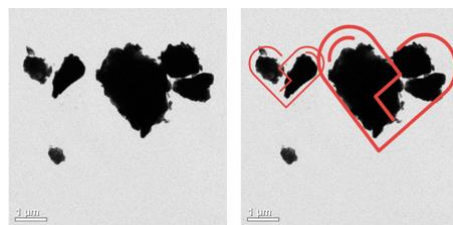


What's happening in the CSN?

February 21, 2018

Volume 3, Issue 5



Copper oxide Valentine TEM image by
Natalie Hudson-Smith

Celebrations

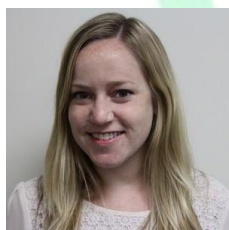
Milestones and awards

Tian (Autumn) Qiu (Haynes group) has been chosen as a 2018 Beckman Institute Postdoctoral Fellow at the Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign. Congratulations, Autumn!



Congratulations to **Diamond Jones (Mason group)**, who received a travel award from the University of Iowa's Center for Global and Regional Environmental Research (CGRER). The funds will help support Diamond's trip to the Spring ACS meeting in New Orleans, where she will present a poster on CSN research.

Alicia McGeachy (Geiger group) was nominated for induction into the Edward A. Bouchet Graduate Honor Society. Alicia also received a Conservation and Scientific Research Award from the Metropolitan Museum of Art. Congratulations, Alicia!



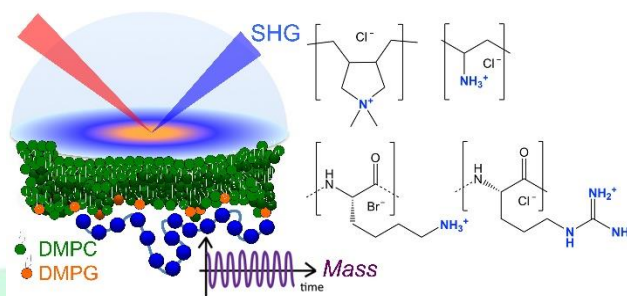
Emily Caudill (Pedersen group) received a Schrag Travel Grant from the UW-Madison Department of Chemistry (Analytical Division), which will provide support to attend ACS New Orleans.

Joel Pedersen was appointed to the Editorial Board of *Environmental Science: Nano* as an Associate Editor.



CSN Productivity

Alicia McGeachy, Naomi Dalchand, Emily Caudill, Tianzhe Li, Merve Dogangun, Laura Olenick, Hanbyul Chang, Joel Pedersen and Franz Geiger, *Physical Chemistry Chemical Physics*. Interfacial electrostatics of poly(vinylamine hydrochloride), poly(diallyldimethylammonium chloride), poly-L-lysine, and poly-L-arginine interacting with lipid bilayers. Read the Just Accepted version online [here](#).



Christy Haynes has co-guest edited a virtual issue of *Analytical Chemistry* highlighting selected women analytical chemists, including an editorial

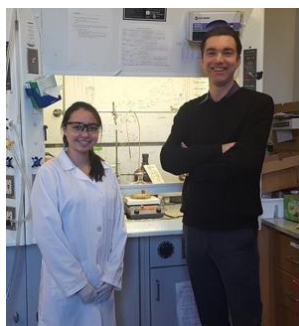
that features OXIDE data and recognizes some challenges for women chemists. The special issue also featured papers from several CSN contributors, including a [2015 review paper](#) from Erin Carlson's group and Autumn Qiu's (Haynes group) [2017 Growth Based Viability Assay paper](#) that included 9 female undergraduate, graduate, and faculty contributors from the CSN! You can find the virtual issue [here](#) and Christy's editorial [here](#).

Donyue Liang's (Cui group) publication in *Physical Chemistry Chemical Physics*, entitled "[Analysis of conformational properties of amine ligands at the gold/water interface with QM, MM and QM/MM simulations](#)," is featured on the list of "[2018 PCCP Hot Articles](#)." Congratulations Donyue his coauthors, Jiewei Hong, Dong Fang, Joe Bennett, Sara Mason, Bob Hamers, and Qiang Cui!

Lab Exchanges

Emily Tollefson (Carlson group) recently spent some time working in the Murphy group with Cassie Zhang. She learned how to synthesize MPA-coated gold nanoparticles and characterize them by UV-Vis and DLS. Emily said, "as a synthetic chemist, I learned a lot of new analytical techniques and really enjoyed my time there."





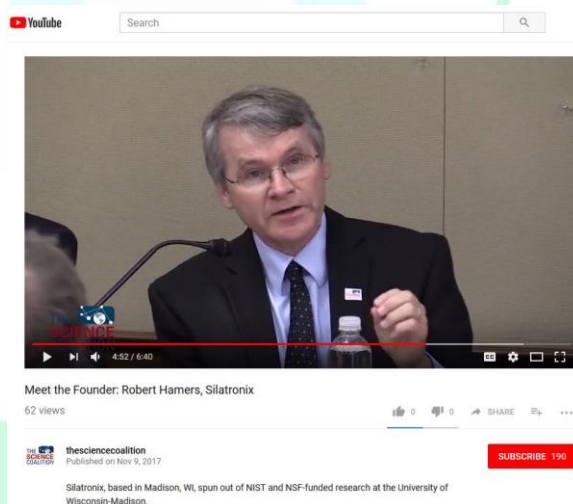
Katrina Carlin a 2017 REU student from New College (Florida) came back to Johns Hopkins for two and a half weeks this past January to continue her summer research project on functionalizing nanocellulose in the **Fairbrother group** (pictured here in the lab next to her hood with Howard).

Liz Laudadio (Hamers group) traveled to Georgia State University to learn how to conduct flow adsorption microcalorimetry experiments with Professor Nadine Kabengi (pictured in the middle) and Dr. Poorandokht Kashkouli (pictured to the right). This collaboration came directly out of the Gordon Research Conference in June, when **Bob Hamers** had the opportunity to meet Professor Kabengi. Liz applied for and received the John Schrag Pre-Dissertator Travel Grant from UW-Madison to help fund her visit.



CSN Talks and Presentations

Bob Hamers is featured in a [Youtube clip](#) highlighting his recent testimony for the Science Coalition hearings in Washington, D.C. The clip includes statements from Representative Bill Foster (D-IL), Senator Jerry Moran (R-KS), Senator Chris Coons (D-DE), and Orin Herskowitz (Columbia University) about the importance of investing in science. Bob talks about his experience as a co-founder of Silatronix and how the National Institutes of Standards and Technology, the National Science Foundation, and the Office of Naval Research were instrumental in developing the technology and keeping the company moving forward. More information can be found on the [Science Coalition website](#).



Jason White visited Georgia Southern University in Statesboro GA, where he met with faculty and graduate students and gave a presentation on CSN research and activities, including the seed grant on nano-enabled agriculture. He also met with 20 undergraduate students as part of a recruitment effort for the summer 2018 CSN REU/REV program.

Travel continued to be a refrain for **Rigoberto Hernandez** in 2018 as he represented our center's research and diversity work at the Humboldt/NSF Kolleg on "New Vistas in Molecular Thermodynamics: Experimentation, Molecular Modeling, and Inverse Design" in Berkeley Ca (January 7-9), the Chemical Society of Washington Local Section of the ACS (January 11), Emory University (January 25-26), UIC (Feb. 15), Mass (Feb. 22-23), and Middle Tennessee State University (March 1-2).



Beautiful Berkeley
Photo credit: Rigoberto



Mike Curry gave a presentation at the University of Alabama Department of Chemistry, entitled "Cellulose-based Plastic Composites: Could We be at a Turning Point in the Plastic Industry?"

New CSN Capabilities

The **Feng lab** has recently moved to a beautiful expanded lab space in the newly opened Hagfors Center on Augsburg University campus! Pictured: **Peter Clement (Haynes lab)** visiting us to talk about experiments with **Josh Kuether**.



Diversity Corner

We are starting a new feature with this issue of the newsletter, tentatively called our "Diversity Corner." This is a chance to discuss topics related to diversity, broadening participation in STEM, inclusivity, etc. Below are a couple of examples (both submitted by **Miriam Krause**) to get the ball rolling.

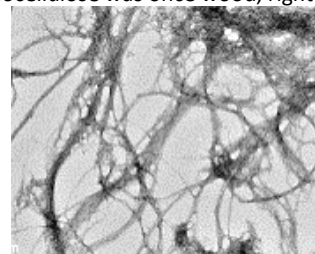
- Ed Yong, a science writer for the *Atlantic* (he also wrote the book *I Contain Multitudes*, about microbiomes), recently published an article called "[I Spent Two Years Trying to Fix the Gender Imbalance in My Stories](#)." I found it very interesting and thoughtfully written, and it made me wonder if there is more I should be thinking about along similar lines in the Center. For example, is the proportion of blog posts written by men vs. women representative of our Center population?
- I attended the Feb 15 ACS webinar [Sexual Harassment in the Sciences: Steps Forward](#) and definitely recommend it. The main speaker was Kathryn Clancy, an anthropologist who studies harassment in science field research, so she was incredibly knowledgeable as well as being a dynamic speaker. I think the webinar archive will be available at the linked site soon, but they already have a bunch of resources posted. There were too many interesting things to summarize here, but one thing to note is that there's an ACS conference symposium about the science of sexual harassment, which you can check out at bit.ly/ScienceSH.

Latest from Sustainable Nano

See sustainable-nano.com for all the CSN blogs and podcasts

Happy 5 year anniversary to Sustainable Nano! Our first post was published way back on January 29, 2013.

5 yr anniversary = Wood
Nanocellulose was once wood, right?



Blog Posts and Podcast Episodes since the last newsletter

- Jan 29: [2017: Sustainable Nano Year in Review](#) by Miriam Krause
- Feb 1: [La diferencia atómica entre los diamantes y el grafito](#) (Nano Sostenible translation of “The atomic difference between diamonds and graphite” by Cathy Murphy)
- Feb 6: [¿Qué pasa con todos esos teléfonos celulares llameantes? Un manual sobre la seguridad de las baterías](#) (Nano Sostenible translation of “What’s with all those flaming cell phones? A primer on battery safety” by Bob Hamers)
- Feb 8: Podcast ep 23: [From Worm Genetics to Chocolate Cake: Art and Science with Dr. Ahna Skop](#)
- Feb 14: [Can gold melt at room temperature? Melting temperature depression!](#) by Meng Wu
- Feb 15: [Microscopio Universal de Royal Rife \(y por qué no puede existir\)](#) (Nano Sostenible translation of “Royal Rife’s universal microscope (and why it can’t exist)” by Natalie Hudson-Smith)



Fun!

Linus Pomerantz (Krause group) enjoyed some Starbucks on the way to the INCLUDES Summit last month (photo courtesy of Miriam Krause).

Baltimore All-Hands Meeting Information

Meeting details and updates will continue to be distributed by email, but here are some of the basics:

- **Agenda, Flash Talks, & Flight info (Ongoing – updated as info comes in):** [link](#)
- **Hotel:** [Inn at the Colonnade Baltimore](#)
- **Meeting location:** [Charles Commons](#)
- **Sunday outreach activity:** 11:00-1:00 at the [Maryland Science Center](#) (note that their website lists the event going until 3:00 but we will only be participating until 1:00)
- **CSN Programming begins:** Sunday, March 4 at 2:00pm
- **CSN Programming ends:** Tuesday, March 6 at 12:00pm
- **OneChemistry Symposium:** [Designing Environmentally Sustainable Nanoparticles](#) Tuesday, March 6, 1:00-5:45pm
- **Monday Night Trainee-Only Social Activity:** Charm City Trivia at [Home Slyce](#) Pizza



The Maryland Science Center
Photo credit: Miranda Gallagher

Opportunities

P&G Focusing on Industrial Recruitment of Scientific Talent (FIRST) Conference - [FIRST link](#)

Are you interested in learning more about industrial research careers? Do you want to see your research brought to life in products that improve the lives of consumers around the world? Apply now and learn what industrial research at P&G is all about! The FIRST Conference is your opportunity to experience the wide range of exciting research careers at P&G. You will travel to Cincinnati-based technical centers to experience industrial careers in action, network with a group of successful scientists and other professionals whose leadership in science and technology is well established, and gain a deeper understanding of the realities of cultural and workforce diversities. You will learn how P&G invests in basic and applied research, which ultimately brings superior innovation to the marketplace. The FIRST Conference is a unique recruitment opportunity that will be held September 2018, in Cincinnati, Ohio. All travel expenses and hotel accommodation costs will be paid by P&G. You could leave this conference with a day visit invitation and may be considered for future employment at P&G.

Applications must be received by July 2018, to be considered for the 2018 conference. Be sure to attach the following to your application: Current resume and a 1 page research summary. Applicants should **expect to receive a doctoral degree within 9-24 months of the conference date. Postdoctoral researchers are also encouraged to apply.**

Science Outside the Lab - Nanotechnology and Policy (June 3 – 9, 2018). **APPLICATION DEADLINE IS MARCH 2, 2018.**

Science Outside the Lab brings a small cohort of graduate student scientists and engineers to Washington, D.C. to explore the relationships among science, innovation, and policy. The goal is to expose participants to as many different viewpoints as possible and help them understand how people and institutions influence and learn from science. This customized one week version is sponsored by the Nanotechnology Collaborative Infrastructure Southwest (NCI-SW) and will be led by Dr. Jameson Wetmore. During the workshop participants will investigate the context of nanotechnology decision-making in government and business at the local, state, federal, and international levels. Participants will meet and interact with congressional staffers, lobbyists, funding agency officers, regulators, journalists, academics, museum curators, and others to learn how and why nanotechnology and other emerging technologies are funded, regulated, shaped, critiqued, and publicized. Graduate students affiliated with the National Nanotechnology Coordinated Infrastructure (NNCI) and the universities that participate in the NNCI are especially encouraged to apply to this program. We are looking for candidates who are interested in how decisions are made about science and innovation funding, regulation, and policy. NCI-SW will cover the program fees, transportation, and some meals for those applicants chosen to participate. **For more information and to receive an application, please contact Andra Williams at andra.williams@asu.edu.**

Stephanie Mitchell (Carlson group) says: *Interested in science policy related to nano? Apply for an all expense paid trip to D.C. to meet and learn from experts in the field of science policy (NIOSH, EPA, NSF, etc.) and meet other students who research nano across the country. If you have any questions about this opportunity, email Stephanie (mitc0496@umn.edu) for more information, she went last year and thought it was a great experience!*

Arizona State University Postdoc Opportunity.

Seeking Post-doc or Research Faculty Interested in Metal/Nano and Biological Interactions We are seeking a post-doc with a PhD in environmental engineering/chemistry/ geology/biochemistry or closely related field to investigate elemental cycling of nanoscale metals and the resulting impacts on the function of aquatic organisms (bacteria, fish) and/or human health. While all living organisms are exposed to natural, incidental or engineered metallic nanoparticles in diets (oral), workplace or natural environments (inhalation), biomedical drug delivery (intravenous) or through the use of consumer products such as sunscreens (dermal) where they can translocate throughout our bodies with benign, adverse or beneficial effects, there is growing evidence that metal-based nanomaterials can also form within living organisms and intriguing evidence suggests that such in-situ production of nanomaterials plays critical roles in biological function in ways we are just beginning to discover.

The position is supported by two centers (NSF and EPA) and internal university support aimed at creating a service-focused culture to help 10-15 PhD students in their research and to create new instrumentation platforms. Experience with ICP-MS and TEM/SEM sample preparation and analysis is highly desired, and critical for success of the project. We are seeking expertise in these areas and biology of fish, humans or other mammals. The expectation will be to publish peer reviewed articles as a first author, although extensive collaborative papers with PhD students are also a natural consequence. There will be opportunities to assist in proposal development, and the post-doctoral position could evolve into a research scientist or research assistant professor position after two years. Qualified applicants with more than 10 peer reviewed journal papers and some experience writing proposals would be considered for a research assistant professor position.

Interested candidates should send to Paul Westerhoff (p.westerhoff@asu.edu) a resume, list of 3 potential references with contact information, and a 1 – 2 page cover letter describing how their interests match with the above description. Applications will be reviewed starting March 10, 2018 and continue until the position is filled with an excellent candidate.

Center for Advancement of Informal Science Education (CAISE) job opportunity.

The Center for Advancement of Informal Science Education (CAISE) has a unique opportunity for someone who wants to immerse themselves in the rich, expanding field of informal STEM learning. As Communications and Community Manager the successful candidate for this now open position will become intimately familiar with the projects, publications and events that are informing the design, evaluation and research of innovative settings and experiences, and will play a key role in facilitating dynamic interaction between the field, funders and other stakeholders. The Washington D.C.-based Communications and Community Manager will join a small, nationally distributed team of scholars and practitioners who curate, create and disseminate resources and opportunities for professional learning for those working in informal STEM education, science communication and public engagement with science. For further information on the position and how to apply, click [here](#).

Looking Ahead

Webinar/in-person workshop at U of MN March 8: Research Integrity and Trustworthy Science: Challenges & Solutions

Scientific research is fundamental to progress, sparking new discoveries, improved health care, and technological innovation. However, research misconduct such as data fabrication, detrimental research practices including selective data reporting,

predatory journals that fail to perform meaningful peer review, and concerns about the reproducibility of scientific findings all threaten to undermine public trust. This conference will bring together leading thinkers from multiple disciplines – biomedicine, the social sciences, law, ethics, and others – to analyze the challenges for researchers, universities, journals, and the community. The speakers, panelists, and audience members will collaborate to map a way forward. To register for in-person or webcast attendance, [click here](#).

The banner features a dark red background. On the left, a yellow box contains the text: "Thursday, March 8, 2018 8:30am-1pm Coffman Theater University of Minnesota". To the right of this box are three small images: a person wearing a blue EEG cap, a hand holding a pipette over a multi-well plate, and a laboratory shelf filled with various bottles. On the far right, a large image shows a microscope with a green laser line. The title "Research Integrity and Trustworthy Science: Challenges & Solutions" is written in white serif font across the middle. At the top left is the "RESEARCH ETHICS" logo, and at the top right is the registration link "Register at: z.umn.edu/ResearchIntegrityReg". At the bottom, in small white text, it says: "Presented by the Office of the Vice President for Research; Consortium on Law and Values in Health, Environment & the Life Sciences; and Masonic Cancer Center Part of Research Ethics Week, March 5-9, 2018".

RSC Twitter Poster Conference: March 6th (9am GMT/3pm Central) - March 7th (9 am GMT).

The Royal Society of Chemistry [Twitter Poster Conference](#) is an online event held entirely over Twitter to bring members of the scientific research community together to share their research, network and engage in scientific debate. During the event simply tweet an image (e.g. JPEG) which will be a digital poster summarising your research along with #RSCPoster, the most appropriate subject area hashtag and the title of your work. *Reminder: We are @SustainableNano on Twitter - don't forget to tag us on your tweets!*

Midwest Regional SACNAS Conference: April 28 - [register online](#)

The University of Chicago's Society for the Advancement of Chicanos and Native Americans in Science ([SACNAS](#)) Chapter invites you to attend our first annual Midwest Regional SACNAS Conference, hosted at the University of Chicago on **Saturday, April 28th, 2018**. The chosen theme, Progress on All Fronts: Personal, Professional, and Social Advancement, is intended to celebrate and support the continued success of diverse students from all disciplines and professional stages. Our conference will offer two keynote speeches from notable advocates for diversity in STEM, as well as numerous personal and professional development sessions curated by SACNAS faculty, friends, and alumni. Professionals and faculty from across the midwest region are encouraged to attend and participate in order to recruit students to their institutions, as well as learn about diverse experiences in various STEM fields.

The conference is free to attend and will provide a valuable professional development opportunity for everyone. If you have questions about the conference, you should contact the UChicago SACNAS Chapter at ucsacnas@gmail.com. Additionally, make sure to check the event on [Facebook](#) for the latest updates.

Note from Miriam: As I've mentioned before, I attended the national SACNAS conference last fall and it was definitely a great environment for anyone interested in diversity in science, not only for Chicanos and Native Americans.

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 2.3: [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](#)

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

