

What's happening in the CSN?

November 15, 2017

Volume 3, Issue 2



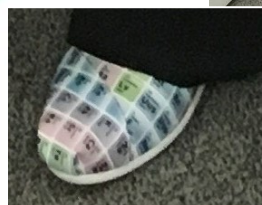
Celebrations

Welcome to New CSN Members

Welcome to recent **Geiger group** alum **Laura Olenick's** new baby, Benjamin Alexander Cox, who was born on September 30, 2017. Congratulations to Laura and her family!

Good news!

Congratulations to **Arielle Mensch (Hamers group)** on breaking the Friday the 13th curse and successfully defending her Ph.D. thesis, "Characterizing Nanoparticle Interactions at the Cellular Membrane." Those cool periodic table shoes will be walking the CSN a little longer, since Arielle is now a postdoc with **Galya Orr** at PNNL.

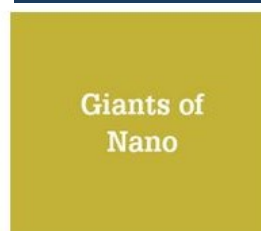


Proud parents with the Doc, showing us where Arielle got her fashion sense.

Milestones and awards

Christy Haynes was chosen to be one of 10 "Giants of Nano" for *The Analytical Scientist's* "Power List", which you can read about [here](#).

Christy was also named a University of Minnesota "Institute on the Environment" (IonE) Fellow, an honor reserved for "distinguished intellectual contributors representing a range of disciplines and fields of professional expertise." Read more about the IonE fellows [here](#). Congratulations Christy!



Giants of Nano



#9 Christy Haynes



Cathy Murphy helped organize, and was featured in, a virtual issue of *The Journal of Physical Chemistry C*, which honors Marie Curie's 150th birthday and highlights female physical chemists "who have been *JPC* Editors, who have been *JPC* Editorial Advisory Board members, or who have won *JPC*/ACS Division of Physical Chemistry Lectureship Awards." Read the editorial highlighting the online issue [here](#), and her featured article [here](#), which is entitled "Anisotropic metal nanoparticles: synthesis, assembly and optical applications."

Franz Geiger met Germany's First Lady Elke Büdenbender during the Humboldt Award Ceremony at the German White House, Chateau Bellevue, in Berlin (Büdenbender was a judge, as well as being the wife of German President Frank-Walter Steinmeier).

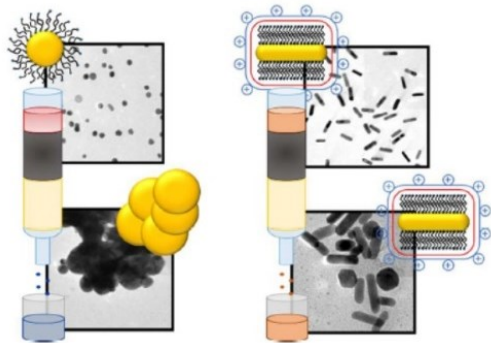
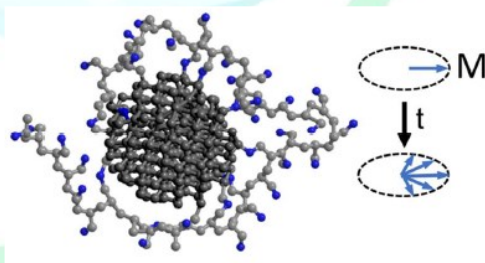
Franz has also been appointed to a three-year term at the Chemical Sciences Roundtable (CSR) of the National Academy of Sciences, Engineering, and Medicine. The CSR mission is to "provide a science-oriented, apolitical forum to enhance understanding of critical issues in chemical sciences and technology affecting the government, industrial, and academic sectors."



First Lady Elke Büdenbender, Franz Geiger, and Katrin Amian (AvH Head for North America).

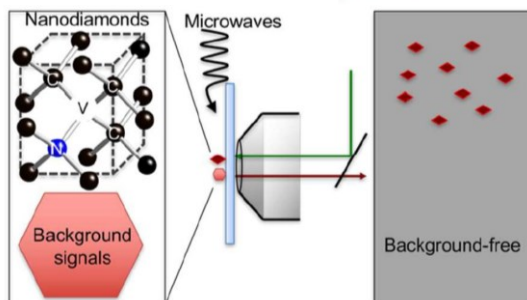
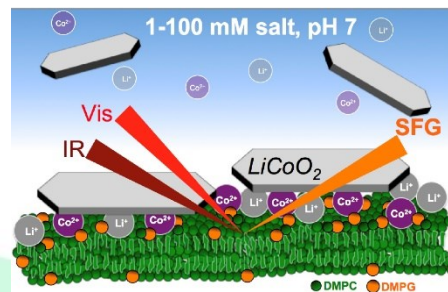
CSN Productivity

Yongqian ("Kelly") Zhang, Charles G. Fry, **Joel A. Pedersen** and **Robert J. Hamers** (2017). Dynamics and Morphology of Nanoparticle-linked Polymers Elucidated by NMR. *Analytical Chemistry* (read the manuscript online [here](#)).



Samuel E. Lohse, Nardine Abadeer, Michael Zoloty, **Jason C. White**, Lee A. Newman and **Catherine J. Murphy** (2017). Nanomaterial Probes in the Environment: Gold Nanoparticle Soil Retention and Environmental Stability as a Function of Surface Chemistry. *ACS Sustainable Chemistry & Engineering* (read the manuscript online [here](#)).

Merve Doğangün, Mimi N. Hang, Jo Machesky, Robert J. Hamers, and Franz M. Geiger (2017). Evidence for Considerable Metal Cation Concentrations from Li Intercalation Compounds in the Nano-Bio Interface Gap. *Journal of Physical Chemistry C* (read the manuscript online [here](#)).



Margaret Robinson, James Ng, Huilong Zhang, Joseph Buchman, Olga Shenderova, Christy Haynes, Zhenqiang Ma, Randall Goldsmith, Robert Hamers (2017). "Optically detected magnetic resonance for selective imaging of diamond nanoparticles." *Analytical Chemistry* (read the manuscript online [here](#)).

CSN Talks and Presentations

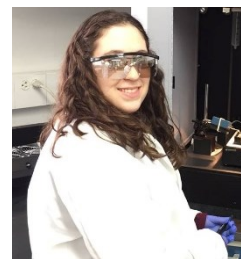
Diamond Jones (Mason group) presented her CSN work entitled "Modeling surface properties of engineered nanomaterials: Dissolution and adsorption" at the University of Iowa Physical and Environmental Seminar Series (left picture below).



Photo courtesy of
Renee Frontiera

Peter Clement (Haynes group) presented CSN work as a poster at the 2017 Midwest regional ACS meeting in Lawrence, Kansas. The poster was titled "Investigating contributions of nanoparticle composition and reactivity to bacterial toxicity of nanoscale metal phosphates" (right picture above).

CSN student **Isabel Foreman-Ortiz (Pedersen group)** presented her work on the effect of nanoparticle exposure on ion channel activity, entitled “Impact of anionic nanoparticles on the structure and function of a model ion channel,” at the 2017 Meeting of the Sustainable Nanotechnology Organization (SNO). Izzy also did some recruiting at ABRCMS by handing out CSN REU fliers.



Bob Hamers participated in two briefings to US Congressional staff as part of a “Sparking Economic Growth” program hosted by the Science Coalition. Bob and seven other faculty entrepreneurs presented two briefings to congressional and federal agency staff. One was for the House of Representatives (sponsored by Rep. Bill Foster) and one for the Senate (sponsored by Senators Jerry Moran and Chris Coons). The briefings included introductions by Foster, Moran, and Coons and were attended by approximately 100 staff.



Photos courtesy of Catherine Johnson (from UW) and Sue Garman (from Hudson Lake).

Miriam Krause recently co-presented two communication workshops with her counterpart from the Center for Chemistry at the Space-Time Limit (CaSTL), Danielle Watt. The first was at SACNAS in Salt Lake City, called “Training effective communication to prepare future STEM leaders.” The second was at NOBCChE in Minneapolis, entitled “NSF Centers for Chemical Innovation Science Communication Skills Workshop.”

Zack Jones and **Riley Whitehead (Hamers group)**, and **Alicia McGeachy (Geiger group)**, also presented posters at NOBCChE.



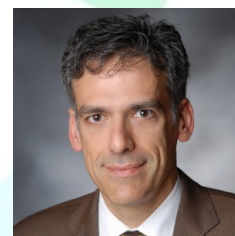
Left. Miriam and Danielle staffing the CCI booth at SACNAS (photo by Lloyd Munjanja). **Above.** Miriam’s pre-workshop selfie at NOBCChE.

Joel Pedersen chaired the session on Nanoparticle Fate and Exposure at SNO 2017 and gave a presentation on CSN research entitled "Nanoparticle interactions at biological interfaces: Insights from model systems". Joel also gave talks about CSN research at series of talks in Taiwan: National Taiwan University in Taipei, National Chung Hsing University in Taichung, National Cheng Kung University in Tainan. He also discussed CSN research at University of Massachusetts Amherst and Huazhong Agricultural University, Wuhan, China.



Christy Haynes gave an invited talk on CSN work at the national American Institute of Chemical Engineers (AIChE) on 10/30/2017 in Minneapolis, MN. Christy also sat on a panel at the annual UMN Institute for Engineering in Medicine conference to share insights about Center funding for research.

Rigoberto Hernandez was busy the last couple months. He presented a talk entitled "Advancing Chemistry through Diveristy" at Duke University, the University of Cincinnati, Northwestern University (hosted by **Alicia McGeachy** as part of the "Faces of Science" lecture series), Smith College, and SERMACS 2017. He also presented a talk entitled "Dynamical Consistency in Sustainable Nanoparticles" at Louisiana State University, Duke, U of Cincinnati, Northwestern, and U of Maryland. Finally, he gave a lecture on "Exact Classical TST in Dissipative and Driven Chemical Dynamics" at U of Maryland.



Latest from Sustainable Nano

See sustainable-nano.com for all the CSN blog posts and podcast episodes

CSN Blog posts

- Oct 9: [Celebrating National Nanotechnology Day and Indigenous Peoples Day](#) by **Miriam Krause**
- Oct 17: [Recycling: A Strategy for Sustainable Nanotechnology?](#) by **Howard Fairbrother**
- Oct 26: [It's National Chemistry Week!](#) by **Miriam Krause**
- Oct 30: [How many moles of gas are in a Pokémon Gastly?](#) by **Natalie Hudson-Smith**
- Nov 10: [Center for Sustainable Nanotechnology T-Shirts Are Back!](#) by **Miriam Krause**

CSN Podcast episodes

- Ep 18. [Why do we care about emerging contaminants?](#) (interview with **Rebecca Klaper**)
- Ep 19. [Scientists and Impostor Syndrome: Can We Do Anything About It?](#) (interview with Valerie Young)
- Ep 20. [Dr. Gro Harlem Brundtland and the Definition of Sustainability](#) (interview with **Liz Laudadio**)

Fun!

From the CSN All-hands meeting at UIUC!



Opportunities

CSN t-shirt drive. Don't forget you have another chance to purchase your Year 3 CSN t-shirt! These could be great holiday gifts for friends and family, or a nice way to welcome new trainees. Funds raised from t-shirt sales will support the Student Board's social activities during All-Hands Meetings. We have a range of styles and colors available - see all the options at bonfire.com/csn-year-3-fundraiser/. The **deadline for ordering is November 28** and shirts will ship 1-2 weeks after that.



The Graduate Women in Science (GWIS) National Fellowships Program is open and accepting applications. CSN's own **Caley Allen (Hernandez group)** was a reviewer for this fellowship years ago, and it is a great opportunity for women in the physical sciences. The awards may be valued up to \$10,000. Caley says "I know that the Center has some outstanding women trainees and faculty, and would therefore be very competitive for the fellowship." You can find more information [here](#). GWIS and the monthly GWIS LEAD by Dr. Elizabeth Travis is related to our diversity and URMs discussion, as she [discusses the importance of sponsorship and diversity for scientific progress](#).

From the ACS Division of Analytical Chemistry: "The ACS Division of Analytical Chemistry (ANYL) requests submissions from graduate students for symposia topics and organization at the Fall 2018 National ACS Meeting in Boston, MA. Graduate-student organizers are invited to submit proposals for these symposia, which should include the following: a title for the symposium, a brief description of the proposed topic, a list of five prominent researchers in the field who would be invited. Symposia chosen will include both invited and contributed talks and could extend over several half-day sessions depending on the number of contributed papers. The student organizers will issue invitations to the five featured speakers, solicit contributed papers, and organize and chair the sessions. Student organizers will receive free meeting registration. Teams that combine graduate students from two universities are especially encouraged. **Proposals are due December 1, 2017** and should be submitted to Miquela Sena at the ACS Analytical Division Office: miquela@sciencemanagers.com."

Looking Ahead

The Student Board decided to change the SB/EC Liaison term from 6 months to 9 months. **Becky Curtis (Klaper group)** has agreed to extend her term through January 2018. Start thinking now about whether you want to nominate yourself or someone else for the next term!

Mark your calendars: our next professional development activity is coming up on **Wednesday, Nov 29 at 10:00 Central**. We will be discussing the article "[The subtle ways colleges discriminate against poor students, explained with a cartoon](#)." The article's author, Alvin Chang, will also be joining us!

Looking to schedule a WebEx meeting? Requests should be made using the online [CSN WebEx Request Form](#), which you can also find under the "Members" tab of the [CSN Website](#).

Diversity Update

The CSN Diversity Committee has been meeting frequently over the last few months and has two important developments.

New CSN Policy on Diversity: The CSN faculty unanimously agreed to the following policy, committing our faculty and senior personnel to active engagement in enhancing the center's diversity:

Faculty Commitment to Enhancing Diversity: CSN faculty and other senior personnel are expected to present at least one talk per year at a minority-serving institution. The intent of this policy is to establish and nurture connections between the CSN and faculty and students at other institutions that principally serve minorities and/or other underrepresented groups and who otherwise might not have access to research opportunities.

Limited funding is available from the UW-Madison account provided that the traveler adheres to all UW-Madison travel policies. Additional funding may be available from home institutions. If in doubt please contact the Diversity Committee.

CSN Diversity Statement: The Diversity Committee developed a statement that reflects the CSN's commitment to enhancing the diversity of the CSN. The following statement was unanimously approved by CSN faculty in November:

The NSF Center for Sustainable Nanotechnology (CSN) values diversity and is committed to maintaining a supportive and inclusive climate within our research community. We value diversity in all forms, including but not limited to national origin, language, race, color, disability, ethnicity, gender, age, religion, sexual orientation, gender identity, socioeconomic status, veteran status, educational background, and family structures. We conduct all center activities, including recruitment, retention, personal and professional development for a diverse group of faculty, postdoctoral fellows, staff, graduate and undergraduate students, in a manner consistent with these values.

Operations within the CSN seek to develop and implement "best practices" for research and workforce training. Our efforts to build a diverse workforce of scientific leaders are enhanced by four primary activities:

1. Recruiting. The CSN seeks to attract a diverse pool of scientists into the center. Some of the mechanisms we use include:

- The CSN Research Experience for Undergraduates (REU) and Research Experience for Veterans (REV) Programs
- Working with McNair and other diversity-oriented programs on our individual campuses
- Providing resources to CSN faculty to attract a diverse pool of outstanding talent to our program
- Providing support for CSN members to give talks at four-year colleges, minority-serving institutions.

2. Training and awareness. The CSN provides training opportunities for graduate students, postdocs, faculty, and staff with the goal of creating the next generation of scientific leaders. Opportunities include:

- Seminars and workshops aimed at career advancement for all CSN participants.

- Development of written and oral communication skills emphasizing how to communicate to non-scientists and diverse audiences.
- Short DISC (Diversity Innovation Safety Communication) moments at each weekly CSN seminar

3. Supporting and retaining. The CSN supports all CSN members in their efforts to become the next generation of scientific leaders. Strategies for support and retention include:

- Creating and maintaining a welcoming climate
- Monthly enter-wide and small-group professional development opportunities
- Networking opportunities
- Supporting new CSN members through “buddy” program and on-boarding committee
- Support/mentorship by faculty, staff and students.

4. Assessment. The CSN evaluates the effectiveness of our programs and uses this information to develop and implement “best practices” in our goal of developing and training a diverse workforce to carry out cutting-edge multidisciplinary science. Some of the tools we use for assessment include:

- Annual surveys of center climate
- Evaluations of each professional development opportunity
- Biannual evaluations of each research project

We believe that the best possible decision-making occurs when all voices are heard. We are committed to the long-term goal center of center membership that reflects the diversity of the US population.

Giving Opportunity

Are you or your family members interested in supporting the CSN by making a donation? Donations are tax-free and all aspects are professionally managed by the University of Wisconsin Foundation, UW-Madison’s official philanthropic foundation. Gifts made to the UW Foundation can be used to support many (but not all) of the CSN activities that we can’t fund using federal grants. If you or someone you know might be interested in making a donation, please direct them to the [UW Foundation’s donation site](#) and ask them to donate specifically to “**Fund #112220006, Center for Sustainable Nanotechnology**”. Better yet, make it a recurring gift!

Lost in Cyber-Space?

HOME ABOUT US OUR TEAM NEWS EDUCATION & OUTREACH WORKING WITH THE CSN PUBLICATIONS RESEARCH MEMBERS

Links to frequently requested CSN documents and information sources

For these documents and more, visit the [Center Resources page](#) on the [CSN website](#) (requires login though Members page, contact [Miriam](#) if you need help).

Newsletter submissions (awards, highlights, lab exchanges, publications, FUN, etc.): [link](#)

CSN Documents and Downloads

- CSN calendar (RFA, All-hands, professional development): [link](#)
- CSN Operations Guide 2.5: [link](#)
- CSN participants list (Names, group, and email addresses): [link](#)
- CSN Projects Documents (Spring 2017 version): [CSN Projects](#) - [% Effort sheet](#)

CSN Reporting Forms

- Report lab exchange activities: [link](#)
- New CSN Publications: [link](#)
- New CSN Presentations: [link](#)
- Report Outreach Activity: [link](#)
- CSN Safety Verification form: [link](#)
- Nanoparticle availability (Listing of NPs available center-wide): [link](#)

CSN Feedback Forms

- Requests for the Executive Committee (meeting agenda): [link](#)
- SuggestionOx (completely anonymous comments/suggestions to CSN staff):
Director (Bob): [link](#)
Associate Director (Christy): [link](#)
Managing Director (Mike): [link](#)
E/O Director (Miriam): [link](#)

Looking to **schedule a WebEx meeting**? Requests should be made using the online [CSN WebEx Request Form](#), which you can also find under the "Members" tab of the [CSN Website](#).

Find the most recent list of all our publications on the [CSN Google Scholar](#) page.

