

What's happening in the CSN?

March 15, 2016

Gold nanoparticles absorbing in the visible spectrum. Current models cannot explain the elusive nanoleprachaun.



CSN Website Launch

The new CSN website is up and running! Check it out at susnano.wisc.edu. Please let Mike or Miriam know if there are any problems with the website, since we may not have caught everything during pre-testing.

Celebrations

Milestones and awards

Nicholas Niemuth's (Klaper group) blog post "[The Science of Snow](#)" was recognized as a [Science Seeker Editor's Selection](#) for the week of February 29. In addition, we heard from Dr. Jane Wissinger at the University of Minnesota on Facebook, who said, "Love it! Sent to my whole 2311 class as we learn to recrystallize!! My favorite part of organic chemistry." Congratulations Nicholas!



Congratulations to **Dr. Ariane Vartanian**, who successfully defended her thesis on March 11! Ariane and **Cathy Murphy** celebrated by launching a new signature champagne (the CSN is kidding – the champagne is signed, but Ariane has not applied her nanotechnology skills to making champagne – as far as we know).

Congratulations to **Kelly Zhang** (Hamers group) for successfully passing her Thesis Oral Exam!



Christy Haynes has been named Associate Editor of [Analytical Chemistry](#), an ACS Publications journal. See the press release [here](#).

Meet the students/postdocs

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.

I am **Jiewei Hong**, a second-year student from **Cui** group. I was born and grew up in Shanghai, China. After graduating from senior high school, I went to Peking University in Beijing, China. I'm now working on establishing a method for determining charge states of Functionalized NPs. I am also involved in understanding the interaction between NPs and lipid membranes. I like playing badminton and going outside to enjoy natural scenery, and I love playing bridge (yet not often because I don't have a partner now).

Izzy Foreman-Ortiz (Pedersen group). I grew up in Lebanon, PA and attended the University of Pittsburgh for my undergraduate studies. At Pitt, I was able to perform undergraduate research under Dr. Geoffrey Hutchison, and graduated with a BS in Chemistry in 2015. Currently, I am a first-year student at UW-Madison in Joel Pedersen's lab, working on studying nanoparticle interactions with supported and suspended lipid bilayers using Electrochemical QCMD (E-QCMD), and the planar lipid bilayer workstation (BLM). I am especially excited to work with suspended bilayers via the brand-new planar lipid bilayer workstation, because this method not only facilitates the analysis of alterations of membrane capacitance due to nanoparticle interactions, but also makes it possible to build up the complexity of the bilayer by allowing for lipid asymmetry and the insertion of proteins.

Unfortunately, I don't have any career-guiding childhood stories about playing with science kits. My childhood was preoccupied with romping around the woods, getting stung by bees, and generally not thinking about what career I might have in 15 to 20 years. I always wanted to do something creative (and fun!) and so I wrote, drew, and got pretty good at the oboe. I didn't become interested in science until college, when I came to appreciate that chemistry can be an incredibly innovative and creative field, and can even rival 'traditional' forms of creative expression. I love learning about new and interesting approaches to problems, and am extremely excited to be able to build my own problem-solving ingenuity throughout my graduate career.



Izzy and a grumpy Muddy

Outside of grad school, I enjoy long, peaceful skype sessions with my grouchy 15-going-on-16-year old cat (pictured), and spending time with family and friends. I am looking forward to warmer weather so I can escape the indoors and explore Madison!



Top: The Bund in Shanghai. Bottom: Jiewei at a state park in northern Michigan (first one on the right).

Student Board's Executive Committee Liaison Nominees. We have a special feature this week. As you probably know, the intrepid **Eric Melby** has been serving as our Student Board's Executive Committee Liaison for the past eight months. The regular term for this position will be about six months going

forward, with rotations coinciding with the April and October All-Hands Meetings. Two candidates, **Alicia McGeachy** and **Nicholas Niemuth**, were nominated to be the next liaison, and both have accepted. We asked each of them to write an "about me" paragraph for this newsletter, which you can read below (please note that we gave them no specific instructions other than approximate length).

All CSN students are encouraged to vote for the next SB/EC Liaison. You will be contacted with information on voting soon. Voting will close on March 25 so the new Liaison will be able to attend the April 4 EC meeting along with Eric. Thank you very much to both Nicholas and Alicia for volunteering to serve as the next Liaison!

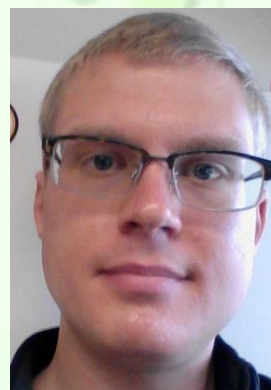


This is me, Alicia, on my first rock climbing wall. Yes, I did make it all the way to the top!

My name is **Alicia McGeachy** (Geiger group). I am a proud native of Brooklyn, New York. I earned my BS degree in Chemistry from Spelman College, an all-women's historically black college, in Atlanta, Georgia. While at Spelman, I had the opportunity to work with Dr. Dorothy Peteet at Columbia University/Goddard Institute for Space Studies. Perhaps even more impressive than working on core samples from Alaska that were over 11,000 years old was that we were able to halt plans to convert Four Sparrows Marsh in Brooklyn into a new parking lot. That summer inspired me to study environmental chemistry.

I now work in the group of **Franz Geiger** at Northwestern University. My current project focuses on understanding how oxidized multiwalled carbon nanotubes interact with model cellular membranes. This project, in the grand scheme of the center's goals, aligns with my own personal desire to solve real-world problems as they relate to environmental health. In addition to my research activities, I am becoming more involved in diversity initiatives both at Northwestern University and beyond. In my spare time, I like traveling, reading, cooking, and trying new things (like rock climbing and hiking).

Hi everyone, I'm **Nicholas Niemuth**, and I'm a candidate for the Student Board liaison to the Executive Committee. Before you vote, here's a bit about me. I'm currently working in Dr **Rebecca Klaper's** lab at the University of Wisconsin – Milwaukee, starting my PhD using the nematode *C. elegans* as a model for elucidating mechanisms of nanoparticle interaction and toxicity. To this work and to the CSN I bring my research and education background, with a BS from UW – Madison in biochemistry and an MS from the University of Michigan in molecular biology. In addition to biology and biochemistry, my undergraduate curriculum at Madison included courses and labs in general, organic, analytical, and physical chemistry (including formal labs with techniques including Raman spectroscopy and NMR). My undergrad research focused on chemical characterization of novel phosphine-borane compounds (as drugs for treating glaucoma), including work with artificial membranes for testing the ability of drugs to cross the blood-brain barrier.



My graduate research at U of M focused on using *C. elegans* as a model for evaluating the role of oxidative stress in aging. My work involved engineering redox-sensitive fluorescent proteins into the genome of nematodes and then using fluorescence microscopy to determine the redox status of different tissues over the course of the animals' lifespan. During my time at Michigan I also served as a student representative for my program and was involved in organizing our annual retreat.

Overall, I think my background, specifically my knowledge of both chemistry and biology and my experience serving on joint student-faculty committees makes me an excellent candidate for EC liaison.

CSN Talks and presentations

CSN Policy for Presentations at Scientific Meetings and Conferences

Please remember that according to our CSN Operations Manual, ***all student/postdoc publications and presentations must be approved by all co-authors***, and with sufficient time in advance for the co-authors to provide comments. Authorship and co-authorship is very important in a collaborative center, so all publications and presentations must be approved by your co-authors before being submitted. The CSN has adopted specific procedures for identifying lead authors and co-authors on papers and mechanisms for ensuring that co-authors are included properly, and similar rules apply to abstracts for talks or meetings. If you are not aware of these procedures, please look in the [CSN Operations Guide](#) for more details.

ACS San Diego

The CSN is making our presence known at the ACS meeting in San Diego! Hopefully you had a chance to check out a CSN research talk or poster!



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 their 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.

Curry group's prize-winning photo at the ACS in San Diego.
From left to right: Chemar J Huntley, Kristy D. Crews, Aiesha Ethridge, Donald H. White, Md Shariful Islam, and Michael Curry.

Looking ahead

Upcoming All-Hands Review

Our year 1 all-hands meeting will be our first chance to highlight our ongoing and emerging success stories. In preparing presentations, please remember to think about the four major oversight issues of the center:

- Can CSN move from describing and understanding a system to controlling and predicting it?
- Can the CSN modeling component span length and time scales in a functional way?
- Can CSN move beyond laboratory models to tackle more complicated, realistic systems?
- Can CSN build strong relationships with other centers working on EHS of nano.

Outreach/Professional Development Opportunity

Wikipedia Edit-A-Thon. Wikipedia is one of the most important platforms out there for improving public access to science. ACS is hosting an edit-a-thon where you can learn how to edit Wikipedia and help edit articles on a huge range of chemistry-related topics. Click [here](#) for more details. You can join in online (or folks in Baltimore could go in person to ACS!) **Sunday, March 20, noon-4pm CST.**

Upcoming conferences and workshops of interest

[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.**

Other CSN business

Changes in Leadership Structure

The Executive Committee has decided to make some adjustments to the CSN leadership structure in order to help streamline decision-making and to strengthen scientific leadership at the RFA level.

Each RFA now has two formal co-leaders, each of whom has roughly equal responsibility for scientific oversight of their RFA. One of the two co-leaders will attend biweekly Executive Committee meetings.

RFA leaders are:

- RFA1: Cathy Murphy and Howard Fairbrother
- RFA2: Joel Pedersen and Franz Geiger
- RFA3: Rebecca Klaper and Galya Orr

We are shrinking the Executive Committee very slightly to streamline decision-making and make it more adaptable. ***The new EC composition is:***

- Director (Bob Hamers)
- Associate Director (Christy Haynes)
- RFA1 representative (Cathy Murphy OR Howard Fairbrother)

- RFA2 representative (Joel Pedersen OR Franz Geiger)
- RFA3 representative (Rebecca Klaper OR Galya Orr)
- E/O Director (Miriam Krause)
- Student Representative (Eric Melby)
- Member-at-Large (Rigoberto Hernandez)
- Managing Director (technically non-voting) (Mike Schwartz)



*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 !!!) have a new home on the susnano.wisc.edu web site. New user logins for that site will be coming soon! Meanwhile, the links below will continue to work as we transition everything over.

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>.