## DIVISION OF CHEMISTRY



# CHENEWSLETTER

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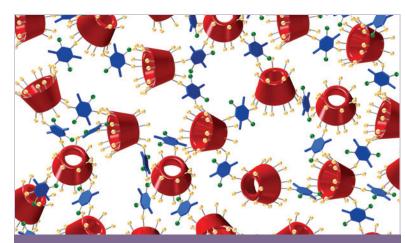


Image of a porous material made from cup-shaped cyclodextrins, that rapidly binds pollutants and removes them from contaminated water. William Dichtel and group, Cornell University, CHE-1413862.

## POLYMER CHEMISTRY BREAKTHROUGH COULD REVOLUTIONIZE WATER PURIFICATION

The group of Professor William Dichtel, Cornell University, synthesized a porous form of cyclodextrin that displays uptake of pollutants through adsorption at rates vastly superior to traditional activated carbon — 200 times greater in some cases. Activated carbons normally have the advantage of larger surface areas than polymers made from cyclodextrin — "more sites for pollutants to stick to," Dichtel said — but they don't bind pollutants as strongly as cyclodextrin.

"What we did is make the first high-surface-area material made of cyclodextrin," Dichtel said, "combining some of the advantages of the activated carbon with the inherent advantages of the cyclodextrin. When you combine the best features of those two materials, you get a material that's even better than either class.

"These materials will remove pollutants in seconds, as the water flows by," he said, "so there's a potential for really low-energy, flow-through water purification, which is a big deal."

What's more, the cyclodextrin-containing polymer features easier, cheaper regeneration, so it can be reused many times with no observed loss in performance.



## UPDATE FROM THE DIVISION DIRECTOR

#### Dear Chemistry Colleagues,

In my three weeks at NSF, there has been an incredible amount of activity. Professors Malika Jeffries-El, Boston University, and Jeff Moore, University of Illinois Urbana-Champaign organized an Early Career Faculty Workshop for junior faculty, postdocs and graduate students. The event was capped at ~110 participants representing a diversity of colleges and universities: from Ph.D.-granting to primarily undergraduate institutions (PUIs). I thank our colleagues Dr. Viviane Schwartz from the Department of Energy, Basic Energy Sciences; Drs. Barbara Gerratana and Derrick Tabor from the National Institutes of Health, National Institute of General Medical Sciences and the National Institute on Minority Health and Health Disparities, respectively, and Dr. Bob McCabe from NSF's Division of Chemical, Bioengineering, Environmental and Transport Systems (CBET) for joining us to talk about their funding programs. The Division of Chemistry's (CHE's) Program Officers and Administrative Staff were present in full force, answering thousands of questions and providing several talks - on proposal preparation, the NSF merit review criteria, and panel process. Attendees participated in mock panels and were able to ask questions based on their own research interests. I thank the many staff members who were involved in organizing and conducting the workshop. We look forward to the impact of this event on the next round of CHE CAREER proposals, which are due on July 22, 2016. With the level of energy and ideas in the room over the 1.5-day workshop, I am very optimistic about the future of chemistry.

We ask that you please send highlights of your NSF-supported research as you put together your annual reports. These highlights are used in our budget documents, are featured in our newsletters and website, stream on the computer monitors in the Mathematical and Physical Sciences (MPS) Directorate, and are mentioned in our external and internal NSF presentations. Highlights are critical to the promotion of the accomplishments of the chemistry community.

NSF has a new Open Access Policy which impacts awards resulting from proposals submitted in or due, on or after January 2016. NSF now requires that either the version of record or the final accepted manuscript of peer-reviewed scholarly journals and papers in juried conference proceedings or transactions be deposited in a public access compliant repository designated by NSF. The articles must be available for download, reading and analysis free of charge no later than 12 months after initial publication and must possess a minimum set of machine-readable metadata elements in a metadata record to be made available free of charge upon initial publication. The articles must be managed to ensure long-term preservation and be reported in annual and final reports during the period of the award with a persistent identifier that provides links to the full text of the publication as well as other metadata elements. The NSF Open Access Policy resulted from a requirement set forth by the Office of Science and Technology Policy (https://www. whitehouse.gov/sites/default/files/microsites/ostp/ostp\_public\_access\_memo\_2013.pdf). Answers to many questions about the NSF Open Access requirements can be found in NSF 16-009 (http://www.nsf.gov/ pubs/2016/nsf16009/nsf16009.jsp). NSF, in partnership with DOE, has established a public repository for the submission of manuscripts and publications resulting from NSF-funded work. The portal is available now for your use via Research.gov. More details about the repository will be provided in the next newsletter.

CHE has openings for new Program Officers (Rotators). If you have an interest in this type of position, or wish to nominate a colleague, please let us know. There are many myths about being a Program Officer, so we strongly encourage anyone who is interested to talk with one of the current or former Program Officers about their experiences or visit the NSF Temporary/Rotator Programs Website: *https://www.nsf.gov/careers/rotator/*.

I thank the many staff members who were involved in organizing and conducting the workshop. We look forward to the impact of this event on the next round of CHE CAREER proposals, which are due on July 22, 2016. With the level of energy and ideas in the room over the 1.5-day workshop, I am very optimistic about the future of chemistry.

CHE is planning an NSF Federal Funders Town Hall Meeting at the 252nd American Chemical Society Meeting in Philadelphia, PA this summer. The Town Hall, tentatively scheduled for Tuesday, Aug. 23, 2016, will include overviews of current funding opportunities and program changes, as well as the popular one-on-one meetings with Program Officers (Speed Coaching). We are also planning to participate in the SciMix Poster Session and in a Presidential Symposium.

I enjoyed the opportunity to visit with colleagues at the ACS Meeting in San Diego, and look forward to meeting more colleagues in Philadelphia. Hope to see you there!

And, finally, I thank Carol Bessel, who has served as Acting Division Director, and Tim Patten, who has served as Acting Deputy Division Director since August 2015. They have done a terrific job! I also want to acknowledge chemist Celeste Rohlfing for her many years at NSF. Celeste began as a Program Officer in CHE, served as the Head of the Office of Multidisciplinary Activities, and was most recently the Deputy Assistant Director of the Mathematical and Physical Sciences Directorate. Celeste is now Chief Operating Officer for the American Association for the Advancement of Science. Celeste's successor in MPS is mathematician, Deborah Lockhart.

Best wishes,

Angela K. Wilson Director, NSF Chemistry Division Director

## DIVISION OF CHEMISTRY STAFFING

The Division of Chemistry would like to congratulate C. Michelle Jenkins who is currently serving on a 120-day detail assignment as the Program Analyst. Before her detail assignment, Ms. Jenkins served as a Program Specialist and Co-Chair of the Outreach Working Group. We are ecstatic about her professional development opportunity within the division.



## HARASSMENT AT GRANTEE INSTITUTIONS

On January 25, 2016, NSF issued Press Statement 16-002 which is summarized as "The National Science Foundation (NSF) will not tolerate harassment at grantee institutions." (*https://www.nsf.gov/news/news\_summ.jsp?cntn\_id=137466*). In particular, please note two paragraphs, "NSF holds responsible the 2,000 U.S. colleges, universities and other institutions that receive NSF funding and requires their implementation of Title IX protections. And NSF encourages NSF-funded researchers and students to hold colleagues accountable to the standards and conditions set forth in Title IX, and to inform their institution of violations.

For any NSF-funded entity that fails to adhere to Title IX, NSF will work with the Departments of Justice and Education to ensure compliance with nondiscrimination laws. NSF may terminate funding to any institution found to be in noncompliance with Title IX regulations and that does not voluntarily come into compliance."

## NEW NSF TRAVEL GUIDELINES KIMBERLY NOBLE AND MARLA STEWART

Federal travel regulations require that all travel reservations be made through NSF's Travel Management Contractor (TMC). AdTrav Travel is NSF's new travel contractor.

#### Making Reservations for a Panel

**Option 1:** You can make your reservations on the Web. Go to FastLane at *http://www.fastlane.nsf.gov* and click on "Panelist Functions." "Panelist" refers to proposal review panels, participants of advisory committees, COVs, and site visits. Next, login using your name, panel ID, and password provided by your program office and go to the "Panelist Travel System." Here you can fill out a reservations worksheet that is transmitted electronically to AdTrav Travel. AdTrav will make your reservations and email you your itinerary. This is the preferred method of making travel reservations.

**Option 2:** Call AdTrav Travel directly with your request at 1-855-417-4024. Their office hours are 8:00 a.m.- 8:00 p.m. EST, Monday through Friday. AdTrav Travel will ask for your Meeting ID. This number should be in your invitation letter sent by the program office.



#### Use of a Personal Vehicle

If a NSF meeting participant uses a personal vehicle in lieu of an airline or train and if the roundtrip mileage is over 300 miles, the total reimbursement is limited to the normal cost of the government-contracted airfare. If the roundtrip mileage is 300 miles or less, NSF will pay all mileage and tolls incurred. In order to be reimbursed for privately owned vehicle (POV) expenses, the participant must complete a POV reimbursement statement. This form should be provided at the meeting.

#### Rental Car

Please note that rental cars are not authorized or reimbursable. Additionally, local ground transportation (including parking) will not be reimbursed for any participant (including local participants). This is because the costs associated with ground transportation are already included in the flat rate reimbursement.

## INFORMATION ON VISITING NSF: REAL ID UPDATE

All visitors to NSF are required to present an acceptable form of identification (ID) — usually a driver's license with photo — to request a badge at the North Entrance (Stafford Street) and enter the building.

Acceptable forms of identification for accessing federal facilities are defined in the Real ID Act, which was passed by Congress in 2005 to enact the 9/11 Commission's recommendation that the Federal Government "set standards for the issuance of sources of identification, such as driver's licenses." The Act established minimum security standards for license issuance and production, and prohibited federal agencies from accepting, for certain purposes, driver's licenses and identification cards from states not meeting the Act's minimum standards. For more information on the Real ID Act, please visit the *Real ID website*.

On January 11, 2016, the Real ID Act exemptions expired. Visitors presenting IDs issued by the following locales are required to show alternative forms of identification.

American Samoa	Minnesota*	New Mexico	U.S. Virgin Islands
Illinois	Missouri	Northern Mariana Islands	Washington*

Acceptable alternative IDs include passports, Personal Identity Verification (PIV) cards from any government agency, U.S. Military ID cards and U.S. Permanent Resident Cards. Any individual without valid alternative identification will need to contact their NSF sponsor to be escorted onto the premises.

\* "Enhanced" licenses from Minnesota and Washington State are accepted.

# HOW TO HIGHLIGHT YOUR CHEMISTRY AWARD STEPHANIE ALBIN AND ERIC PFEIFFER

If you have received NSF Chemistry funding which is enabling you to carry out innovative research and educational activities, you are asked to report on the achievements.

These achievements, or "Highlights," are essential to advancing the Chemistry Division's mission. Highlights are used to:

Communicate the value of chemistry research advances and innovations to the public, Congress, industry, and other government agencies.

Justify future budget requests.

Document the outcomes of NSF program investment, as required by the Government Performance and Results Act (GPRA).

The Division of Chemistry strongly encourages their awardees to submit highlights related to their grants. Highlights should focus on an accomplishment or project outcome, and not merely describe your award. The accomplishment highlighted can be a technical advance or an economic or societal broader impact that resulted from your award.

Highlight submissions are typically a single PowerPoint Highlight slide created using the Chemistry Division Highlight Template. At the top of the slide is the investigator's name, university, award number, and title. The slide should include a compelling graphic image related to the science along with a caption. Additionally, there should be three short paragraphs describing the project outcome, impacts and benefits, and background of the research. It is important to note that Highlight slides may be seen by a variety of audiences and the text you provide should reflect that. Try to target a general science audience, do not use jargon, and avoid using small font to squeeze in more text. A picture (or animation or video) is worth a thousand words, and might even be featured on the cover of our next newsletter. Highlights are prominently displayed on a monitor in the Chemistry Division at NSF.

Award highlights are not just limited to slides. We welcome submissions of news articles, press releases, presentations, videos, etc. All highlights are uploaded into the NSF award management system, for easy reference by Program Officers and other NSF staff. You can send your highlights along with a completed NSF Multimedia Permission & Use of Copyrighted Material Form at any time to your Program Officer and to chemhighlights@nsf.gov.

More detailed information on this and the highlight template and permission form can be found at: *http://www.nsf.gov/mps/che/Highlights/HighlightWebpages/highlights.jsp* 

## UPCOMING DATES AND DEADLINES

Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES)

Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES) is a comprehensive national initiative designed to enhance U.S. leadership in science, technology, engineering and mathematics (STEM) discoveries and innovations focused on NSF's commitment to diversity, inclusion, and broadening participation in these fields. NSF INCLUDES supports efforts to develop talent from all sectors of society to build the STEM workforce. The initiative aims to improve the preparation, increase the participation, and ensure the contributions of individuals from groups that have traditionally been underrepresented and underserved in the STEM enterprise, including women, members of racial and ethnic groups, persons with disabilities, and persons with low socio-economic status. Significant advancement of these groups will result in a new generation of promising STEM talent and leadership to secure our nation's future in science and technology.

The due date for preliminary proposals was April 15, 2016, and invited full proposals are due June 24, 2016. (Due by 5 p.m. proposer's local time): For further information please click on the solicitation link: http://www.nsf.gov/pubs/2016/nsf16544/nsf16544.htm.



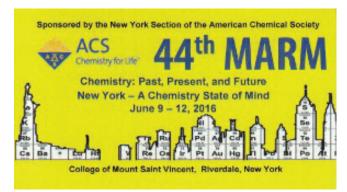
DEADLINES

## CHE COMMUNICATION LISTSERV SIGN-UP

Stay informed with the latest news and topics of interest from the NSF Division of Chemistry: sign up for our mailing list by sending an email message with the subject line, '**Subscribe to CHE**', to: *cheminfo@nsf.gov*. Please share this information with your colleagues!

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## ACS MIDDLE ATLANTIC REGIONAL MEETING (MARM) 2016



Further information will be posted to Chemistry's website: *www.nsf.gov/chem* in the near future.

The 44<sup>th</sup> Middle Atlantic Regional Meeting (MARM) 2016 of the American Chemical Society will be held from Thursday, June 9 to Sunday, June 12, 2016. Hosted by the New York Section of the ACS, the meeting will take place at the College of Mount Saint Vincent in Riverdale, NY.

CHE staff members are scheduled to give a series of presentations focused on research opportunities for undergraduates, graduates and postdocs, early career faculty, and faculty members at all career stages. We will also be exhibiting — hope you can stop by and see us!

## 2016 CHEMISTRY EARLY CAREER FACULTY WORKSHOP

TIMOTHY PATTEN

On March 10 and 11, 2016, Professors Malika Jeffries-EL (Boston University) and Jeffrey Moore (University of Illinois Urbana-Champaign) hosted the first Chemistry Early Career Faculty workshop in Arlington, VA. About 110 tenure-track, junior faculty, postdocs and graduate students from a wide range of academic institutions across the country attended the event. Nearly all of the Program Officers and administrative professionals from the Division of Chemistry were also present. The workshop agenda included presentations on various aspects of developing, submitting and reviewing NSF proposals, mock review panels, "speed coaching" sessions with NSF program staff, and lots of time to ask questions. A highlight of the workshop was a series of keynote speaker presentations from faculty who had received CAREER awards from the Chemistry Division: Katherine Plass (Franklin and Marshall College), Tom Miller (CalTech), Todd Hudnall (Texas State University), and Kent Kirshenbaum (New York University). Tentatively, the Chemistry Division is planning to support another workshop during 2017.



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