

# Nanoscience and Advanced Materials Specialty Section

# Newsletter

## Letter from the President

Dear NAMSS members,

Unfortunately, we were unable to meet together this year. I assume that most of us were very keen on attending the annual SOT meeting and, of course, our NAMSS reception and business meeting. Although we looked forward to the wonderful weather and meeting venue of Anaheim, COVID19 was spreading faster than we expected. We can only hope that you all stay in good health. As we cannot meet in person, the executive board has thought about alternatives. SOT has taken the initiative to launch a series of webinars which we endorse. Instead of our business meeting, we decided to share the most relevant information with you in this Newsletter. We don't want to ignore questions, comments and suggestions from your end so if you have any, please let us know and we will respond as soon as we can.

As per May 1, we have a new Executive Committee and I welcome new members and would like to thank the outgoing officers Jonathan Shannahan (Secretary/Treasurer), Salik Hussain (Councilor) and Candace Wong (Student Representative). Salik Hussain will re-join us as our VP-Elect as I move from President to Outgoing President.



On behalf of the Executive Committee I wish you all the best and I am sure we will meet next year in Orlando, Florida or during some other events.

Flemming Cassee  
President NAMSS

## Upcoming Webinars

- NAMSS is in the process of working with the chairs of one of our sponsored sessions entitled "Toxicological Exposure and Risk Assessment of Emissions from 3D Printers" to organize it into a webinar to be presented as part of the virtual meeting program. More details related to the webinar agenda will be provided once a date has been selected.

<https://www.toxicology.org/events/am/AM2020/program.asp>

**"Advanced materials  
imply an evaluation  
against a predefined  
scale we don't know"**

## Webinar: Advanced materials

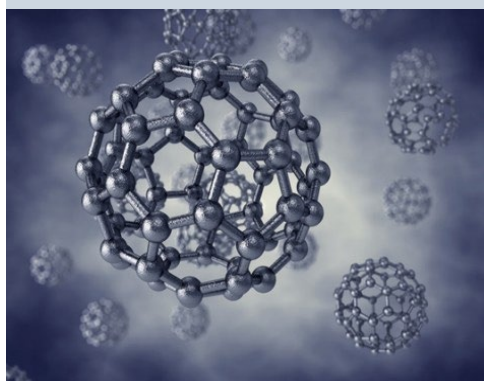
On March 4<sup>th</sup>, Dr. Charles Geraci, Associate Director of Emerging Technologies at the National Institute for Occupational Safety and Health (NIOSH), presented a webinar sponsored by NAMSS entitled "From Nanomaterials to Advanced Materials: A Health and Safety Perspective," with 96 attendees. The webinar covered the topic of advances in nanoscale science that have resulted in materials that are more active, more efficient, and more versatile in their commercial applications. Dr. Geraci spoke to how we are coming to define 'Advanced Materials' as these materials are chemically and biologically more active and more efficient for the specific functions for which they are designed. Advanced materials are combining with the development of new manufacturing technologies, such as additive manufacturing, 3D printing, and engineered/synthetic biology, to give us a vision of the new materials, processes, and products that make up '21st Century Manufacturing'. Dr. Geraci also presented the challenge for the environmental health and safety professional to remain current on the issues of potential health hazards, the degree to which these materials are being introduced into new manufacturing technologies, and the way they are used and incorporated into products. A key take-home message from the seminar was that many of the lessons learned with nanotechnology will have direct re-application opportunities in the rapidly emerging world of advanced materials and the 21st Century Manufacturing environment.



## Other News:

*NIOSH has just posted a new webpage describing Advanced Manufacturing*

<https://www.cdc.gov/niosh/topics/advancedmnf/default.html>



## Future Conferences

- The 9th Nanotechnology, Occupational, and Environmental Health meeting is still operating as planned in Denver on October 4-6 as of now. The abstract deadlines have been extended to August 1 of this year to accommodate those investigators that may wish to present their work in light of other meeting cancellations.

<http://susnano.org/nanotech2020/nanotech-overview-2020.html>



- The Seventh International Conference nanoSAFE 2020 will be held from 16th to 20th November 2020 in Minatéc-Grenoble, France.

<http://www.cea.fr/cea-tech/pns/nanosafe/en>



- Nanosafety 2020 Conference, 5 - 7 October at the Hotel Palafox in Zaragoza, Spain. <https://nanosafety2020.leibniz-nanosicherheit.de>



- 10<sup>th</sup> International Conference on Nanotoxicology: Edinburgh, UK, 20<sup>th</sup>-22<sup>nd</sup> April, 2021.

## Executive Committee 2019- 2020:

President	: Flemming R. Cassee
Vice President	: Jenny R. Roberts
Vice President-Elect	: Jared M. Brown
Secretary/Treasurer	: Jonathan H. Shannahan
Past President	: Aaron Erdely
Councillor	: Salik Hussain
Councillor	: Todd A. Stueckle
Graduate Student Representative:	Candace Nicole Wong
Vice Student Representative	: Dorothy J. You

## Executive Committee 2020- 2021:

President	: Jenny R. Roberts
Vice President	: Jared M. Brown
Vice President-Elect	: Salik Hussain
Secretary/Treasurer	: Amy K. Madl
Past President	: Flemming R. Cassee
Councillor	: Phoebe Stapleton
Councillor	: Todd A. Stueckle
Postdoctoral Representative	: Cynthia Browning
Graduate Student Representative:	Dorothy J. You
Vice Student Representative	: Mariana Farcas

**Welcome to Our New Officers!**

*Unfortunately we could not meet face-to-face this year. Please find our Specialty Section Poster that our student and postdoctoral representatives present on the last page of the newsletter.*

*We look forward to seeing you in Orlando!*

**NAMSS Website:**

***<http://www.toxicology.org/groups/ss/nano/>***

## 2019 Award Winners



**Andrew Ottens** – Best Publication Award for the paper entitled “Nanoparticle Exposure Driven Circulating Bioactive Peptidome causes Systemic Inflammation and Vascular Dysfunction” published in Particle and Fibre Toxicology.

**Alba Rodriguez** – Outstanding Postdoctoral Award

**Matthew Sydor** – Outstanding Graduate Student Award

**Saeed Alqahtani** – Runner-up Outstanding Graduate Student Award

**Dorothy You** – Runner-up Outstanding Graduate Student Award

### Awards Committee members:

Andrij Holian  
Jonathan Shannahan  
Alison Bauer  
Salik Hussain  
James Roede  
Aaron Erderly  
Phoebe Stapleton  
Valerie Minarchick

### Financial Report for Spring NAMSS Newsletter

Our most recent financial report posted for February 2020 states we have \$7,576 in available funds. Cost of awards this year were approximately \$1,440. As of March, our membership consisted of 156 members. Two companies were generous enough to sponsor the NAMSS this year: VitroCell and R.J. Lee



*The EU Nanosafety  
Cluster has renewed its  
website:*

[www.nanosafetycluster.eu](http://www.nanosafetycluster.eu)



## New officers

### SECRETARY/TREASURER



Amy Madl is a Senior Principal Health Scientist with Cardno ChemRisk, a scientific consulting firm which specializes in risk assessment methods to characterize and provide understanding of complex chemical exposures in a variety of potentially contaminated media. Dr. Madl earned a BS in Biochemistry and a MS and PhD in Pharmacology and Toxicology, all from the University of California, Davis. Her 20 year of experience includes investigating the health effects of exposure to a variety of compounds, including diesel exhaust, particulate matter (PM<sub>2.5</sub>), beryllium and other metals, benzene, oxidant gases, petroleum products, and asbestos, as well as irritants and sensitizers. Dr. Madl is a member of a number of professional organizations, including the Society of Toxicology (SOT) (since 1999),

American Conference of Governmental Industrial Hygienists (ACGIH), American Industrial Hygiene Association (AIHA), International Society of Exposure Science (ISES), and the Society of Risk Analysis (SRA), and has served as elected Councilor of SOT's Inhalation and Respiratory Specialty Section (2007-2009) and as Chair of AIHA's Toxicology Committee (2009). Dr. Madl also holds an adjunct research position with the University of California, Davis. Dr. Madl has published over 85 abstracts, book chapters, and peer-reviewed papers on various exposure, toxicology, and risk-related topics, including issues involving nanoparticle exposures in occupational, medical device (i.e., orthopedic implants), and consumer product (i.e., personal care product) scenarios.

### COUNCILOR

Phoebe Stapleton is an Assistant Professor in the Rutgers University, Department of Pharmacology and Toxicology, where she investigates the cardiovascular impact of engineered nanomaterial exposure during pregnancy. She received her Ph.D. in Exercise Physiology from West Virginia University in 2010 and was a postdoctoral fellow at West Virginia University from 2010-2015. She is the author/co-author of over 39 peer reviewed publications and 100 abstracts/conference proceedings. Dr. Stapleton has served on the Vascular Endothelial Biology and Career Development study sections for the American Heart Association. She also serves The Microcirculatory Society as a Councilor and the chair of their society awards committee. She has been a member of the SOT since 2010 and has served in various Specialty Sections and Regional Chapters.



### POSTDOCTORAL REPRESENTATIVE

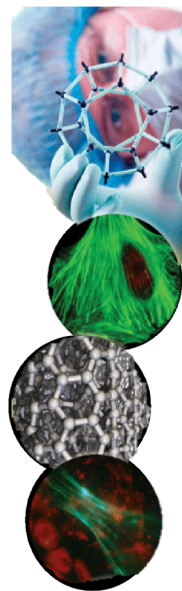
Cynthia Browning is a postdoctoral research assistant at Brown University. She earned her PhD in Biomedical Science and Engineering from the University of Maine in December 2016. Cynthia's research interests focus on developing new methodologies for predicting the toxicity of novel materials in humans and in aquatic organisms. To accomplish this, she utilizes in vitro 2D and 3D cellular models to investigate the toxicity and underlying mechanistic effects of novel 2D metal oxide nanomaterials. She has been a member of SOT since 2011 and presents research at both the SOT Annual Meetings and the Northeast regional section meetings.



### STUDENT REPRESENTATIVE

Mariana Farcas joined SOT in 2013 and is an active member of the Allegheny-Erie Regional Chapter, Occupational and Public Health Specialty Section, Inhalation Specialty Section, Women in Toxicology Special Interest Group, and the Alpha Eta chapter of the Phi Lambda Sigma Leadership Society. She also served as a Continuing Education course volunteer at the 2019 SOT Annual Meeting in Baltimore. She is currently a Ph.D. student in the Pharmacological and Pharmaceutical Sciences Program at West Virginia University (WVU), she and is also an ORISE fellow at the National Institute for Occupational Safety and Health (NIOSH) in Morgantown, WV. Her research is focused on the adverse pulmonary and systemic effects of exposure to three-dimensional (3-D) printer emissions.





## Mission Statement

To serve as the focal point for the interaction of members of the Society of Toxicology interested in the science and toxicology of nanoscale and advanced materials, the responsible development of safe nanomaterials, and the application of nanotechnology to address human health and environmental issues.

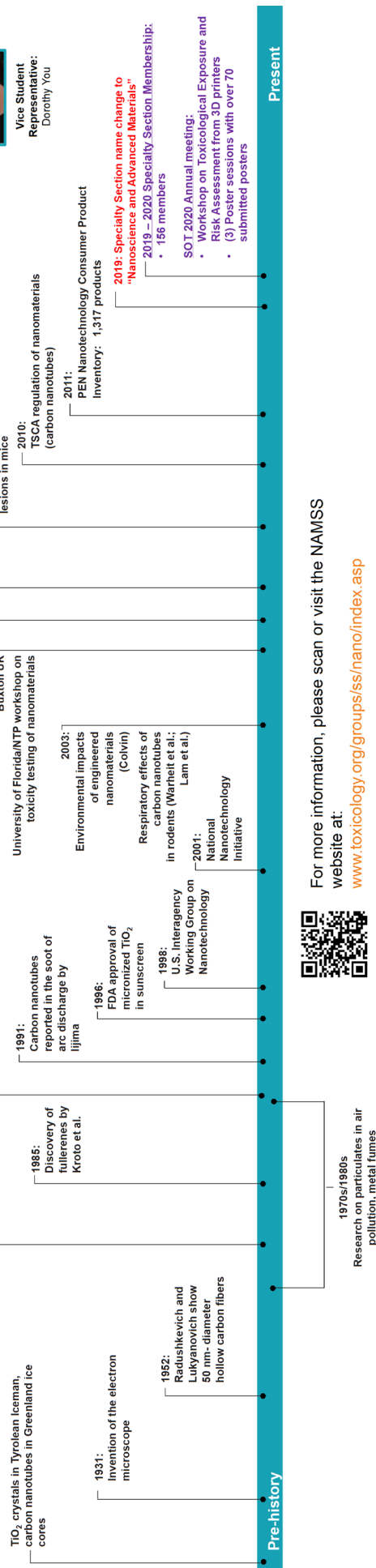
This will be achieved through the conduct of scientific programs and educational activities that address current developments and key issues in nanoscale science and toxicology.

## Nanoscience and Advanced Materials SS Awards

- ❖ Outstanding Graduate Student Award
- ❖ Outstanding Postdoctoral Award
- ❖ Best Publication Award

**Deadline: January 8, 2021**

**Contact: Salik Hussain, Ph.D.,**  
salik.hussain@hsc.wvu.edu



For more information, please scan or visit the NAMSS website at:  
[www.toxicology.org/groups/ss/nano/index.asp](http://www.toxicology.org/groups/ss/nano/index.asp)

# Nanoscience and Advanced Materials (Formerly Nanotoxicology)

## Annual Reception and Business Meeting:

**Monday, March 16<sup>th</sup>, 2020**  
**6:00-7:30 PM**  
**Anaheim Marriott Platinum 8**

## Join the Nanoscience and Advanced Materials Specialty Section!

You can join or pay membership dues at any time during the year through the SOT membership renewal. Members of the Society of Toxicology will become members of the SS upon payment of SS dues

## 2019-2020 Officers



**President:**  
Flemming R. Cassee,  
Ph.D.



**Vice President:**  
Jenny R. Roberts,  
Ph.D.



**Vice President-Elect:**  
Jared Brown,  
Ph.D.



**Secretary/Treasurer:**  
Jonathan Shannahan,  
Ph.D.



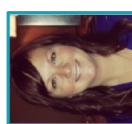
**Past President:**  
Aaron Erdely,  
Ph.D.



**Councilor:**  
Todd Stueckle,  
Ph.D.



**Councilor:**  
Salik Hussain, DVM,  
Ph.D.



**Postdoctoral Representative:**  
Katelyn Siegrist, Ph.D.



**Student Representative:**  
Candace Wong



**Vice Student Representative:**  
Dorothy You