

What's happening in the CSN?

January 27, 2017

Volume 2, Issue 5

Celebrations

Welcome to New CSN Members

The CSN welcomes **Anthony Lewis (Fairbrother group)**, a sophomore at Johns Hopkins University originally from New York City. Anthony is studying BioPhysics and has been investigating polymer photodegradation and designing new experiments with **Miranda Gallagher**. Welcome, Anthony!



The CSN also welcomes **Dr. Emily Tollefson**, who joins the **Carlson group** as a postdoc. Emily was an undergraduate at Pacific Lutheran University and recently completed her PhD at the University of California, Irvine. Welcome, Emily!

The CSN welcomes two new scientists to our External Advisory Board!

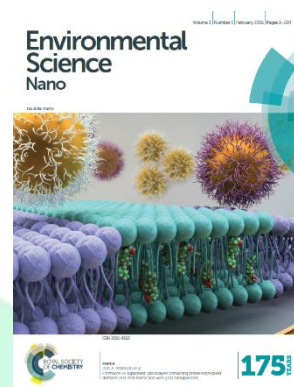
Jim Hutchison is a Professor of Chemistry and Biochemistry at the University of Oregon, and his lab has a wide range of interests related to molecular-level design and synthesis of nanomaterials and surface coatings, including greener approaches for producing nanomaterials. You can check out Prof. Hutchison's lab website [here](#) and his Google Scholar page [here](#).



Nicholas Hud is a Professor of Chemistry and Biochemistry at Georgia Tech, and the Director of the Center for Chemical Evolution ([CCE](#)). His lab aims to understand how biopolymers like RNA and DNA assemble, including mechanisms that may have led to the origin and evolution of RNA on prebiotic Earth and processes such as nucleic acid condensation and packaging, which have numerous implications in medicine and biology. Check out Prof. Hud's website [here](#) and his Google Scholar page [here](#).

Milestones and awards

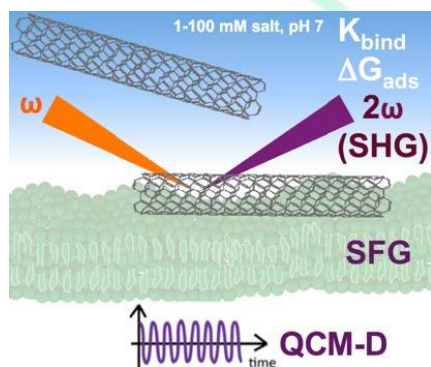
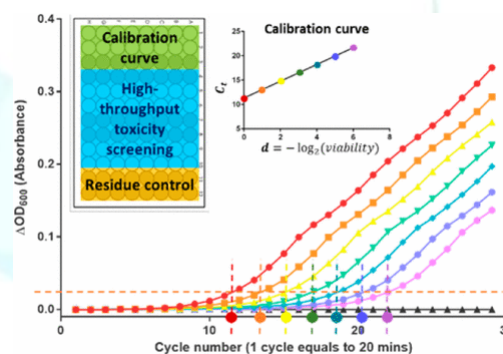
Congratulations to CSN researchers **Eric Melby** and coauthors **Arielle Mensch, Sam Lohse, Dehong Hu, Galya Orr, Cathy Murphy, Bob Hamers, and Joel Pedersen**, whose article "Formation of supported lipid bilayers containing phase-segregated domains and their interaction with gold nanoparticles" was one of the top 10 most downloaded articles in *Environmental Science: Nano* from 2016. You can find the article in the [Environmental Science: Nano 2016 Most Downloaded Articles collection](#). Notably, the cover art that featured this paper is also used on the cover pages for all recently accepted articles in *ES:Nano*!



Congratulations to CSN students **Denise Williams (Rosenzweig group)**, who passed her literature review exam on January 6th and **Natalie Hudson-Smith (Haynes group)**, who passed her oral preliminary exam at the University of Minnesota on January 24th!

CSN Productivity

Autumn Qiu's (Haynes Group) paper, entitled "A growth-based bacterial viability assay for interference-free and high-throughput toxicity screening of nanomaterials," has been accepted to *Analytical Chemistry*. Congratulations to Autumn and coauthors **Thu Ha Thi Nguyen, Natalie Hudson-Smith, Peter Clement, Dona-Carla Forester, Hilena Frew, Mimi Hang, Cathy Murphy, Bob Hamers, Vivian Feng, and Christy Haynes**! Read the online ASAP version of the paper [here](#).



Alicia McGeachy's (Geiger Group) paper, entitled "Resonantly Enhanced Nonlinear Optical Probes of Oxidized Multiwalled Carbon Nanotubes at Supported Lipid Bilayers," has been accepted for publication in the *Journal of Physical Chemistry B*. Congratulations to Alicia and coauthors **Laura Olenick, Juli Troiano, Ronald Lankone, Eric Melby, Tom Kuech, Ese Ehimiaghe, Howard Fairbrother, Joel Pedersen, and Franz Geiger**! You can read the Just Accepted version of the paper [here](#).

Ian Gunsolus' (Haynes group) and **Mimi Hang's (Hamers group)** paper, entitled "Influence of nickel manganese cobalt oxide nanoparticle composition on toxicity toward *Shewanella oneidensis* MR-1: Redesigning for reduced biological impact," has been accepted to *Environmental Science: Nano*. Congratulations to Ian, Mimi, and coauthors **Natalie Hudson-Smith, Joe Buchman, Joe Bennett, Dan Conroy, Sara Mason, Robert Hamers, and Christy Haynes!** You can read the online Accepted Manuscript version of the paper [here](#).

Just in case you haven't seen it yet, check out our [CSN Google Scholar](#) page! Personal Google Scholar pages have been added to individual profiles on the CSN website (see the "[Our Team](#)" page). If you have a Google Scholar page that doesn't appear in your profile, email Mike Schwartz so he can add it.



Lab Exchange

Ricky Brown (Rosenzweig group) recently spent time working with **Cassie (Xi) Zhang (Murphy group)** during a lab exchange at the University of Illinois. Ricky and Cassie are investigating ways to functionalize gold nanoparticles (top image), and are teaming up with **Dan Hofmann (Murphy group)** and **Kelly Zhang (Hamers group)** to develop a common functionalization strategy for diamond nanoparticles, gold nanoparticles, and quantum dots (bottom image, the team has a conference call to discuss cool science).

CSN Talks and Presentations

Christy Haynes performed as part of an annual outreach event called [Energy and U](#) during the week of January 2nd. Energy and U promotes concepts of science and sustainability to both 3rd-6th grade students and the general public. Among the 2000 people that enjoyed her performance were Vivian's 8-year-old son Nathan (picture on the left) and Christy's own 8-year-old son Clark (picture on the right); both boys came up on stage to help with the explosive demonstrations (lucky!).





Christy Haynes also presented a TED talk on January 21 at a local [TEDx conference in Edina, MN](#). Her talk was called “Nanomaterials Are Everywhere; How Do We Make Them Safe?” and featured published research results from many Center members. For more about TED, check out Christy’s blog post, “[Let's Talk about Responsible Science Communication](#)” from last fall. Christy will share the video of her 18 minute talk as soon as it’s available.

Mike Schwartz and **Miriam Krause** visited Tuskegee University on January 17-18 to visit the **Curry Lab** and gave a presentation at the Chemistry Department seminar about CSN research and summer REU/REV opportunities. They were joined by Christine Conwell, the Managing Director from the Center for Chemical Evolution ([CCE](#)), as part of an effort to get the word out about how fun it is to do research in labs that are part of the [Centers for Chemical Innovation](#) program.



(L-R) Mike, Christine from the CCE, Miriam, Donald White, and Aiesha Ethridge at The Oaks, the historic home of Booker T. Washington.

On January 24, **Bo Zhi (Haynes group)** and **Miriam Krause** presented “What is Sustainable Nanotechnology?” to a group of about 100 retirees through the University of Minnesota Osher Lifelong Learning Institute (OLLI). The presentation itself was about an hour, plus about a half hour of questions from a very engaged and curious audience! (Note: Miriam wishes to mention that **Mike Schwartz** isn’t the only one who forgets to take photos at CSN events.)

Miriam Krause also gave a presentation entitled “Training Informal Science Communication in a Chemistry Research Center: The Sustainable Nano Blog,” on January 26 at the [Science Talk NW](#) conference in Portland, OR.



Fun



Members of the **Haynes**, **Carlson**, and **Feng** groups enjoyed a fun game night at Vivian's house over the winter break.

Top (L-R): Joe Buchman, Rodrigo Tapia Hernandez, Thomas Pho, Kyle Johnson, Natalie Hudson-Smith, Stephanie Mitchell, Blake Miller, and Peter Clement.

Bottom: Christv and Vivian.

Announcing the CSN Nature Walk Photo Competition!

Yes, Nature. The reason many of us are working in the world of #Sustainability. So, get outside this month, smell the fresh, crisp air and be inspired, even if it's just a stroll on the campus quad! Science says that it's the best thing you can do to reduce the stress of monthly reports, quarterly reports, annual reports, reviews, presentations, papers, experiments, and too many emails!

- **Deadline:** Feb 28th. Submit your photos to CSNphotocompetition@gmail.com. One submission per contestant.
- **Eligibility:** Faculty, staff, postdocs, research scientists, undergrads, grad students, CSN kids, CSN parents, and CSN cats!
- **First Prize:** 64 GB memory card and rugged memory card case! Plus, your name and photo in the CSN newsletter!
- **Second Prize:** Your choice of either a 5 pack of Kodak Professional Porta 400 film or a GorrillaPod Tripod! Also, your name and photo in the CSN newsletter!
- **Third Prize:** Your name and photo in the newsletter!
- **Legal:** You retain all copyright to this image and may watermark it before submission. Your photo will be used in the monthly newsletter and/or website. Photos will be judged by a student organizer and assistants to be named at a later time. Snappy captions are encouraged.



Looking Ahead

Opportunities

March 2, 2017, 1:00-2:00 CST. ACS Technology & Innovation Webinar. "TERA-print: From Academic Discovery to A Commercial Desktop Fab." Website description: "How do you successfully transition your academic discoveries to a commercial market? Join us as Chad Mirkin discusses TERA-print, a Northwestern University start-up company based upon the inventions of Polymer Pen Lithography (PPL) and Beam Pen Lithography (BBL). In addition to underlying the first tools for point-of-use, large-area desktop nanofabrication, these techniques open up the field of nanocombinatorics and a new and

powerful approach to materials discovery. Chad will explore the commercialization of these methods and how they are being used to generate combinatorial libraries with as many as 100 million nanoscale features that can be used to screen and identify nanomaterial structure-function relationships important in catalysis, energy harvesting and conversion, and the life sciences.” For more information and to register, see [website](#).

Aug. 14–19. SciFinder Future Leaders Program for Students & Postdocs. From the [C&EN article by Linda Wang](#): “Applications are being accepted for the 2017 SciFinder Future Leaders program, organized by CAS [Chemical Abstracts Service], a division of the American Chemical Society. The program will be held Aug. 14–19 in Columbus, Ohio. The program provides Ph.D. students and postdoctoral researchers from around the world with opportunities to collaborate with CAS scientists, innovators, and business leaders to expand their professional network and build connections. At the conclusion of the program in Columbus, participants will attend the fall ACS national meeting in Washington, D.C., from Aug. 20–24.” **The application deadline is Feb 12.** More details [here](#).

Upcoming Conferences

March 5-9: Pittcon 2017

April 4-6: ACS National Meeting.

April 16-21: MRS National Meeting

June 18-23: Environmental Nanotechnology GRC (Vice Chair: Rebecca Klapar). Apply before **May 21** [here](#).

June 13-15: 21st Annual Green Chemistry & Engineering Conference (GC&E) in Reston, Virginia. Conference theme is "Making Our Way to a Sustainable Tomorrow." Call for papers closes **Feb 13**. See [website](#) for more information.

Upcoming CSN meetings and reminders

General

- **Student** monthly reports will be due **the last Friday** of each month (deadline for this month was extended to **Sunday, January 29**).
- **February 15:** REU/REV applications are due - spread the word!
- **October 5-8:** CSN All-hands at the University of Illinois, Urbana-Champaign.

Site Review

- **April 4:** CSN faculty meeting at ACS to outline site visit presentation. WebEx for those not at ACS that need to/want to participate.
- **April 10:** Full practice for site review presentation.
- **April 13:** “Red Team” meeting in Minneapolis for all faculty plus specific student presenters (TBD) and EAB members.
- **April 21, April 28:** Preparation (3 hours in the afternoon, exact time TBD).

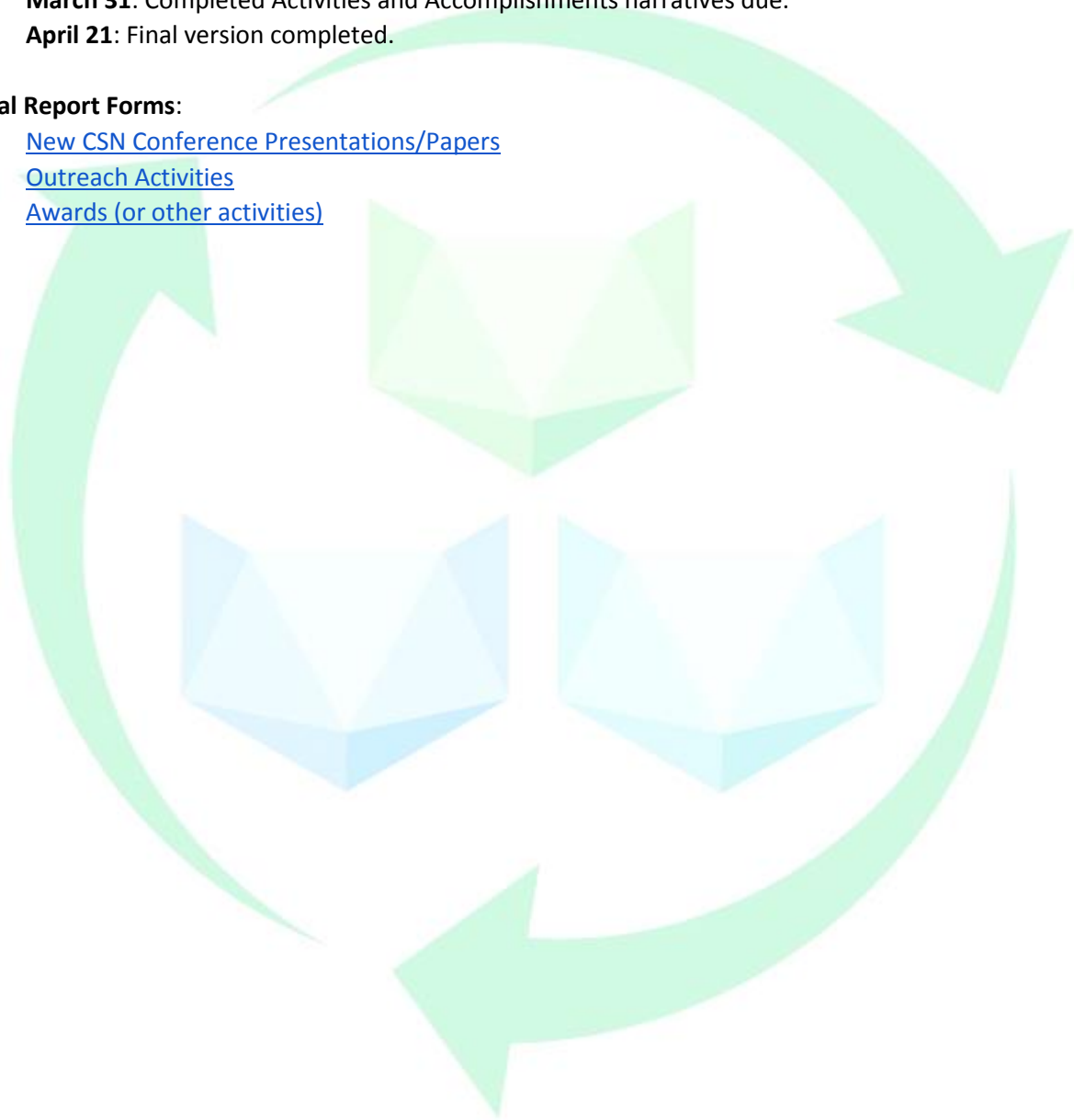
- **May 6-9:** Site Visit in Madison. **Everyone participating in the Site Visit will need to arrive on Saturday, May 6.** The Site Review will occur on Monday, May 8 through the early afternoon of Tuesday, May 9th. Participants can plan to leave in the early evening on Tuesday, May 9th.

Annual Report (additional information will be posted as it becomes available)

- **March 1:** Final budget decisions for Year 3.
- **March 31:** Completed Activities and Accomplishments narratives due.
- **April 21:** Final version completed.

Annual Report Forms:

- [New CSN Conference Presentations/Papers](#)
- [Outreach Activities](#)
- [Awards \(or other activities\)](#)



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.

