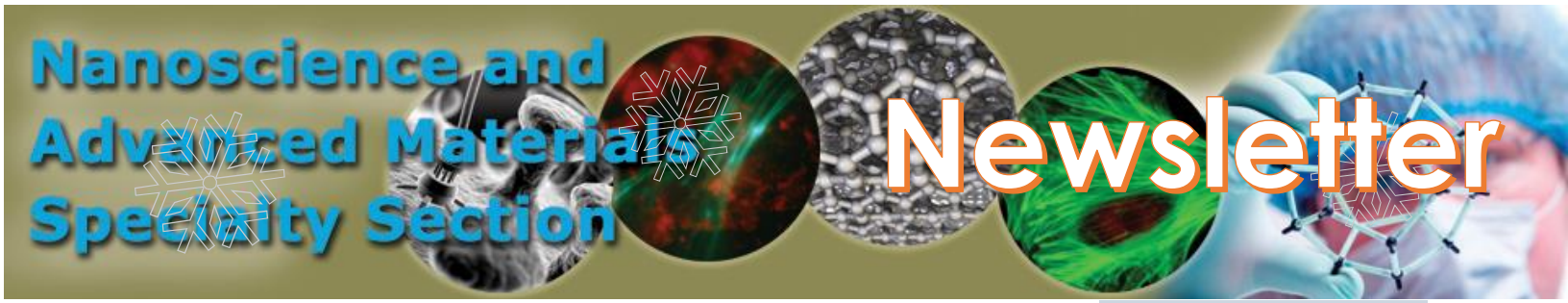


Dear members,

Now that this specialty section has changed its name to cover a wider range of chemicals, i.e. going from nanomaterials to advanced materials, the question can be raised on how we define advanced materials. This is not a trivial question. Even nanomaterials are hard to define. Yes, we all talk about particles smaller than 100 nm, but without specifying what kind of diameter we are talking about (e.g. hydrodynamic, geometric). The EU adopted a definition of a nanomaterial in 2011 (Recommendation on the definition of a nanomaterial (2011/696/EU)) but this has still not been made final. Since 2011 a lot of discussion have taken place on for example how to determine how a material meets the criteria:

Upcoming Webinars

- *From Nanomaterials to Advanced Materials: A Health and Safety Perspective*
  Dr. Chuck Geraci,
  January 30, 2020
  1 PM EST

"A natural, incidental or manufactured material containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm.

In specific cases and where warranted by concerns for the environment, health, safety or competitiveness the number size distribution threshold of 50 % may be replaced by a threshold between 1 and 50 %.

By derogation from the above, fullerenes, graphene flakes and single wall carbon nanotubes with one or more external dimensions below 1 nm should be considered as nanomaterials."

Recently, the Joint Research Centres of the EU published a Science for Policy Report "Identification of nanomaterials through measurements" which follows up of the earlier report "An overview of concepts and terms used in the European Commission's definition of nanomaterial". I encourage you to have a look at this report.

Now, it becomes clear that defining what an advanced material is will be even more complicated.

Here is an example that I found on a South-African website:

"All materials that represent advances over the traditional materials that have been used for hundreds or even thousands of years. From this perspective, advanced materials refer to all new materials and modifications to existing materials to obtain superior performance in one or more characteristics that are critical for the application under consideration. They can also exhibit completely novel properties. Advanced materials typically have properties that are superior to and outperform conventional materials in their applications. "

But, I am sure that our members like a challenge so I call for suggestion for a definition which we also can use to scope our work. Please submit you thought by entering it online. Go to https://form.jotform.com/193510906442051

We will summarize these at the business meeting during the annual SOT meeting and in our next newsletter. I am looking forward to seeing you at our NAMSS reception in Anaheim.

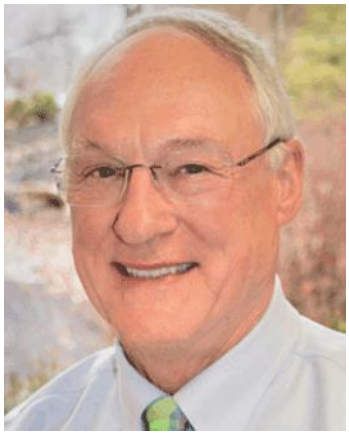
Kind regards,

Flemming

President, Nanotechnology and Advanced Materials Specialty Section

Webinars

From Nanomaterials to Advanced Materials: A Health and Safety Perspective



Speaker: Dr. Chuck Geraci

Associate Director of Emerging Technologies
National Institute for Occupational Safety and Health

Thursday, January 30, 2020

1:00 PM American Eastern Standard Time

Duration: 1 hour

Advances in nanoscale science have resulted in materials that are more active, more efficient, and more versatile in their commercial applications. A key outgrowth has been the development and deployment of 'Advanced Materials'. 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'. The challenge for the EHS professional is 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. The types of risk assessment and management approaches needed to support safe, responsible, and sustainable commercialization of nano- and advanced-material-enabled products can be challenging, but a lot of progress has been made in the past 10 years. 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.

Attendee Registration Link:

https://aim-hq.webex.com/aim-hq/onstage/g.php?MTID=e9be0b93b99866a1387edf225eb1663ae

Upcoming Conferences

7th International Conference NANOSAFE 2020

Date: November 16-20, 2020

Place: Maison Minatec, Grenoble, France

Organized every two years since 2008, NANOSAFE Conference is intended for sharing latest research results on health and safety issues related to nanomaterials and beyond for a socially responsible approach. This special edition will be organized in partnership with the Labex SERENADE Opens in new tab with the ambition to cover the newest findings concerning Safer- and Eco-Designed innovative nanomaterials.

More information on our website: www.nanosafe.org

9th Nano Conference Denver

When: October 4 - 6, 2020

Where: Denver, Colorado (USA) at Sheraton Downtown Hotel

9th NANO CONFERENCE

Sustainable Nanotechnology Organization
Research | Education | Responsibility

International Symposium on Nanotechnology, Occupational and Environmental Health

The 9th NANO CONFERENCE will provide a broad aspect of professional conference hosted by two collaborative parties, the Sustainable Nanotechnology Organization (SNO) and Nanotechnology, Occupational and Environmental Health (NanOEH) committees.

Topics

- ✓Green/advanced synthetic materials and manufacturing
- ✓Nanomedicine, nanodrugs, pharmaceutical and medical applications
- ✓Nanotoxicology related to humans
- ✓Eco-toxicology
- ✓Occupational and environmental exposure assessment
- ✓Global challenges
- ✓Sustainable water treatment and remediation
- ✓Fate and transport
- ✓Sustainable food and agriculture
- ✓Sustainability and Energy
- ✓Devices and sensors
- ✓Epidemiology
- ✓Education panel
- ✓Regulation and policy

Candace Tsai, Co-Chair

9th NANO CONFERENCE

NanOEH co-chairs:

Jared Brown

Chuck Geraci

Alison Elder;

SNO President:

Vinka Craver

SNO Executive Director:

Barbara Karn

10th International Conference on Nanotoxicology: Edinburgh, UK

20th – 22nd April 2021

NanoTox2021

https://nanotox2021.org

NAMSS Sponsored Session

For those traveling to Anaheim CA in March 2020 . . . Mark your Calendars!

Monday, March 16, 8AM – 10:45 AM

Workshop Session: Toxicological Exposure and Risk Assessment of Emissions from 3D Printers

Chairs: Treye Thomas, Consumer Product Safety Commission; and Yong Qian, NIOSH.

Inhalation Toxicity of Acrylonitrile Butadiene Styrene (ABS) 3D Printer Emissions in Rats. Mariana Farcas, NIOSH

3D Printer Emission Inhalation Impairs Systemic Microvascular Function. Tim Nurkiewicz, West Virginia University.

Release of Aerosols from Fuse-Deposition Modeling 3D Printers and Associated Human Exposure. Sameer Patel, Univ. of Colorado Boulder.

Factors Influencing Emissions from 3D Printers. Aleksander Stefaniak, NIOSH

Emissions from Consumer-Level 3D Printers. Qian Zhang, UL

Panel Discussion/Q&A

Awards

Our Specialty Section offers awards for students and postdocs, as well as for best publication of the year. **The deadline for submission is January 8**. Below are the descriptions of the awards. As your Vice President-Elect, I am the chair of the Awards Committee. If you have any questions as an applicant, please feel free to contact me at: jared.brown@cuanschutz.edu.

In addition, I would like to extend an invitation to any member who would like to participate on our Awards Committee. If you are interested, please contact me directly by e-mail at jared.brown@cuanschutz.edu by **December 10**. The applications will be distributed to the Awards Committee for review later in January for a decision by the end of January.

Thank you for your participation in advance!

Jared Brown

Vice President-Elect Nanoscience and Advanced Materials Specialty Section

Outstanding Graduate Student Award:

An engraved plaque and cash award will be given to a graduate student whose work represents an outstanding achievement in nanoscience and advanced materials. The amount of the award ($500) will be given to a single winner or divided among first, second, and third place winners at the discretion of the Awards Committee. Selection criteria include the statement of a clear hypothesis, thoroughness of relevant nanomaterial physicochemical characterization, quality of data interpretation, potential impact, and style. Although preference will be given to Specialty Section and SOT members at large, the primary criterion for this award is the importance of the investigator's work to the field. Thus, students in other Specialty Sections are encouraged to apply. Undergraduate students are also eligible for this award. Materials to be submitted for the award include: Accepted SOT abstract, extended abstract (2 pages maximum, tables/figures included), student CV, two letters of recommendation (one from primary advisor).

Outstanding Postdoctoral Award:

An engraved plaque and cash award will be given to a postdoctoral candidate whose work represents an outstanding achievement in nanoscience and advanced materials. The amount of the award ($500) will be given to a single winner or divided among first, second, and third place winners at the discretion of the Awards Committee. Selection criteria include the statement of a clear hypothesis, thoroughness of relevant nanomaterial physicochemical characterization, quality of data interpretation, potential impact, and style. Although preference will be given to Specialty Section and SOT members at large, the primary criterion for this award is the importance of the investigator's work to the field. Thus, postdoctoral candidates in other Specialty Sections are encouraged to apply. Application materials include: Accepted SOT abstract, extended abstract (two pages maximum, tables/figures included), student CV, two letters of recommendation (one from primary advisor).

Best publication Award:

An engraved plaque will be given to the first author of the paper that is judged to make significant contributions to the field of nanoscience and advanced materials. An engraved plaque is also given to the senior author if he/she is not also the first author. Selection criteria include the statement of a clear hypothesis, thoroughness of relevant nanomaterial physicochemical characterization, quality of data interpretation, potential impact, and style. At least one author of the paper must be a member of the Specialty Section. Application materials include: Copy of accepted or in-press paper; two letters of support (cannot be authors) that describe the quality and impact of the study to the field.

Please send all applications materials in a single PDF document to Vice President-Elect Jared Brown: jared.brown@cuanschutz.edu

Financials

September 2019

Net Assets	$8,110
Membership	208

For more information on NAMSS . . .

Website:

http://www.toxicology.org/groups/ss/nano/

E-mail:

Rosalie Duvic rosalie@toxicology.org