Pathways Internship Program. The Pathways program allows students to explore Federal career opportunities prior to their graduation. Dr. Kelsey Cook is currently on a detail assignment in the Directorate for Mathematical and Physical Sciences (MPS) Front Office as a Staff Associate. Ms. Renee Wilkerson returned from her detail assignment at the White House Office of Management and Budget, resumed her position as a Program Analyst in the Division of Chemistry, and subsequently started a detail assignment in the MPS Front Office.

Please see the web directory for an up-to-date listing of Division of Chemistry Staff 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)

## NSF Division of Chemistry at ACS Meetings

*Renee Wilkerson*

All American Chemical Society (ACS) meeting attendees are invited to attend the "Federal Funders Town Hall and Speed Coaching Meeting" at the 246th National Meeting and Exposition of the American Chemical Society (ACS) in Indianapolis, Indiana on Monday September 9, 2013 at the Indiana Convention Center, from 1:00 pm – 5:00 pm (Exhibit Hall A). The Federal Funders Town Hall and Speed Coaching Meeting is a partnership between the National Science Foundation's Division of Chemistry (NSF CHE), the Department of Energy's Chemical Sciences, Geosciences, and Biosciences Division in the Office of Basic Energy Sciences (DOE BES), and the National Institutes of Health's Division of Pharmacology, Physiology, and Biological Chemistry in the National Institute of General Medical Sciences (NIH NIGMS). To the extent enabled by the availability of travel funds, representatives from these agencies will share the latest

news on program budgets, priorities, and other important updates for the chemical research community. Attendees can meet with Federal Program Officers from NIH, DOE, NSF, and possibly other agencies for one-on-one discussions of funding opportunities and competitive proposal writing. No registration or sign-up is required.

Please note that the Federal Funders Town Hall and Speed Coaching Meeting will only be held at fall meetings of the American Chemical Society beginning with the Fall 2013 ACS National Meeting.

Contact [chemplans@nsf.gov](mailto:chemplans@nsf.gov) for additional information.

We hope to see you in Indianapolis for this special outreach activity.

## National Medal of Science Winners Include Chemistry Principal Investigators

Linda Sapochak



U.S. President Barack Obama presents the National Medal of Science award to Dr. Allen Bard, University of Texas at Austin, Texas, during a ceremony in the East Room of the White House in Washington, DC.



Dr. M. Frederick Hawthorne received the National Medal of Science from President Barack Obama to honor his discovery - a breakthrough that so many battling cancer have been hoping for.

The Division of Chemistry extends congratulations to awardees Dr. Allen Bard (University of Texas at Austin) and Dr. M. Frederick Hawthorne (University of Missouri) for their recent honors as 2011 National Medal of Science recipients. President Obama named Bard and Hawthorne as two of twelve eminent researchers awarded the prestigious National Medal of Science, the highest honor bestowed by the United States Government upon scientists, engineers, and inventors.

*"I am proud to honor these inspiring American innovators," President Obama said. "They represent the ingenuity and imagination that has long made this Nation great—and they remind us of the enormous impact a few good ideas can have when these creative qualities are unleashed in an entrepreneurial environment."*

—White House Press Release, "President Obama Honors Nation's Top Scientists and Innovators," December 21, 2012.

<http://www.whitehouse.gov/the-press-office/2012/12/21/president-obama-honors-nation-s-top-scientists-and-innovators>

Professor Hawthorne has been funded by the Division of Chemistry for work on novel metallacarboranes. Professor Bard has been funded by the Division of Chemistry for work on nanoparticle electrochemistry. Please see the [NSF Awards Abstract Database](#) for additional information on their respective research projects.

The National Medal of Science was created by statute in 1959 and is administered for the White House by the National Science Foundation. Awarded annually, the Medal recognizes individuals who have made outstanding contributions to science and engineering. A committee of Presidential appointees selects nominees on the basis of their outstanding contributions to knowledge in the physical, biological, mathematical, engineering, and behavioral/social sciences.

For more information about the National Medal of Science, see <http://www.nsf.gov/od/nms/medal.jsp>

# The Sustainable Chemistry Update

Tingyu Li

*Due to the-ever increasing competition for natural resources and a mandate from the America Competes Reauthorization Act of 2010, sustainable chemistry has become a funding priority in the Chemistry Division. In FY 2013, there were three major initiatives in sustainable chemistry.*

## 1. Sustainable Chemistry, Engineering, and Materials (SusChEM)

SusChEM is an NSF-wide program which addresses the interrelated challenges of sustainable supply chains, production, and use of chemicals and materials. Examples include the replacement of rare, expensive and/or toxic chemicals with earth-abundant, inexpensive, and benign chemicals; the recycling of chemicals that cannot be replaced; the development of non-petroleum based sources of important raw materials; the discovery of new environmentally friendly chemical reactions and processes; and the design of chemical processes to include recovery and recycling. In FY 2013, there are five participating divisions: the Division of Chemistry; the Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET); the Division of Materials Research (DMR); the Division of Civil, Mechanical and Manufacturing Innovation (CMMI); and the Division of Earth Sciences (EAR).

In FY 2013, no solicitation was issued for SusChEM. Instead, a Dear Colleague Letter (NSF 12-097; <http://www.nsf.gov/pubs/2012/nsf12097/nsf12097.jsp>) was sent to encourage submission of SusChEM proposals to existing NSF programs in their current submission windows in all the participating divisions. Proposals were accepted from either single or multiple investigators. Many of the proposals received as a response to the Dear Colleague Letter have been reviewed and some funding decisions have already been made. In FY 2013, the Division of Chemistry expects to invest approximately \$10 M in SusChEM research. The SusChEM initiative will continue in FY 2014. Interested investigators are encouraged to check for updates on the Division website (<http://www.nsf.gov/div/index.jsp?div=CHE>).

## 2. Sustainable Energy Pathways (SEP)

Sustainable Energy Pathways is part of the NSF-wide initiative on Science, Engineering, and Education for Sustainability (SEES). The Sustainable Energy Pathways program calls for innovative, interdisciplinary basic research in science, engineering, and education by teams of researchers for developing systems approaches to sustainable energy pathways based on a comprehensive understanding of the scientific, technical, environmental, economic, and societal issues. SEP considers scalable approaches for sustainable energy conversion to useful forms, as well as its storage, transmission, distribution, and use.

You can search the NSF Award database using the term 'Sustainable Energy Pathways' for a listing of awards made under the SEP solicitation:

<http://nsf.gov/awardsearch/simpleSearchResult?queryText=Sustainable+Energy+Pathways>

Visit the NSF SEES website for program updates:

[http://www.nsf.gov/funding/pgm\\_summ.jsp?pgm\\_id=504707](http://www.nsf.gov/funding/pgm_summ.jsp?pgm_id=504707)

## 3. NSF-EPA joint solicitations

Two NSF-EPA joint solicitations were issued in FY 2013. EPA/NSF Networks for Sustainable Molecular Design and Synthesis (NSF 13-523) involves the Division of Chemistry and the Division of Chemical, Bioengineering, Environmental, and Transport Systems at NSF, and the Office of Research and Development / National Center for Environmental Research at EPA. This solicitation promotes the development of safe and sustainable chemicals and sustainable synthetic procedures. EPA/NSF Networks for Characterizing Chemical Life Cycles (NSF 13-524) has participation from the Office of Research and Development /National Center for Environmental Research at EPA and the Division of Chemistry at NSF. This solicitation encourages synergy and enhances cooperation in examining the life cycles of synthetic chemicals and materials as they relate to their manufacture, use, transport, and disposal or recycle. Proposals received in response to these two solicitations are currently being reviewed. The competition should generate approximately 5 awards, each around \$2-4 million over 4 years.

In summary, the Division of Chemistry has made significant financial commitments to encourage and foster research in sustainable chemistry. The chemistry research community is strongly encouraged to consider submission of proposals under these initiatives. As always, investigators are encouraged to contact the relevant Program Officer identified in the solicitation, or the disciplinary Program Officer in the area of proposed research, for additional information. To see examples of awards made under the SusChEM initiative, select the relevant Disciplinary Research Activities program listed on the NSF Chemistry website: <http://www.nsf.gov/div/index.jsp?div=CHE>, then the link "What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)." SusChEM awards all have "SusChEM:" in the beginning of the proposal title.



## Committee of Visitors – February, 2013

Carol A. Bessel

NSF relies on the objectivity of external experts to assess and assure that we maintain high standards of merit review, and to ensure the openness and fairness of the merit review system. This group of external reviewers, referred to as a Committee of Visitors (COV), typically convenes on a triennial basis to assess the quality and integrity of proposal review. On February 19-21, 2013, Professor Joseph Francisco of Purdue University chaired the COV for the Division of Chemistry at NSF Headquarters in Arlington, VA. The Committee was composed of 26 members from the scientific community, representing a diverse sampling of all areas of chemistry, all career stages, and constituent organizations.

During the three day visit, the COV members were provided with a representative set of proposals, reviews and Program recommendations. They were able to see the detailed documentation and reasoning behind declinations and awards, including several of the “hard calls” the Program Officers must make. Within conflict-of-interest guidelines, the Committee members were given access to all proposal actions (awards and declinations) made by the Division in the previous three years, starting with Fiscal Year 2010.

In addition to assessing merit review, the COV members were specifically asked by the Division to discuss how to evaluate the realignment that took place within the Division's scientific programs in 2009. The Committee's report was presented to the Advisory Committee for Mathematical and Physical Sciences, which discussed and approved it at its April meeting.

The report was reviewed by MPS Assistant Director Fleming Crim and has been posted, along with Dr. Crim's response, at:

<http://www.nsf.gov/mps/advisory/cov.jsp>, and  
[http://www.nsf.gov/mps/advisory/covdocs/CHE\\_Cover\\_Letter\\_and\\_Response.pdf](http://www.nsf.gov/mps/advisory/covdocs/CHE_Cover_Letter_and_Response.pdf), respectively.

Annual responses are at,  
<http://www.nsf.gov/mps/advisory/cov.jsp>,  
and/or on the Divisional pages.

## Share a Project Outcome — Submit a Highlight to NSF Today

The Division of Chemistry supports innovative research in chemical sciences, integrated with education, through strategic investment in developing a globally engaged U.S. chemistry workforce reflecting the diversity of America. Communicating the value and articulating the impact and importance of chemistry as an essential science for addressing important questions and challenges facing the 21st century remains an important priority of the Division.

We rely on our community of Principal Investigators to submit “highlights” that describe outcomes of NSF-funded research and education activities. These “highlights” provide at-a-glance snapshots of the Division's investments, are shared through various media, and serve multiple purposes for informing Foundation stakeholders about our progress in advancing discovery, innovation, and education beyond the frontiers of current knowledge. One popular new portal is the Science, Engineering & Education (SEE) Innovation website, which features outcomes of NSF-funded projects by state, region, Congressional district, and scientific theme:

[www.research.gov/seeinnovation](http://www.research.gov/seeinnovation)

We would like to submit as many of your Highlights as possible to the SEE Innovation website and need your help. Please consider submitting a Highlight about your current or recent Division of Chemistry supported project. Of particular interest are the notable outcomes and accomplishments of the project, including those related to project personnel, outreach activities, and scientific and educational advances directly supported by the project.

See the Chemistry website for a template and additional details for submitting a Highlight:  
<http://www.nsf.gov/mps/che/Highlights/HighlightWebpages/highlights.jsp>



## Important NSF Policy Updates

The NSF Policy Office maintains an overview of policy and guidance for the programs of the National Science Foundation on their website at: <http://www.nsf.gov/bfa/dias/policy/index.jsp>

### Proposers should be aware of the following recent NSF policy updates:

- New NSF Proposal & Award Policies and Procedures Guide (PAPPG), Effective for Proposals Submitted or Due On or After January 14, 2013

*The PAPPG provides guidance on the preparation and submission of proposals to NSF along with guidance on managing and monitoring the award and administration of grants and cooperative agreements made by the Foundation. Significant changes have been made to the PAPPG to implement revised merit review criteria affecting the project summary and project description sections of proposals along with the annual and final reports for awarded proposals.*

<http://www.nsf.gov/pubs/2013/nsf13004/nsf13004.jsp?org=NSF>

- NSF Notice of Intent to Revise American Recovery and Reinvestment Act (ARRA) Award General Terms and Conditions to Ensure Project Completion by September 30, 2013

*This important notice applies to all NSF grantees with active awards that were issued pursuant to the American Recovery and Reinvestment Act of 2009.*

<http://www.nsf.gov/recovery/acceleration.pdf>

**Note:** Please see the updated ARRA Acceleration Frequently Asked Questions document for all ARRA-funded projects:  
[http://www.nsf.gov/pubs/policydocs/arra/faqs\\_pi.jsp?org=NSF](http://www.nsf.gov/pubs/policydocs/arra/faqs_pi.jsp?org=NSF)

- A revised version of the Research Experiences for Undergraduates (REU) solicitation was recently issued, NSF 13-542.

*The REU solicitation was revised to clarify the treatment of indirect costs in proposals for REU Sites and REU requests for supplemental funding.*

[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5517](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517)

- Important Information Regarding Automated Compliance Checking of FastLane Proposals beginning March 18, 2013

*See full article in this newsletter for more details on page 9*

### ***Virtual Panels at NSF Division of Chemistry***

*Margaret Anne-Wampamba*

The Directorate for Mathematical and Physical Sciences (MPS) has implemented the use of virtual collaboration to facilitate review panels, Committee of Visitors meetings, Advisory Committee meetings, site visits, and telework. Virtual collaboration allows for broadening participation and reduced cost, while easing the need for conference room space. The Division of Chemistry (CHE) is fully on board with this process. WebEx has been the preferred tool for conducting virtual panels. It is easy to use by providing video streams and document sharing. It uses standard telephone services to carry audio at high quality.

Participant surveys have revealed overwhelmingly positive responses to virtual meetings at NSF.

#### **Related links:**

[FY2014 NSF Budget Request to Congress – Merit Review Process Improvements](#)

[NSF Merit Review Website](#)

# NSF Automated Compliance Checking

C. Michelle Jenkins

On **March 18, 2013**, the NSF enhanced the FastLane System to begin automated compliance checking for all required sections of full proposals. **Please note** that Preliminary proposals were not affected by this system enhancement. The sections of full proposals required by the Grant Proposal Guide (GPG) are listed below; inclusion of these sections is now being checked automatically by FastLane at the time of proposal submission.

- Project Summary
- Biographical Sketch(es)
- Current and Pending Support
- Project Description
- Budget
- Facilities, Equipment and Other Resources
- Reference Cited
- Budget Justification
- Data Management Plan (if applicable)

FastLane checks whether a required document is included; it will *not* check formatting, page length, or content requirements (with the exception of the Project Summary, for which the page length is checked).

Proposal submission instructions for conference, symposia or workshops; international travel grants; or program solicitations may deviate from the GPG instructions for standard unsolicited proposals. When submission instructions do not require one of the above sections, proposers should insert text or upload a document in that section, stating "Not Applicable." If this step is omitted, FastLane will not accept your proposal.

PI's will receive a warning message if any of the required sections is missing, but will still be able to forward the proposal to their Sponsored Project Office (SPO). However, the FastLane system will prevent submission to NSF by the SPO if required sections are missing. The SPO remains responsible for assuring all other proposal compliance requirements are met per the GPG.

Lastly, this also applies to proposals being submitted through [Grants.gov](#). Proposals must include all GPG-required sections or include a document stating that the section is "Not Applicable".

For additional information, please see:

[FAQs on Automated Compliance Checking of Required Proposal Sections](#)

# Workshop Update

## Catalytic Chemistry Workshop: Defining Critical Directions for the Future"

*July 26-27, 2011 Denver, CO*

The Chemical Catalysis Program sponsored the "Catalytic Chemistry Workshop: Defining Critical Directions for the Future" July 26-27, 2011 at Denver, CO (CHE - 1125137). The workshop report can be found at:

<http://www.seas.harvard.edu/friend/directory/CatReport-10-03-2012.pdf>

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## Strengthening Forensic Science through Connections with the Analytical Sciences

*December 3 – 4, 2012*

The Chemical Measurement and Imaging Program sponsored a workshop on "Strengthening Forensic Science through Connections with the Analytical Sciences" Dec. 3-4 2012. The workshop was organized by R. Graham Cooks of Purdue University, and engaged scientists from the Directorates for Mathematical and Physical Sciences (MPS), Social, Behavioral & Economic Sciences (SBE), and Education & Human Resources (EHR), as well as from a wide range of academic and government entities, including the Department of Justice (DoJ), National Institute of Standards and Technology (NIST), Naval Research Laboratory (NRL), Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS), the U.S. Secret Service (USSS), and the Netherlands Forensics Institute. Inspired by a 2009 NRC report urging improvement in the scientific basis of forensics and resulting Congressional interest, the workshop aimed to identify relevant fundamental science drivers, primarily in the realm of new concepts in instrumentation and data analysis. Educational and collaborative aspects were also considered. A link to the report will be available soon at the Division website

([http://www.nsf.gov/mps/che/c\\_newsletters\\_and\\_workshops.jsp](http://www.nsf.gov/mps/che/c_newsletters_and_workshops.jsp))

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## Future Directions in Electron Paramagnetic Resonance (EPR) Spectroscopy

*March 11 – 12, 2013*

The Chemical Structure, Dynamics and Mechanisms Program and the Division of Molecular and Cellular Biology co-sponsored a workshop on "Future Directions in Electron Paramagnetic Resonance (EPR) Spectroscopy" between U.S. and German scientists on March 11-12, 2013. The workshop, organized by Gary Gerfen, was stimulated by the recent establishment in Germany of a network of laboratories (called a Priority Program) for the pursuit of state-of-the-art R&D in EPR instrumentation and techniques. The participants called for establishment of a similar US network of EPR spectroscopists to promote collaborative research on challenging problems such as "in cell" EPR and carrier mobility in semiconductor nanoparticles.

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## Molecular Design

*June 27 – 28, 2013*

The Division of Chemistry sponsored a workshop on Molecular Design, on June 27-28, 2013 at the American Chemical Society headquarters in Washington, DC. Organized by Paul Anastas, Director of the Center for Green Chemistry and Green Engineering at Yale University, the workshop aimed to define the required advances and interdisciplinary collaborations to innovate safer chemical design. A particular focus was on a systems-level approach that includes first-principles computation and mechanistic investigation in the design of safer chemicals. The workshop included representatives from chemistry, chemical and environmental engineering, toxicology, public health, environmental health sciences, and public policy. The final report, once reviewed and approved by all participants, will be submitted to a peer-reviewed journal.

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## SusChEM Workshop on Base Metal Catalysis

*September 7, 2013 Indianapolis, IN*

The Chemical Catalysis Program is sponsoring the "SusChEM Workshop on Base Metal Catalysis", which will take place on September 7, 2013 in Indianapolis, IN. The workshop is being co-organized by Paul Chirik of Princeton and Liz Jarvo of UC Irvine, and is aligned with the NSF Science, Engineering and Education for Sustainability (SEES) initiative. The workshop will bring together a diverse group of established and emerging leaders to discuss the opportunities and difficulties in seeking abundant, relatively non-toxic, and inexpensive alternatives to precious metal catalysts. *This workshop will also be coupled with a one-day symposium entitled "Non-Precious Metal Catalysis: Opportunities and Impacts" during the Fall ACS National Meeting in Indianapolis (Sept. 8-12, 2013).*

# Upcoming Proposal Deadlines

**All deadlines are 5 p.m., submitter's local time, unless otherwise noted**

Faculty Early Career Development (CAREER)

Full Proposal for MPS Directorate: July 24, 2013

[NSF 11-690](#)

Research Experiences for Undergraduates (REU) Sites

Full Proposal: August 28, 2013

[NSF 13-542](#)

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Each disciplinary program within the Division of Chemistry has a single annual submission window for unsolicited proposals. Proposals responding to funding opportunities without specific deadlines (e.g., Research in Undergraduate Institutions (RUI; NSF 00-144) and Grant Opportunities for Academic Liaison with Industry (GOALI; NSF 12-513)) should be submitted during the submission windows listed below.

**Principal Investigators (PIs) may submit to the following programs annually between September 1st and September 30th:**

- Chemical Catalysis – CAT
- Chemical Structure, Dynamics and Mechanisms - CSDM
- Chemical Theory, Models and Computational Methods - CTMC
- Chemical Synthesis - SYN

**Proposals may be submitted to the following programs annually between October 1st and October 31st:**

- Chemical Measurement and Imaging - CMI
- Chemistry of Life Processes - CLP
- Environmental Chemical Sciences - ECS
- Macromolecular, Supramolecular and Nanochemistry - MSN

Programs that specify a submission date in a solicitation (including International Collaboration in Chemistry and Centers for Chemical Innovation) are not affected by this submission requirement. PIs should visit the Chemistry website (at <http://www.nsf.gov/div/index.jsp?div=CHE>) for relevant deadlines.

**NOTE:** that if the last day of a submission window falls on a weekend or official Federal government holiday, the deadline is extended to the following business day.

See the NSF Active Funding Opportunities webpage at [http://www.nsf.gov/funding/pgm\\_list.jsp?org=NSF&ord=date](http://www.nsf.gov/funding/pgm_list.jsp?org=NSF&ord=date) for a sortable listing of all NSF Funding Opportunities.

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## Newsletter Production

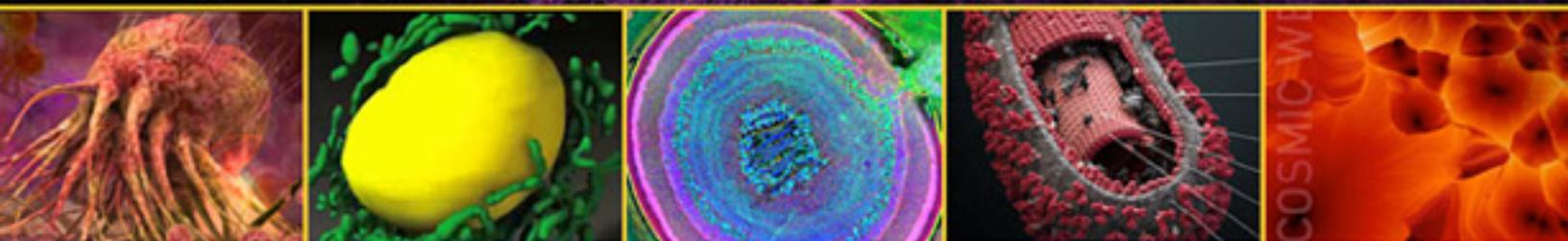
Tanja Pietrass, MPS/CHE

Matthew Pepper, DAS/IDB

C. Renee Wilkerson, NSF/CHE

# INTERNATIONAL SCIENCE & ENGINEERING VISUALIZATION CHALLENGE

SCIENCE AND ENGINEERING'S MOST POWERFUL STATEMENTS  
ARE NOT MADE FROM WORDS ALONE



## About The Challenge

Some of science's most powerful statements are not made in words. From DaVinci's Vitruvian Man to Rosalind Franklin's X-rays, science visualization has a long and literally illustrious history. To illustrate is to enlighten! Illustrations provide the most immediate and influential connection between scientists and other citizens, and the best hope for nurturing popular interest. They are a necessity for public understanding of research developments.

The National Science Foundation (NSF) and the journal *Science* created the International Science & Engineering Visualization Challenge to celebrate the grand tradition of science visualization and to encourage its continued growth. The spirit of the competition is to communicate science, engineering and technology for education and journalistic purposes.

Judges appointed by NSF and *Science* will select winners in five categories: Photography, Illustration, Posters & Graphics, Games & Apps, and Video. The winning entries will appear in a special section of *Science* (with one entry chosen for the front cover) and be hosted at [ScienceMag.org](http://ScienceMag.org) and [NSF.gov](http://NSF.gov). In addition, each winner will receive a one-year online subscription to *Science* and a certificate of appreciation.

We urge you and your colleagues to enter the competition now, which closes on **September 30, 2013**. If you have questions, please contact [scivis@nsf.gov](mailto:scivis@nsf.gov).

[http://www.nsf.gov/news/special\\_reports/scivis/challenge.jsp](http://www.nsf.gov/news/special_reports/scivis/challenge.jsp)