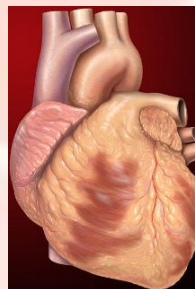


What's happening in the CSN?

February 14, 2016 Edition



Celebrations!

Welcome to new CSN Members

The CSN is pleased that **Dr. Joe Bennett** has agreed to join us as a new postdoc/research specialist in **Sara Mason's** lab! Joe will be joining us in April.

Milestones and awards

CSN student participant **Md Shariful Islam (Curry lab)** was selected as the 1st place winner in the 2016 Alabama EPSCoR Annual Open House Conference! The conference was hosted at the Renaissance Hotel in Montgomery, AL, on Friday, January 6. The title of award winning poster is "Investigation of the Influence of Nanocellulose Processing Methods on its Physical and Mechanical Properties". Congrats Md!

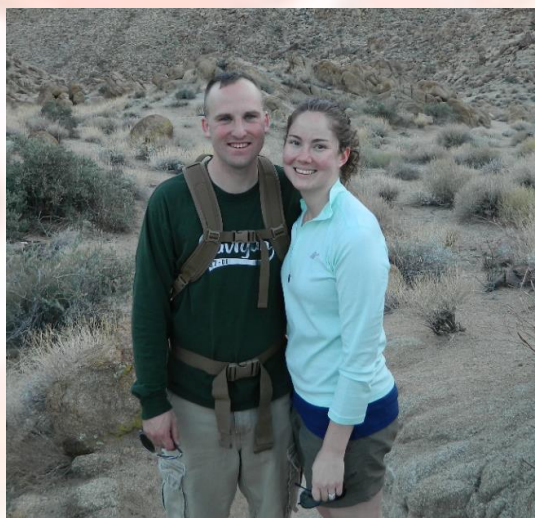


Meet the students (in their own words)

In order to help all the Phase II participants get to know one another, starting with this newsletter we will be 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 we'll pick 3-4 research groups. One student from each of those groups will be randomly selected and asked to write a short paragraph about themselves. Participation is totally voluntary.

Miranda Gallagher (née Miranda Lahr) is from a family of civil servants, teachers, military engineers and one biologist. Her sense of responsibility comes from her hard working mom delivering mail in Upstate NY rain or shine. Her dedication to public service comes from her grandfather, uncles, brother and husbands' service in the US Air Force, Army, and Marine Corps. Her love of our environment started while exploring tide pools at low tide around Half Moon Bay with her father and brother.

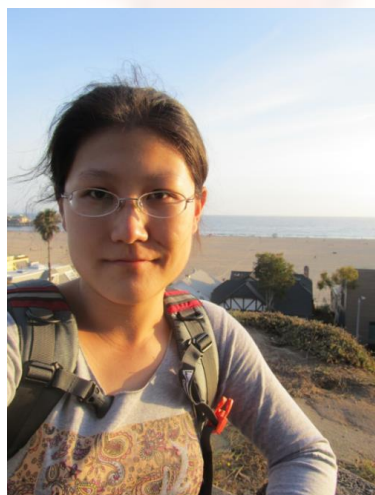
Miranda is a graduate of Chemistry and French from Hartwick College, Oneonta, NY. After teaching more science than English as an adjunct professor at the Université de Nice, she joined the **Fairbrother group** at



Johns Hopkins to study surface chemistry in depth. Through materials and surface analysis of degraded samples, she seeks to inform the redesign of safer high quality quantum dot-polymer nanocomposites for the CSN.

As a fifth year graduate student, Miranda spends her free time researching post-docs, playing soccer with the three-time champion Buckyballs and photographing the beautiful Maryland wilderness while hiking with her husband.

My name is **Xu Huang** (people also call me Mary). I was born and grew up in Beijing, China. I graduated from the College of Chemistry and Molecular Engineering at Peking University, doing experiments in molecular self-assembly. Now I'm a fourth-year graduate student in Professor **Sara Mason's lab**, doing DFT calculations to simulate surface structures of LiCoO_2 battery materials and studying their stabilities, electronic properties, cation release and coating behavior in aqueous solutions.



Outside of research, I enjoy music, movies, hiking and working out in the gym. I began to like math and gradually developed interests in physics, chemistry, and lab work. I like concepts and ideas that can be related by equations or things that can be quantified. During graduate school, I began to focus on computational methods that can systematically explore the microscopic world, making and testing hypotheses (especially under the conditions where experiments are difficult to perform). And it is also great to develop programming skills to deal with data & equations, derive physical quantities and analyze output results more efficiently. After my Ph.D., I want to continue to focus on theoretical study with more math and programming.

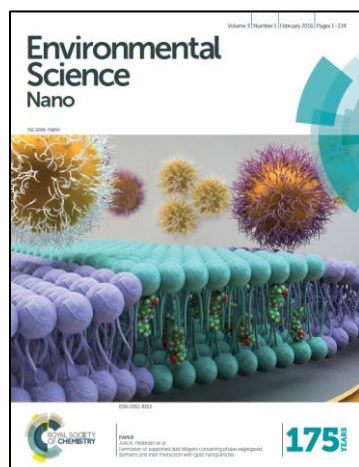
Md Islam. I am from Dhaka, the capital of Bangladesh. I grew up in a small family, which includes my mom, elder brother, sister-in-law, and one baby nephew. My dad passed away when I was very young. Therefore, I witnessed the struggles my mom faced in raising us into becoming good human beings. My dream has always been to become someone who my mother will be proud of and so that I can support her in her old age one day. I studied hard and worked hard in the field of chemistry, which I thought was an interesting subject and something I was good at for a successful career choice. In Bangladesh, I attended University of Dhaka where I completed both my bachelors and master's degrees in inorganic and analytical chemistry. After all the efforts, I was very lucky to get the opportunity to come to Tuskegee University to do another master's degree in Chemistry. I'm honored to be 2016 Masters Student doing work in **Dr. Michael Curry's lab**,



developing new methods of making cellulosic nanoparticles for the Center of Sustainable Nanotechnology (CSN).

I am a sports lover. I like to play cricket, which is very popular in South Asia, England, Australia, New Zealand, West Indies, South Africa etc. I like to play soccer, tennis, basketball, and volleyball too. In the meantime, I like to watch the game. Now, I am trying to learn American football. I like to travel and hang out with friends. I wanted to be a cricketer before. But, back home, you can't make your own aim. Parents are supposed to make all the decisions which are best for their child. They thought to be a cricketer will be uncertain for my career and threw me into the science world. That was the start of my love with science. My interest in science keeps growing from opportunities such as: (1) participating in an international conference arranged by Bangladesh Chemical Congress in 2010; (2) working as a quality control executive for Eskayef Bangladesh Ltd., which is one of the most renowned pharmaceutical companies in Bangladesh; and (3) becoming an active member of the American Chemical Society. My primary interest is to do research, so obtaining a PhD would be a great avenue for me to reach the highest level in research education and to showcase my passion to work in the scientific world.

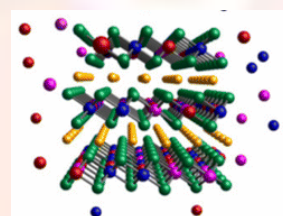
CSN productivity



Eric Melby's paper has now been published in *Environmental Science: Nano* and was selected to be featured on the cover (image to the left)! Congratulations to Eric and co-authors **Arielle Mensch, Sam Lohse, Dehong Hu, Galya Orr, Cathy Murphy, Bob Hamers, Joel Pedersen (corresponding)**. You can read more about the paper in an *Environ. Sci.: Nano* [Research Highlight](#) and in [Eric's recent blog post](#).

E.S. Melby, A. Mensch, S.E. Lohse, D. Hu, G. Orr, C.J. Murphy, R.J. Hamers, and J.A. Pedersen. [Formation of supported lipid bilayers containing phase-segregated domains and their interaction with gold nanoparticles](#). *Environmental Science: Nano* **2016**, 3, 45-55.

Ian Gunsolus, Mimi Hang, Christy Haynes, and Bob Hamers are featured on [Fox 9 \(Minneapolis/St. Paul\)](#), [Kare 11 \(Minneapolis/St. Paul\)](#), and online on [Science Daily](#), [Minnesota Daily](#), [What's Up With That?](#), [Green Car Congress](#), and in [University of Minnesota](#) and [University of Wisconsin](#) press releases. Also, check out Miriam's blog posts "[Our Day of TV News Glory](#)" and [more](#). The great publicity for the CSN is the result of **Ian and Mimi's** recent joint first author publication in *Chemistry of Materials*, which included co-authors **Hunter Wayland, Eric Melby, Arielle Mensch, Katie Hurley, Joel Pedersen, Christy Haynes (co-corresponding), and Bob Hamers (co-corresponding)**.



Hang, M. N.; Gunsolus, I. L.; Wayland, H.; Melby, E. S.; Mensch, A. C.; Hurley, K. R.; Pedersen, J. A.; Haynes, C. L.; Hamers, R. J. [Impact of nanoscale lithium nickel manganese cobalt oxide \(NMC\) on the bacterium *Shewanella oneidensis* MR-1](#). *Chemistry of Materials* **2016** (ASAP).

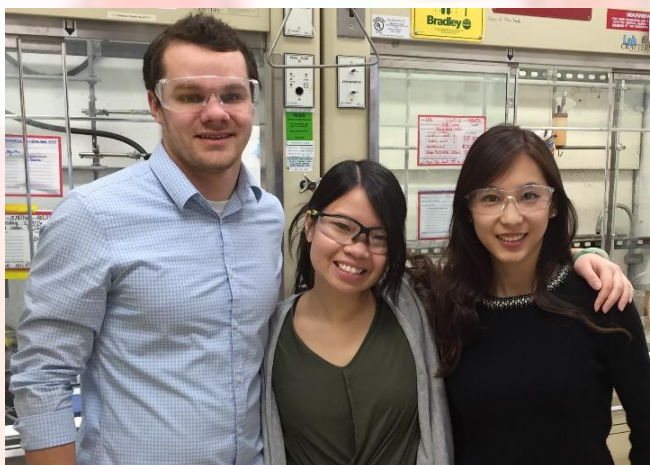
Bob Hamers was appointed as a Senior Editor of the ACS Journal *Accounts of Chemical Research*. ACR is a unique journal consisting of short reviews in which an individual author or group highlights and contextualizes their own work in a manner that will be accessible to the broad scientific community. ACR accepts articles by invitation only, but authors can request an invitation by completing a short "conspectus" that is then reviewed by the senior editors.

Lab exchanges

Kadir Hussein, a CSN undergraduate student in the **Haynes lab**, just returned from a 3 month research exchange in Prof. Karen Lienkamp's lab in Germany where he was working on the synthesis of synthetic mimics of antimicrobial peptides. He presented a summary of his work in the Haynes Group Meeting, also attended by **Prof. Vivian Feng**. The picture shows Kadir with his graduate student mentor (Monika Kurowska) from the Lienkamp lab.



Jared Bozich, a CSN graduate student in the **Klaper lab**, is visiting the **Hamers lab** at UW-Madison. Jared is working with graduate students **Kelly Zhang** and **Mimi Hang** to learn how to functionalize and purify nanodiamond and other nanomaterials.



Mike Schwartz visited the University of Minnesota and Augsburg College, where he met CSN researchers from **Haynes**, **Carlson**, and **Feng** labs. In addition to a great visit with students, postdocs, and faculty, and a first-hand demonstration of everyday activities in "Hollywood" Haynes' lab ([There were T.V. cameras!](#)), he also saw one of the coolest periodic tables ever!



CSN Talks and presentations

Rigoberto Hernandez was the lead organizer of the [Cottrell Scholars Collaborative Academic Leadership Training Workshop](#) with Peter Dorhout (KSU) and Karen Bjorkman (Toledo) as co-leads. **Bob Hamers** was one of the experienced academic leaders (EALs) for the workshop. The workshop was sponsored by the Research Corporation for Science Advancement and the ACS. It was a rather unusual workshop focusing on academic leadership, since it targeted both administrative (e.g. department chairs, deans, provosts) and research center director (e.g. spanning faculty within a department, a college or multi-institution) positions. The participants included chemists, physicists, and astrophysicists from PUI and R1 institutions.

Rigoberto also visited several PUIs, including the College of Saint Benedict, Saint John's University, and Willamette University (as part of his Phi Beta Kappa lectures).

New CSN capabilities



Don't you hate it when the furnace kicks on and it's so loud you can't hear the latest CSN WebEx meeting? **Geiger lab** did, so they upgraded their temperature and humidity control in the wing that houses their laser lab. In addition to moving the chillers out of the laser lab and into a new room, the upgrade included a new air handler, new interlock doors, and HEPA filter installation. Not only can they listen to the latest **Adele** song about Valentine's Day regrets with better clarity, but moving the chillers should also lead to less noise in their data by improving laser stability!



Looking ahead

Student seed proposal

Our very first Student Seed Proposal deadline **has been extended to Monday, Feb. 22 at 5:00 PM Central**. See complete guidelines or contact [Miriam](#) for more details (guidelines were recently emailed by Arielle and are posted on the Members Only website).

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

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.

For all students/postdocs:

Sue (martinze@chem.wisc.edu) will begin booking flights for students/postdocs on **Feb. 15**, and ***the absolute deadline for booking tickets is March 12.*** She needs the following information when you email her:

1. Name as it appears on your ID
2. Birth date
3. Cell phone number
4. Departure airport code
5. Travel parameters (specific times when they can leave and when they need to be back). Please be flexible on times if possible so we can get good prices.
6. Meal restrictions, disability needs, or special accommodations.

Upcoming professional development activities

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

"**How to Write for the Sustainable Nano Blog.**" This is a 1-hour presentation/Q&A by **Miriam Krause** that is intended mostly for new blog writers, but experienced writers who just want a refresher are also welcome. There will be two opportunities to attend: **Monday, Feb. 15 at 3pm Central** and **Tuesday, Feb 16 at 1:30 Central** (they are basically the same, so need to attend both).

"**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.

Stay tuned for information on additional activities that are still in the works for March and May!

Upcoming conferences and workshops of interest

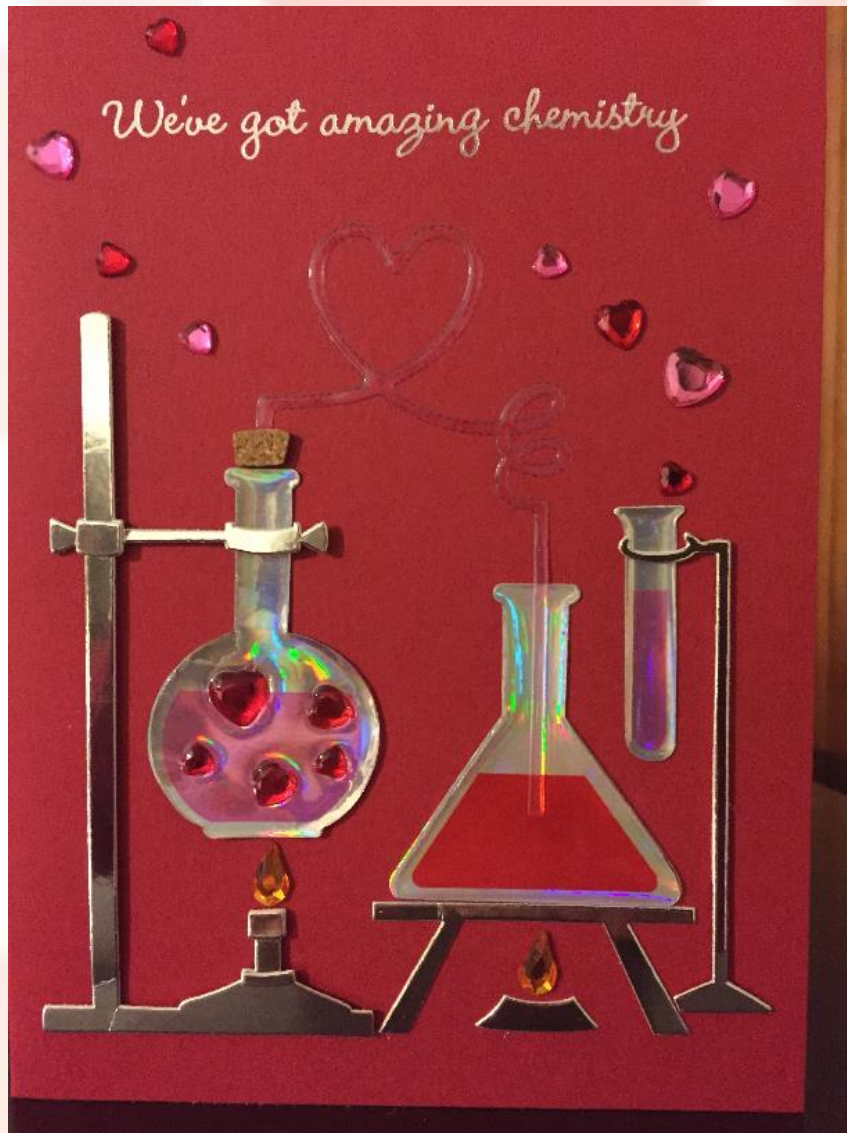
The University of Michigan is hosting a [NextProf Science](#) workshop on May 10-13. The workshop is for students/postdocs who might be interested in academic careers. **Application deadline: February 21.**

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.**

A Valentine's Day message from Cathy Murphy





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>

Center-wide calendar of CSN Events: Google-calendar. Contact Miriam for details.

Participants list: Names, group, and email addresses: <http://tinyurl.com/jrrkp4b>

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

Upcoming CSN meetings (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>

Detailed, approved projects for all students/postdocs: <http://tinyurl.com/hnp3whg>

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