

# SNO REPORT

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## **SNO Report Submissions**

Please send news, conference announcements, job postings, and other contributions to the SNO Report to the editor, **Kyle Doudrick** [kdoudrick@nd.edu](mailto:kdoudrick@nd.edu)

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## **Letter from the President:**

It is that time of year again when we report on SNO activities and this report is one way that we update members on what is going on in the organization. In this edition, I am pleased to report on the 2016 annual conference, including SNO awards and interviews to members. It is also my pleasure to announce that the 6<sup>th</sup> annual conference is underway.

The SNO's 5th Annual Conference was held in Orlando, FL from November 10—12, 2016 at the Doubletree by Hilton Universal Orlando. The conference co-chairs were Dr. Sudipta Seal, Distinguished Professor of Materials Science & Engineering at University of Central Florida and Dr. Quo (Treen) Huo, Associate Professor at the NanoScience Technology Center at University of Central Florida, Orlando. The 2016 conference sessions were organized around selected "systems" such as energy systems. The conference was well attended. SNO's annual conference had been largely successful, bringing the community together and providing a neutral platform, defining the new field, thus achieving one of the key missions. The SNO Award is intended to recognize individ-

uals that have demonstrated a commitment to impactful research and service that deepens the scientific community's understanding of issues related to sustainable nanotechnology. The SNO 2016 award was given to Professor Andre Nel of UCLA. Professor Nel is no stranger to the SNO or the nanomedicine community, and this award is only a token of his contributions to sustainable nanotechnology. The 2016 RSC/SNO Young Investigator award was given to Dr Elijah Peterson of NIST. This edition also contains awards and other recognitions by SNO members.

SNO also partners with other organizations. In January 2017, SNO co-sponsored an international conference on Advances in Nanotechnology in Guwahati, India from January 9-13 and supported the Environmental Effects of Nanoparticles and Nanomaterials conference (ICEENN) in 2016. As in previous years, the themed issue of the 2016 annual conference will be published by the RSC journal of *Environmental Science: Nano*. This journal has recently received its first impact factor which has been

largely due to the contributions of SNO member community. Plans for the 2017 annual conference are already underway. The 6<sup>th</sup> SNO annual conference will be held from Nov. 5-7, 2017, Los Angeles. Be there! Please check SNO website for deadlines and abstract submission.

The SNO advisory board held a retreat on February 6-7, 2017 at the Cosmos Club in Washington DC. At this retreat, SNO reviewed its progress in the last five years and brainstormed on the next five years. SNO governance members in attendance include: Omowunmi "Wunmi" Sadik, **President** (SUNY-Binghamton); Barbara Karn, **Executive Director**, Vinka Craver, **Secretary** (University of Rhode Island), Kyle Doudrick (Notre Dame), Achintya Belzebarua (NDSU) Sudipta Seal (UCF), Phillip Demokritus (Harvard), Arturo Keller (UCSB), and Candace Tsai (Purdue). The SNO by-laws were also approved at the retreat and the updated version has now been uploaded on the website ([www.susnano.org](http://www.susnano.org)).

This edition of SNO Report contains other exciting news. Enjoy! **-Wunmi Sadik**

## 2016 SNO Award



**Prof. Andre Nel**  
**University of California Los Angeles**

The **SNO Award** is given annually to a top contributor in the field of sustainable nanotechnology. Stay tuned for our next issue where we will highlight all our past **SNO Award** winners and their story.

## 2016 SNO/RSC Young Investigator Award



**Dr. Elijah Peterson**  
**National Institute of Standards**

The **SNO/RSC Young Investigator Award** is given annually to a top (untenured) scientist working in sustainable nanotechnology. Dr. Peterson has contributed greatly to carbon nanomaterial toxicity and metrology, and we look forward to see his future contributions.

## 2016 SNO Poster and Pitch Award Winners

Students competed in two contests this year, a poster presentation and a nano pitch. Students' posters and the accompanying abstracts were judged on their presentation ability and the relevance of their research to sustainable nanotechnology. For the second annual Nano Pitch, students got the chance to "pitch" their research to the conference in under 100 seconds. Awards were given to those who could tell a convincing story about the importance and relevance of their research. The poster and pitch award winners are listed below. Congratulations to all.



Moyosove Afolabi



Noha Samir Ismail

### Poster Awards

2<sup>nd</sup> Place: Noha Samir Ismail

3<sup>rd</sup> Place: Moyosove Afolabi

### Nano Pitch Awards

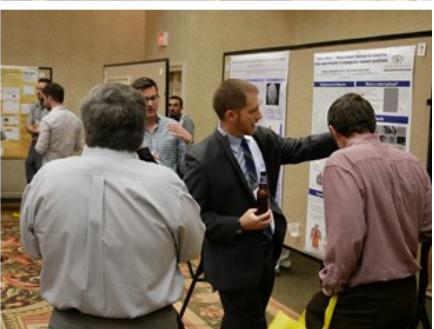
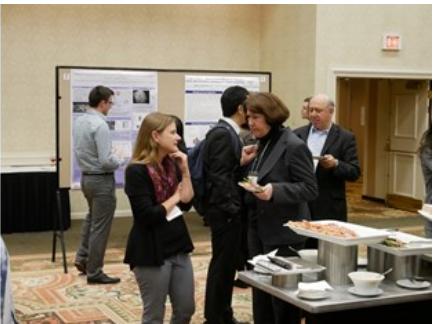
1<sup>st</sup> Place: Carolyn Wilke

2<sup>nd</sup> Place: Devon Rippner

3<sup>rd</sup> Place (tie): Moyosove Afolabi

3<sup>rd</sup> Place (tie): Montara Erickson

## 2016 SNO Conference Photos



## Where are they now? SNO Student Award Winners Q&A with Sanghamitra Majumdar



Dr. Joel Cohen



Dr. Nicholas Geitner

**(Majumdar)** You were one of the recipients of SNO student awards in 2012 as a graduate student. Where are you now and how does your current work contribute towards sustainable nanotechnology?

**(Cohen)** I am now a senior toxicologist for the consulting firm Gradient, practicing mainly in the area of consumer product safety assessment. With Gradient I aim to help make consumer products safer through chemical hazard and risk assessment as well as green chemistry practices. For example, we conduct alternatives assessments to evaluate the environmental health and safety implications of chemicals and/or nanoparticles used in consumer products. Through this process we aim to identify potential alternatives that may pose less risk to human health while achieving similar functionality in the end product. I also currently maintain a Visiting Scientist appointment at the Center for Nanotechnology and Nano-toxicology at the Harvard T.H. Chan School of Public Health. In this position I am mainly working on alternative testing strategies for nanomaterials. This includes developing in vitro methods for screening nanoparticle hazards in an effort to reduce the need for animal testing. I am particularly interested in food grade nanoparticles currently used in a variety of food products and food contact materials. Our lab is investigating the potential impacts associated with oral ingestion of these food grade particles using both in vitro and in vivo models for toxicity.

**(Geitner)** I am currently a Postdoctoral Associate at Duke University, working at the Center for the Environmental Implications of NanoTechnology (CEINT). As such, my work focuses on the fate and transport of nanoparticles in the environment and what physical processes drive nanoparticle transport. This ranges from nanoparticle fate in large scale mesocosms to the prediction and measurement of nanoparticle trophic transfer. My other work employs computational simulations of nanoparticle interactions with small molecules in environmental and agricultural settings. For example, nanoparticle interactions with pesticides. This focus on nanoparticle impacts and fate in the environment contributes to sustainable nano by first understanding the safety issues with these materials, and then by harnessing this knowledge for useful applications.

**(Continued on next page)**

**(Majumdar) How were you introduced to SNO and how has the annual SNO conferences benefited you in your professional development during your graduate and post-graduate research?**

**(Cohen)** At the recommendation of my doctoral research advisor, I attended the very first SNO conference in Washington, DC. My experience in DC, along with the other SNO conferences I attended in Santa Barbara and Portland, OR, was very beneficial to my professional development. These annual conferences provided a unique environment to present my doctoral research to a community well-versed in the issues I was investigating. I received useful feedback to my posters and podium presentations that helped move my research forward. The conferences also provided a valuable networking opportunity for establishing and maintaining relationships with researchers that shared similar interests in both the applications and the environmental health and safety implications of nanotechnology.

**(Majumdar) Where would you envision yourself in the next five years?**

**(Cohen)** Over the next five years I aim to continue my training as a toxicologist, further broadening the scope of my practice beyond nanomaterials to the world of consumer chemical and materials exposures in general. I envision my training in the physical, chemical and toxicological characterization of nanomaterials will help provide firm grounding for evaluating the health and safety implications of nanomaterials used in consumer products. I also aim delve further into the practice of green chemistry and alternatives assessment, in an effort to promote sustainability across the spectrum of chemicals and materials used in consumer products.

**(Geitner)** My PhD advisor at Clemson University brought me along to the first SNO meeting in Washington, DC. Having now been to several meetings, I'd say SNO has been very beneficial. Seeing the progress and really transformation of sustainable nano research has been encouraging and fascinating. After each conference, I always leave with new connections and several new project ideas that are inspired by the research discussed each year at SNO. These ideas have, together with guidance from advisors, really shaped the current and future direction of my research.

**Don't forget to submit your application for the upcoming Gordon Research Conference on Environmental Nanotechnology!**

*The Next Generation of Nanotechnology: Materials, Applications, and Implications*

Deadline for application: May 21, 2017

Chair: Prof. Sharon Walker

Conference Dates: June 18-23, 2017

Location: Stoweflake Conference Center, Stowe, VT





## SNO partners with Indian Colleagues for Successful Conference

SNO partnered with co-chairs Dr. Achintya Bezbarua (SNO Council) and Dr. Sunandan Baruah to hold a conference January 9-13, 2017 at Assam Don Bosco University in Guwahati, Assam, India. The International Conference on Advances in Nanotechnology (iCAN 2017) featured 50 keynote addresses and papers. In addition, there were over 40 poster

presentations. Topics ranged from green synthesis, to environmental nanotechnology to nanoelectronics to nanosensors to clean water to agriculture. The conference featured an evening of entertainment by local dancers and musicians and a trip to the World Heritage Site at Kaziranga National Park where rhinos, deer, and water buffalo abound. We, fortu-

nately, did not run across the tigers that live there, too.

Conference attendees and SNO met with ministers and university officials to discuss how to promote nanotechnology research in the region. iCAN2017 has been instrumental in advancing nanotechnology research in Assam and proving the value of SNO partnerships.

**Dr. Barbara Karn travels to India for the International Conference on Advances in Nanotechnology**



## Making SNO Better: Be on the lookout for SurveyMonkeys

We are currently reorganizing SNO so that it meets the members' needs better. We will be sending out surveys via SurveyMonkey. Please be on the lookout, and we would be grateful if you could complete them. We want to continue making SNO a great organization, and we believe this is a perfect way to start doing that!

## Wunmi Sadik receives the Nigerian National Order of Merit

Wunmi Sadik, President & Co-Founder of SNO, was recently recognized as the 2016 recipient of the Nigerian National Order of Merit (NNOM) in the category of Science, which is Nigeria's highest national honor for distinguished contributions in academia.

NNOM was created in 1979 and has since been awarded to 73 people; only four of them—including Sadik—are women. Prior recipients include the Nobel Laureate Wole Soyinka, author Chinua Achebe and Isidore Okpewho. This award

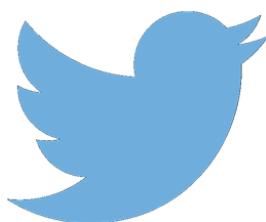
broadly recognizes Sadik's accomplishments in science, innovation, and research, including her international professional leadership and her passion for developing sustainable solutions to Nigeria's educational and research needs.



SNO President & SUNY-Binghamton University Chemistry Professor Omowunmi (Wunmi) Sadik (on right) receives a 2016 Nigerian National Order of Merit from Nigerian President Muhammadu Buhari (third from left) and Chairman of the National Merit Award Committee Professor Etim Moses Essien (second from left) during a visit to the Presidential Villa in Abuja. Fellow awardee Professor Tanure Ojaide (left).  
Photo by Philip Ojisua

## Follow us on Twitter

SNO is an organization for all things “sustainable nanotechnology.” Social media is a great way to stay up-to-date on the latest topics and remained connected to our members. We will be using Twitter to post news relevant to SNO and to stay engaged with our members. **Please follow us @susnanotech.** Publish a paper? Obtain a new research grant? Give a lecture on sustainable nano? We would love to hear from you!



Nanotechnology for Sustainable Food Production: Promising opportunities and scientific challenges #SNO  
[pubs.rsc.org/en/Content/Art...](https://pubs.rsc.org/en/Content/Art...)

*Examples of one of our latest tweets: new publication from a few of our members*



Prof. Wunmi Sadik  
Binghamton University

**Susnano.org**

Interested in writing a story or announcing good news? Send us an email at kdou-drick@nd.edu

## Wunmi Sadik Named 2017-2018 Jefferson Science Fellow

SNO President and co-founder, Professor Wunmi Sadik has been named a 2017-2018 Jefferson Science Fellow (<https://careers.state.gov/work/fellowships/jefferson-science>).

As a Jefferson Science Fellow, Sadik will be placed in the US State Department for one year. She will continue as a consultant for another 5 years after her fellowship year. The JSF program engages tenured, or similarly ranked, academic scientists, engineers and physicians from U.S. institutions of higher learning, who are U.S. citizens, and are eligible for selection as Jefferson Science Fellows. Fellows spend one year at the U.S. Department of State or the U.S. Agency for International Development (USAID) for an on-site assignment in Washington, D.C. Fellows' assignment may also involve extended stays at U.S. foreign embassies and/or missions [http://sites.nationalacademies.org/PGA/Jefferson/PGA\\_176905](http://sites.nationalacademies.org/PGA/Jefferson/PGA_176905).

Sadik is a Professor of Chemistry and the founding Director of the Center for Research in Advanced Sensing Technologies and Environmental Sustainability (CREATES) at the State University of New York at Binghamton (SUNY Binghamton), where she has been a member of the faculty since 1996. She is also the President and Co-Founder of the Sustainable Nanotechnology Organization (SNO) ([www.susnano.org](http://www.susnano.org)), a non-profit, international professional society dedicated to advancing sustainable nanotechnological solutions around the world through education, research, and the promotion of the responsible growth of nanotechnology. Dr. Sadik received her BS and MS in chemistry from the University of Lagos (Nigeria) and her PhD in chemistry from the University of Wollongong (Australia). She has held appointments at Harvard University (where she was the first person of Nigerian origin or descent to receive the Harvard University Radcliffe Fellowship), Cornell University and the Naval Research Laboratory. Her body of work includes authoring/co-authoring over 170 scientific publications, and she has given over 370 invited lectures and conference contributions across the world. Out of the 30 PhD students that she has mentored to date, 12 of them have gone on to into tenure-track faculty positions in the US and around the world.

Dr. Sadik's research areas are in surface chemistry, chemical sensors and biosensors, and in their application to solving real-life problems in biological systems, energy and the environment. Her research has been funded by various U.S. government agencies, such as the National Science Foundation (NSF), the Defense Threat Reduction Agency, the National Institute of Standards and Technology, the Army Research Office, the Naval Research Laboratory and the Environmental Protection Agency. She has also received significant funding from leading institutions in the private and non-profit sectors such as Procter & Gamble and the Bill & Melinda Gates Foundation. Dr. Sadik holds five U.S. patents for her work on biosensors and nanostructured membranes. Dr. Sadik's work has received widespread recognition for its practical impact, commercial potential and value to society. She has developed an international presence in environmental analysis, sustainable nanotechnology and sensors, with global collaborations in Nigeria, South Africa, the West Indies, Japan, Romania, the United Kingdom and Australia. Dr. Sadik currently serves on the South African Department of Science & Technology's Implementation Committee on Nanoscience, which focuses on building national academic and professional capacity in nanoscience and technology.