



WHAT'S HAPPENING IN THE CSN?



Happy belated Pride Month!
(image from Wikipedia)

NSF Center for Sustainable Nanotechnology

WELCOME TO NEW CSN MEMBERS



Kushani Mendi
(Rosenzweig group grad student)



Jennifer Bjorkland
(Mason group postdoc)



Amanda Spiewak
(Hamers group postdoc)

2023 SURE Students

Elea-Maria Abisamra (Rosenzweig group)
Samira Billow (Wheeler group)
Katie Conn (Daly group)
Katherine Crutchfield (Stoddard group)
Amoya Dixon (Kabengi group)
Andrea I. Garcia-Ramos (Santana group)
Emily Kessler (Mensch group)
Eric Martinez (Klaper group)
Zephani Melichar (Haynes group)
Imani Phillips (Curry group)
Marena Rivera-Dopazo (Giraldo group)
Matthew Ruiz (Gaines group)
Adriana Schroeder (Murphy group)
Matty Sey (Mason group)
Adrianna Taylor (CAES group)
Han Xie (Hernandez group)
Natnael Yaregal (CAES group)
Charise Young (Fairbrother group)
Haneen Yousif (Clayborne group)

Honorary Students

Nicolas Alt (Clayborne group)
Bella Guardado (Rosenzweig group)
Ehmely Hernandez (Murphy group)
Rima Jamous (Haynes group)
Andrea Ligoeki (Haynes group)
Sharmaka Mohamud (Haynes group)
Anna Silver (Mensch group)
Zarina Tavares (Fairbrother group)
Chris Yoler (Mensch group)



Welcome to our wonderful cohort of 2023 Summer Undergraduate Research Experience (SURE) students! Most of our summer undergrads were able to attend an in-person orientation meeting at the University of Minnesota on June 14.





Nikki Hoang (Murphy group) defended her thesis, entitled "Protein Corona Formation and Analysis on Colloidal Inorganic Nanoparticles," on June 20! Congratulations Dr. Hoang! (photos show Nikki with her advisor Cathy and with her husband, CSN alum **Rodrigo Tapia Hernandez**)



Christy Haynes began her term as Department Head for UMN chemistry! Read the news release featuring Dr. Haynes [here](#).



Rebecca Klaper has accepted the position of Dean for the UWM School of Freshwater Sciences (effective July 1)! Read more about Rebecca's new position [here](#).

CSN alum **Natalie Hudson-Smith** (Ph.D. 2020) just accepted a tenure-track assistant professor position in the Department of Chemistry at St. Peter's University. She'll start there this fall!



Andre Clayborne was promoted to Associate Professor with tenure at George Mason University!



Former CSN postdoc **Deepti Sharan (Carlson group)** recently had a baby named Mishika - welcome!



Former CSN postdoc **Fangjia Li (Orr group)** also recently had a new baby named Isaac - congratulations!

Milestones and Awards



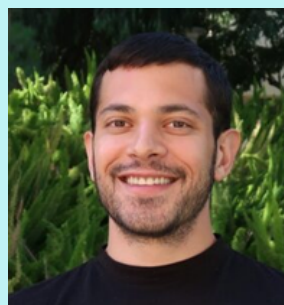
Congratulations to CSN postdoc **Safia Jilani (Haynes group)** for being awarded a Ford Fellowship. The Ford Fellowship "provides support for scholars and future professors to use inclusion and diversity to improve the student experience in higher education." Read more about the award in a University of Minnesota press release [here](#).



Milestones and Awards



Congratulations to **Beza Tuga** (**Haynes** group) for being awarded the 2023-24 Doctoral Dissertation Fellowships from the University of Minnesota. Read a news release featuring Beza [here](#)!

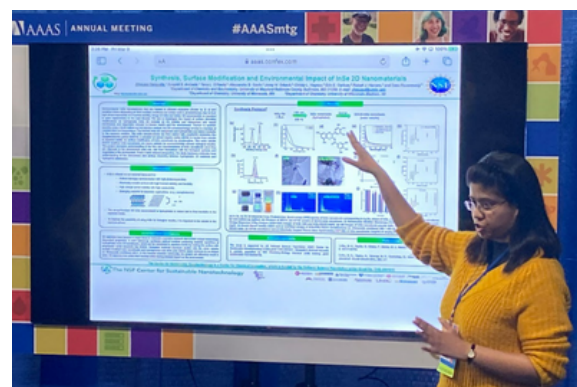


Chris Castillo (**Giraldo** group) has been awarded a UC President's Pre-Professoriate Fellowship. He also obtained a Gordon Research Conferences' travel award.

Finally, Chris will also serve as our next SPRING Board/Executive Committee Liaison! Congratulations Chris!



CSN SURE students **Elea-Maria Abisamra** (L, **Rosenzweig** group) and **Charise Young** (R, **Fairbrother** group) have both been accepted to present their CSN work at the NOBCCHE 50th Annual Conference in New Orleans. Elea was also awarded a Tier One Advancing Science Conference Grant. Congratulations, Charise & Elea!



Shreyasi Sengupta (**Rosenzweig** group) was awarded Graduate Student Honorable Mention for the E-poster competition at the 2023 AAAS Annual Meeting in Washington, DC.



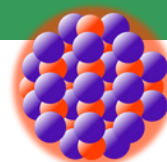
Savannah Phillips (**Fairbrother** group) passed GBO and is now a PhD candidate



Della Mosley was the the 2023 Commencement Speaker at Palo Alto University (PAU) on Saturday, June 17. Read the News release featuring Dr. Della [here](#).

Shana Stoddard was awarded the Silvia Ronco Innovative Mentor Award 2023. Read the News release [here](#).





See Sustainable-Nano.com for all CSN blog posts & podcast episodes



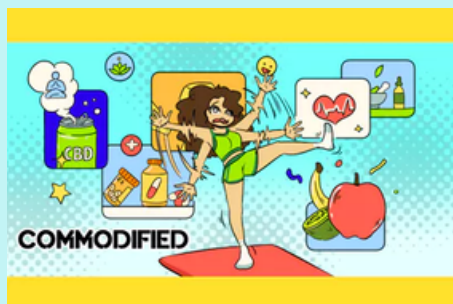
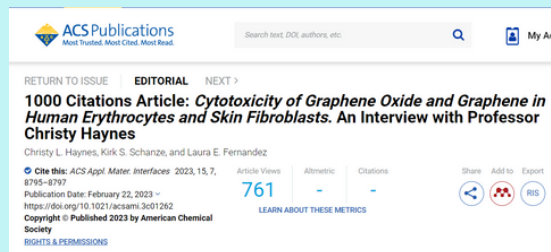
- [Science Henna: Sharing stories through my hands](#) by Safia Jilani
- [Celebrating Mental Health Awareness Month: Part 1](#) - repost of "Mental Health and the Diversity of Minds" by Izzy Foreman-Ortiz
- [Celebrating Mental Health Awareness Month: Part 2](#) - repost of "Anxiety can make graduate school feel like an Olympic balance beam" by Laura Kesner
- [Celebrating Mental Health Awareness Month: Part 3](#) - repost of "Running towards a degree" by Christian Reardon-Lochbaum

- [Nanopartículas accidentales en el medio ambiente: el problema de la contaminación por nanoplásticos](#) - translation of post by Zeke Piskulich
- [Celebrando la ciencia en una convención de ciencia ficción](#) - translation of post by Miriam Krause
- [El Toque de Cobre](#) - translation of post by Seth Frand
- [Podcast episode 42: Why we all feel so terrible and what to do about it](#) - webinar with Dr. Kaz Nelson

Thank you to our Nano Sostenible translation & editing team: Lissett Guadalupe Diaz, Regina Gonzalez Lona, & Wilanyi Alvarez Reyes

CSN Media & Other Recognition

Christy Haynes was interviewed by *ACS Materials & Interfaces* for a Haynes group publication that was the first to reach 1000 citations for the journal. You find the full interview [here](#)!



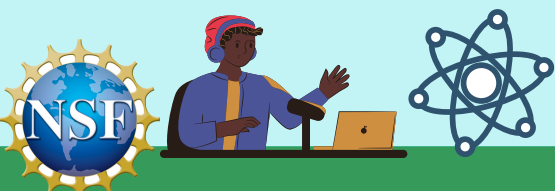
In a recent episode on the Embodied Podcast, **Della Mosley** and other guests talked all about wellness, from reframes and tools to collectivism and making sure wellness is for all of us. Go have a listen to the full episode - [Commodified: When 'Wellness' Makes Us Unwell.](#)

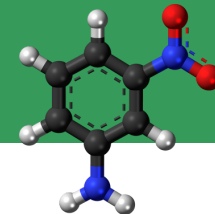
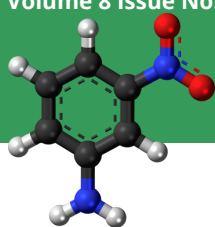


Sara Mason was the focus of two Brookhaven National Laboratory features: The first was entitled "Using Computation and Theory to Enhance Nano-Agriculture and Beyond" (read [here](#)). The second was entitled "Coming Out is a Lifelong Process" (read [here](#)).



Liz Laudadio (Hamers group alum) was interviewed for their research in advanced coatings to help them last longer. Read the whole interview [here](#)!





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

Laura A. Kesner, Zeke A. Piskulich, Qiang Cui and Zeev Rosenzweig (2023).

Untangling the Interactions between Anionic Polystyrene Nanoparticles and Lipid Membranes Using Laurdan Fluorescence Spectroscopy and Molecular Simulations. *Journal of the American Chemical Society*. 145 (14), 7962-7973. Read the online publication [here](#).

Natalie V. Hudson-Smith, Wilanyi Alvarez-Reyes, Xiaoxiao Yao, Jiayi He, Rebeca Sarahi Rodriguez, Stephanie Mitchell, Mahmoud Matar Abed, Eleni Spanolios, Miriam O. P. Krause and Christy L. Haynes (2023).

NanoAdventure: Development of a Text-Based Adventure Game in English, Spanish, and Chinese for Communicating about Nanotechnology and the Nanoscale. *Journal of Chemical Education*. 100 (6), 2269-2280. Read the online publication [here](#).

Younghoon Oh and Qiang Cui (2023).

Non-equilibrium transport of nanoparticles across the lipid membrane. *Nanoscale*. Read the online publication [here](#).

Eric Ostovich, Austin Henke, Curtis Green, Elizabeth Laudadio, Max Spehlmann, Nathan Van Ee, Jamie Uertz, Robert Hamers and Rebecca Klaper (2023).

Physiological Impacts of *Raphidocelis subcapitata* in Response to Lithiated Cobalt Oxide Nanomaterials. *Environmental Toxicology and Chemistry*. Read the online publication [here](#).

Christian O. Dimkpa, Chaoyi Deng, Yi Wang, Ishaq O. Adisa, Jingyi Zhou and Jason C. White (2023).

Chitosan and Zinc Oxide Nanoparticle-Enhanced Tripolyphosphate Modulate Phosphorus Leaching in Soil. *ACS Agricultural Science & Technology*. Read the online publication [here](#).

Mingshu Li, Li Gao, Jason C. White, Christy L. Haynes, Tana L. O'Keefe, Yukui Rui, Sami Ullah, Zhiling Guo, Iseult Lynch and Peng Zhang (2023).

Nano-enabled strategies to enhance biological nitrogen fixation. *Nature Nanotechnology*. Read the online publication [here](#).

Jaya Borgatta, Yu Shen, Carlos Tamez, Curtis Green, Jenny K. Hedlund Orbeck, Meghan S. Cahill, Connor Protter, Chaoyi Deng, Yi Wang, Wade Elmer, Jason C. White and Robert J. Hamers (2023).

Influence of CuO Nanoparticle Aspect Ratio and Surface Charge on Disease Suppression in Tomato (*Solanum lycopersicum*). *Journal of Agricultural and Food Chemistry*. Read the online publication [here](#).

Jiayi He, Eleni Spanolios, Clarice E. Froehlich, Cassandra L. Wouters and Christy L. Haynes (2023).

Recent Advances in the Development and Characterization of Electrochemical and Electrical Biosensors for Small Molecule Neurotransmitters. *ACS Sensors*. 8 (4), 1391-1403. Read the online publication [here](#).

Katherine M. Greskovich, Kelly M. Powderly, Maegen M. Kincanon, Nathan B. Forney, Catherine A. Jalomo, Anita Wo and Catherine J. Murphy (2023).

The Landscape of Gold Nanocrystal Surface Chemistry. *Accounts of Chemical Research*. Read the online publication [here](#).

DID YOU KNOW?



The WELLS Healing Center now has a tax-deductible donation page. For the link to the page and other cool updates about **Della Mosley** and the WELLS Healing Center, see **Dr. Della's [linktree page](#)**



Check out the recent special issue from *Accounts of Chemical Research* highlighting HBCU research. **Mike Curry** was a guest editor, and you can read the editorial he co-wrote (with Carl Bonner, Desmond Stubbs, and N. Joyce Payne) [here](#). The issue also featured research contributions from Mike Curry ("[Isolation, Oxidation, and Application of Crystalline-Pristine Cellulose: Natural Products That Could End Plastic Waste](#)") and **Rob Green** ("[Structural and Photoluminescence Characterization of Oxyfluorides for Phosphor Applications](#)").



Site Visit

Our Year 8 NSF Site Visit took place at the University of Wisconsin - Madison, April 24-25



Rigoberto Hernandez
@EveryWhereChem

Celebrating/presenting the work of @SustainableNano as we look to the next 2.5 years...
Can a panel review be fun?! Well, yes, if your center is full of cool people doing great science!

Traducir Tweet



CSN Talks & Presentations

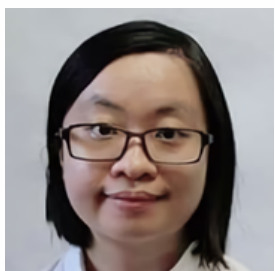
Haynes group members **Beza Tuga, Andrea Ligocki, Eleni Spanolios, and Cheng-Hsin Huang** (clockwise below), along with **Sharmaka Mohamud**, and **Tana O'Keefe** (in Tweet at right) all presented on their CSN work at the UMN IPrime meeting in May 2023.



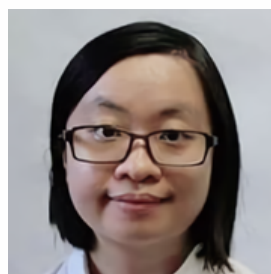
Haynes Group
@HaynesChemLab

More good news from IPRIME: [@TLOkeefe12](#) and Sharmaka's poster was selected for a Best Poster Award! Sharmaka joined us in January as a [@NorthStarSTEM](#) post-bac fellow and is mentored by Tana. Congrats to them both 🎉 [#umnproud](#)

[@SustainableNano](#) [@UMNChemistry](#)
Traducir Tweet



Wilanyi Alvarez Reyes (Haynes group) helped organize the 2023 Chemical Biology Interface Training Grant Symposium at the University of Minnesota. She also presented a flash talk about her CSN work as part of the symposium.



Cheng-Hsin Huang (Haynes group) gave a talk about her CSN work at the 3rd year Graduate Research Symposium at the University of Minnesota.

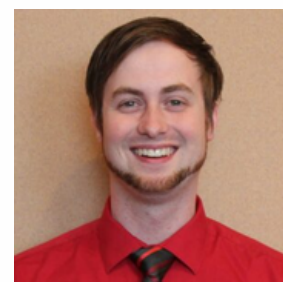


Christy Haynes gave an invited seminar about CSN work at Colorado State University, as well as presenting at the UMN IPrime meeting.

Cathy Murphy delivered four talks around the UK and Ireland for my Centenary Prize Tour, sponsored by the Royal Society of Chemistry. The title was "On the Surface of Things: Ligand Display and Dynamics on Gold Nanocrystal Surfaces"



Two CSN **Haynes** group alumni, **Ian Gunsolus** and **Joe Buchman**, visited the University of Minnesota to participate on a panel about "tips and tricks" for post-PhD job hunting. They had lots of great insights to share based on their current positions at HealthPartners and Medtronic.



CSN Talks & Presentations



Several CSN members presented talks and posters at the spring ACS conference in Indianapolis, IN. The full list of spring CSN talks is on this [google sheet](#).



See page 12 for information on the upcoming fall ACS conference in San Francisco, CA.



ACS meetup L-R: **Mike Schwartz**, **Arielle Mensch** (affiliate & alum **Pedersen/Orr** groups), **Miriam Krause**, **Christy Haynes**, collaborator Kathryn Riley, and **Shana Stoddard** (2023 Scholar-in-Residence) outside the Slippery Noodle, the oldest bar in Indiana!



Eleni Spanolios and **Safia Jilani** (Haynes group) along with **Miriam Krause**, **Jeanette Mejia** (WELLS team) and UMN colleague Hyeokjung Kim attended the [Midwest Retreat for Diversity in Chemistry](#) June 23-25 at Park University in Parkville, MO (whose mascot is the Pirates). The CSN crew presented a wellness workshop for all conference attendees.

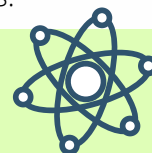
New Capabilities



Zeke Piskulich and **Qiang Cui** were awarded an NSF ACCESS allocation, entitled "Characterization of the Impact of Crowding Agents on the Composition and 2D-Infrared Spectroscopy of Fused-in-Sarcoma Condensates."



Sara Mason was awarded a software and computational allocation for CSN work by the Center for Functional Nanomaterials at Brookhaven National Labs.

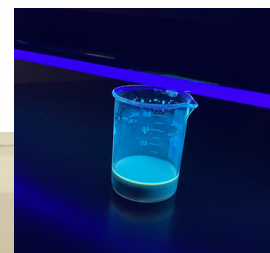


Environmental Nano Gordon Research Conference (GRC)

Many CSN members attended and presented at the Environmental Nanotechnology Gordon Research Conference (GRC) and Graduate Research Symposium (GRS) in Newry, Maine. The [agenda](#) is listed [here](#).



Outreach



SPRINGS from JHU and UMBC did a joint outreach activity with CSN alum **Sophia Sommerkamp**'s high school chemistry club! **Savannah Phillips** and **Caroline Anastasia** (Fairbrother group), **Shreyasi Sengupta** (Rosenzweig group), and **Yinhan Wang** (Hernandez group) guided the students through synthesis of carbon dots and demonstrated their fluorescence.



Cathy Murphy gave a talk about nanotechnology to high school students (via Zoom) at Morristown High School, New Jersey, in honor of Women's History Month, March 21, 2023.



Wilanyi Alvarez Reyes (Haynes group) presented a Spanish-language outreach show (Energy and U) for 3rd-7th graders. She taught the first law of thermodynamics and about sustainability with large demonstrations and dancing.

Lab Exchanges



Jason White along with CAES staff **Yi Wang** and **Nubia Zuverza-Mena**, visited the Brookhaven National Laboratory with **Sara Mason**. They got to meet with Center for Functional Nanomaterials (CFN) scientists to learn about capabilities, and now both CAES staff submitted user proposals!



Incoming CSN postdoc **Jennifer Bjorklund** (left) and SURE student **Matty Sey** (right) also visited BNL the week of June 26. During the visit, Matty and Jennifer accompanied **Sara Mason** on several tours of the CFN.



Natnael & Adrionna doing some planting!



SURE students **Natnael Yaregal** and **Adrionna Taylor** (L and R of center) were among a group of volunteers who recently helped **Wade Elmer** (far R) with a CAES field work project



Meanwhile, in the UMN Chemistry Lobby....



The **Murphy** group's gold nanorods are going to the moon! Read the UIUC news release [here!](#)



MoonArk chambers are shown stacked. Photo by Dylan Vitone





SURE KICKOFF



Outreach demo activity:
liquid nitrogen ice cream



Ready for a lab tour!



Mentoring Matters session with Shana Stoddard



Internships



Mahima Unnikrishnan
(Murphy group, R) is doing a summer internship at Corteva.



Riley Lewis (Haynes group, L) is doing a summer internship at Seagate.

ACS FALL 2023: AUGUST 13 - 17 IN SAN FRANCISCO, CA



- There will be a [memorial symposium in honor of Joel Pedersen](#) from 8am-6pm Monday, August 14 and Tuesday, August 15, plus a virtual poster session
- Our fellow CCI [CAICE](#) (Center for Aerosol Impacts on Chemistry in the Environment) will also have a "sunset" symposium celebrating their 13 years on Wednesday, August 16 from 8am to 6pm (in Moscone Center room 308)
- [official conference website here](#)
- [Our list of CSN member presentations is here!](#)



Opportunities!

THE LIFE CYCLE OF COLLABORATION

A THREE PART WORKSHOP SERIES ABOUT HOW WE LEVEL UP AS COLLABORATIVE LEADERS.

Register by Aug 2 for this 3-part workshop (Aug 10, Sept 14, Oct 12) focusing on leadership, facilitation, and conflict resolution. Mike and Miriam participated in this workshop in the spring, and it was really good. If you're interested, we can arrange for the CSN budget to cover the costs (let Mike and Miriam know). Learn more about the workshop at [Project Kinect](#).

FREE | VIRTUAL CONFERENCE | JULY 25-26

SciPEP2023
New Insights for Communicating Basic Science

REGISTRATION OPEN

scipep.org



Support and enhance K-12 chemistry education through the American Chemical Society Science Coaches program! Science Coaches is a unique opportunity for teachers to partner for a year with a chemist volunteer.

The final deadline for applications to be received is September 1! Learn more about program requirements, application timeline, and how to apply on the [Science Coaches webpage](#).



LOST IN CYBER-SPACE?

Links to frequently requested CSN documents and information sources.

Newsletter submissions:

Awards, highlights, lab exchanges, publications, FUN, etc. [link](#)

CSN Documents and Downloads

- Nanodatabase Login: [link](#)
- Nanodatabase Help page: [link](#)
- CSN calendar: [link](#)
- CSN Operations Guide: [link](#)
- CSN participants list (Names, group, and email addresses): [link](#)

CSN Reporting Forms

- Report lab exchange activities: [link](#)
- Report Outreach Activity: [link](#)
- Report Awards and Other Activities: [link](#)

CSN Anonymous feedback

(Completely Anonymous Feedback to Admin)

- Links to send completely anonymous feedback in several ways are [on this page](#).

ADMIN EMAILS

- Bob (rjhamers@wisc.edu)
- Christy (chaynes@umn.edu)
- Miriam (mkrause@umn.edu)
- Mike (mpschwartz@wisc.edu)



This material is based upon work supported by the National Science Foundation under the NSF Center for Sustainable Nanotechnology, grant number CHE-2001611. Any opinions, findings, and conclusions or recommendations expressed are those of the participants and do not necessarily reflect the views of the National Science Foundation or the participating institutions.