

What's happening in the CSN?

March 1, 2016 Edition

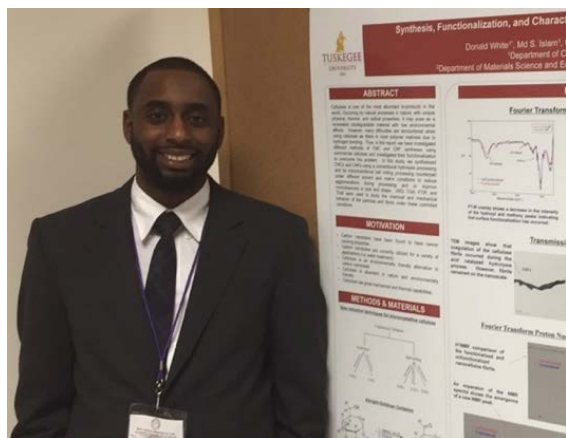
Sustainable Nano reader question

A question recently came in to the blog from Pranav (age 13): "How do you synthesize titanium dioxide nanoparticles?" The reader's questions are a great way for CSN researchers to engage with the public, so if you would like to write a response, please contact Miriam (mkrause@umn.edu)!

Celebrations

Milestones and awards (it's been a great month for the CSN!)

Erin Carlson won the Presidential Early Career Awards for Scientists and Engineers (PECASE), which is the highest honor the U.S. government gives to early faculty. In addition to being an awesome honor, the award comes with an invitation to the White House to meet the President! From the [White House press release](#): "These early-career scientists are leading the way in our efforts to confront and understand challenges from climate change to our health and wellness," President Obama said. "We congratulate these accomplished individuals and encourage them to continue to serve as an example of the incredible promise and ingenuity of the American people."



Donald White (Curry group) has placed 2nd in the Poster Competition at the [Alabama Academy of Science](#) Conference, held this year at the University of North Alabama. His poster was entitled, "Synthesis, Functionalization, and Characterization of Cellulose Nanofibrils and Nanocrystals."

[Corporation for Science Advancement](#). According to the [RCSA announcement](#), the award is "intended to recognize and advance truly outstanding research and education." Silvia Ronco, the RCSA Program Director, said, "It is such an honor to be able to celebrate Rigoberto's teacher-scholar career with the TREE award. Not only he is a highly skilled computational chemist; he is also a wonderful role model for underrepresented groups in STEM disciplines. The combination of great science and outreach activities of high national impact made Rigoberto a very strong candidate for TREE."

Rigoberto Hernandez is one of two recipients of this year's Transformational Research and Excellence in Education (TREE) Award, provided by [The Research](#)





Kadir Hussein, an undergrad who has worked in the center for 2 years (**Haynes** group, with mentor **Ian Gunsolus**), has officially finished his B.S. in Chemistry at the University of Minnesota and is starting a scientist position at Cargill. Kadir plans to apply to graduate school in the coming year.



Chana Honick (**Rosenzweig** group) has been accepted to multiple prestigious schools for graduate work in physical chemistry, including Yale, Columbia, Johns Hopkins, and Penn. We look forward to seeing her thrive during her upcoming studies and wish her the best of luck.



Katya Konstantynova (**Carlson** group) passed her prelims for the Department of Chemistry at the University of Minnesota, and is now officially a Ph.D. candidate!

Meet the students/postdocs (and other fun stuff outside the lab)

In order to help CSN members get to know one another, we are doing short “get acquainted” write-ups of CSN students/postdoc participants, with the aim of introducing all CSN participants over the next ~6-8 months. Each month, students or postdocs from CSN groups will be randomly selected and asked to write a short paragraph about themselves. Participation is totally voluntary.



My name is **Caley Allen**. I grew up in South Georgia in a small town named Valdosta. I obtained my undergraduate B.S. degree in chemistry and physics from Valdosta State University. I then graduated from Auburn University in Alabama with my PhD in chemistry, specializing in computational chemistry. My PI was Prof. Orlando Acevedo, with whom I investigated how the complex microenvironment of room temperature ionic liquids affected the mechanism, energetics, and conformations of several classical organic reactions. Upon graduation, I obtained a Postdoctoral Fellow position at the Georgia Institute of Technology working with Prof. **Rigoberto Hernandez** and his research group. As part of the CSN, I want to simulate the lifecycle of engineered nanoparticles—from their aggregation to their interactions within complex biological environments—to determine the mechanisms of their toxicity and help toward the redesign of environmentally safe nanomaterials.



I attended the 2014 National Postdoctoral Association (NPA) meeting in St. Louis. This is me climbing through the Monstrosity at City Museum, which is suspended over 50 feet in the air. The City Museum is the giant playground I wish I'd had when I was a kid. If you are ever in St. Louis, and are not afraid of heights or tight spaces, I highly suggest you go!

Outside of research and academia, I am an animal enthusiast. I have three wonderful four-legged rescues; an eleven year old lab mix, a six year old Dotson-terrier mix, and a nine year old tabby. ☺ Lastly, I am very competitive and am a bit of an exercise fanatic. I love being active; bowling, racquetball, jogging, hiking, softball, yoga, Pilates, etc. One of my favorite weekly activities (on average 8 hours a week) is Les Mills group fitness classes.

Katya Konstantynova. I was born and raised in Yalta, Donetsk region, Ukraine. I earned my undergraduate and master's degrees from Taras Shevchenko National University of Kyiv, Ukraine. My major was analytical chemistry. I like to know the details of established analytical techniques and develop new analytical methods. I want to apply these methods to study "life systems" such as bacteria.



Katya at Willis Tower in Chicago

I work in the laboratory of Prof. **Erin Carlson**. My project involves understanding how the communication between bacteria affects their metabolic output. I am also interested in understanding the influence of nanoparticles on the metabolism of bacteria. It is so exciting to see how intelligent bacteria are in adapting and responding to various perturbations.

I like to travel a lot, see places, and meet with new people. I also like animals. I have two cats back in my hometown in Ukraine. In my spare time, I like to run and dance.

Autumn Qiu (Haynes lab) and **Miriam Krause** (E/O Director) were among an 80 person choir called [VocalPoint](#), which performed two benefit concerts (Feb. 27 and 28) for the charity [Upstream Arts](#).



CSN productivity

Zeev Rosenzweig and **Melissa Muth** published an article on Deep Innovation in the Coller Institute of Venture magazine *Venture Findings* ([Issue #3](#)), entitled "[The challenges of deep innovation: From American academia to the marketplace](#)." The article provides an overview of how Small Business Innovative Research (SBIR) and Small Technology Transfer Research (STTR) programs have played a role in translating ideas to the marketplace, and how the new NSF I-Corps program aims to address the "Valley of Death" between scientific discovery and introduction of a product to the marketplace by focusing on innovation Education. Check it out!



From *Venture Findings* #3
(2016) Deep Innovation Issue

The National Science Foundation recently [featured CSN research](#) on the front page of their website! The article highlighted the recent article by Mimi Hang and Ian Gunsolus (and co-authors) in *Chemistry of Materials*, entitled "[Impact of Nanoscale Lithium Nickel Manganese Cobalt Oxide \(NMC\) on the Bacterium *Shewanella oneidensis* MR-1](#)."

Lab exchanges



Sunipa Pramanik (Haynes lab) has spent a week doing a lab exchange in **Joel Pedersen's** lab at UW-Madison, where she worked with **Tom Kuech**, **Izzy Foreman-Ortiz**, and **Kyoungtea Kim** to learn about forming and characterizing lipid bilayers. Additionally, she found some time to hang out with **Pedersen** and **Hamers** group members outside of the lab (above)!

Zheng Zheng successfully completed the **Rosenzweig** lab's first lab exchange at the University of Illinois Urbana-Champaign, where he worked with **Ariane Vartanian** and **Fred Idesis** in **Cathy Murphy's** group, where he learned how to wrap gold nanoparticles with polyelectrolytes.



CSN Talks and presentations



Margy Robinson (Hamers group) gave a talk entitled "[Why defective diamond is the best diamond](#)" for the analytical chemistry seminar at the UW-Madison Department of Chemistry.

Rigoberto Hernandez visited two more PUIs (primarily undergraduate institutions) in February, Hamilton College and Bucknell College, as part of the Phi Beta Kappa Scholars program. He will also be visiting one of the CSN nodes, Johns Hopkins University, on March 3rd and 4th for his seventh Phi Beta Kappa Lecture visit. A happy bonus is that he will have a chance to visit with the **Fairbrother** and **Rosenzweig** groups!

Christy Haynes co-guest edited a virtual issue of *Chemical Research in Toxicology*. Check out her editorial entitled "[Chemical Research in Toxicology Editorial Advisory Board Members' Favorite CRT Articles](#)" (written with Stephen Hecht, also at the University of Minnesota).

Joel Pedersen and **Rebecca Klaper** will participate in a workshop at the Duke University Center for the Environmental Implications of NanoTechnology ([CEINT](#)) entitled "Environmental Nanomaterial Testing Media Harmonization". The goal of this workshop is to develop user-community-driven recommendations

for consistently characterized, relevant media types in which nanomaterial characterization and testing should be carried out, along with recommendations for consistently captured characterization parameters.

New CSN capabilities

Switching to Webex format for meeting video playback. Now that we are firmly committed to Webex for our meetings, we will be posting meeting recordings in the Webex format only (.arf), rather than converting them to MP4s. The player has various features such as allowing you to turn video and chat on and off during playback. In order to watch these files, [download the Webex player](#) for Windows or Mac.

New website. Our new CSN website is almost ready to launch! The address will remain the same: susnano.chem.wisc.edu. New features will include easier navigation to CSN resources such as forms, meeting recordings, and the database-formerly-known-as-Susnano2. Stay tuned for more updates!

The **Haynes** lab has finally received their new fluorometer to assist in the characterization of carbon dots and fluorescent silica nanoparticles. The engineer will be in the lab on March 10 to install the instrument.

Opportunities

The Green Chemistry & Commerce Council (GC3) offers [summer internships for grad students](#). Applications are **due March 23**. The GC3 Innovators Internship places technically proficient students into sustainability-related summer internships with our member companies. The interns spend 10-12 weeks working within a GC3 member company, learning the skills needed in sustainable industry. This year's interns will also have the opportunity to attend the GC3 Innovators Roundtable.

STEM Education Postdoctoral Fellow. The University of Pennsylvania (Philadelphia) seeks a Postdoctoral Fellow to contribute to enhancing STEM education at the undergraduate level. Under the direction of Penn's Center for Teaching and Learning (CTL), the Fellow will engage with faculty from a variety of STEM disciplines. Candidates from all STEM fields are welcome. Review of **applications will begin immediately; new applications will be accepted until the position is filled**. To apply, send a cover letter and CV by email to Sara DeMucci (sdmucci@upenn.edu), with STEM Education Postdoc as the subject. A more detailed posting is available [here](#).

Looking ahead

All-hands meeting and Year 1 review (April 17-19)

For all students/postdocs: You should have received an email providing detailed instructions on how to book your flight for the All Hands meeting with Fox Premier. If you did not receive this email or you have additional questions, please contact **Mike Schwartz** (mpschwartz@wisc.edu).

Contact the group air agents via the following options:

- UW designated group call line: 866/230-8787 (select option 4) - reference Group Code 09AO59.
- Email: uwgroups@gofox.com - reference Group Code 09AO59 in the subject line of the email.

Please plan your travel according to the following times:

Arrival: Sunday, April 17

Executive Committee: Please try to arrive by ~**12:00** for a 1:00 PM EC Meeting. *All other faculty, students, and postdocs:* Please arrive **by 5:00 PM on Sunday, April 17.**

Departure: Tuesday, April 19

Activities will be done by **4:30 PM on Tuesday**, so please pick flights leaving BWI at 6 PM or later if possible.

Upcoming professional development activities

"Faculty Positions at PUIs - Advice from the Other Side of the Desk." Vivian Feng will present a webinar on **Wednesday, March 9 at 1:30pm Central time** (after the RFA 1 meeting).

An [ACS webinar on lithium ion batteries](#) will be held on **Thursday, March 10, 2016 @ 1-2pm Central.**

"Advancing Chemical Innovation through Diversity." Rigoberto Hernandez will present a webinar on **Monday, April 4 at 10:30 Central time.** The webinar will be shared with all the other CCIs as well.

Upcoming conferences and workshops of interest

The [8th International Nanotoxicology Congress](#), June 1-4, Boston MA. **Abstract submission deadline: March 15.**

[International Conference on Environmental Effects of Nanoparticles and Nanomaterials](#), August 14-18, Golden, CO. **Abstract submission deadline: April 18.**

[2016 Sustainable Nanotechnology Organization \(SNO\) conference \(Theme: Sustainable Nanotechnology Systems\)](#), Nov. 10-11, Orlando, FL. **Abstract submission deadline: August 15.**

*Don't forget to fill out the Google Form when you have content to add to the newsletter (see the lists of links on the "Lost in Cyberspace" page below! If you have pictures you would like to include, or questions, comments, or suggestions for the newsletter, contact **Mike Schwartz** (mpschwartz@wisc.edu). He promises not to ask you to be a co-editor based on your suggestions unless you're mean.*



If you don't know what this picture is you'll have to search through classic 1960's TV programs...

Lost in Cyber-space?

Links to frequently requested CSN documents and information sources

All these documents (and more !!!) are also available on the susnano.chem.wisc.edu web site, but only after you log in. Contact [Miriam](#) if you don't know how to log in.

CSN Operations Guide: <http://tinyurl.com/zyw9k4h>

Form to **request discussion by the executive committee:** <http://tinyurl.com/z9eftvh>

Form to **report lab exchange activities:** <http://tinyurl.com/jxw5jh9>

CSN participants list (Names, group, and email addresses): <http://tinyurl.com/jrrkp4b>

List of all CSN researchers and project names (google-sheet): <http://tinyurl.com/hxfazkl>

Center-wide calendar (RFA, All-hands, professional development): <http://tinyurl.com/zeukpus>

Nanoparticle availability (Listing of NPs available center-wide): <http://tinyurl.com/goathu7>

Suggestion-ox (send completely anonymous suggestion to Bob, with all of sender's information completely scrubbed): <https://www.suggestionox.com/response/BeNBi6>

Approved projects for all students/postdocs: <http://tinyurl.com/hnp3whg>

Newsletter topics (To suggest a topic or to add information to be included in the next newsletter; e.g., an award, highlight, etc.): <http://goo.gl/forms/Rz8FIIXnGy>

Download the Webex player: <https://www.webex.com/play-webex-recording.html>.