



QEEN II: 2nd Quantifying Exposure to Engineered Nanomaterials from Manufactured Products Workshop

Sponsored by the Consumer Product Safety Commission (CPSC) and co-hosted by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) and the National Nanotechnology Initiative (NNI)

October 9–10, 2018

U.S. Department of Labor, Frances Perkins Building
200 Constitution Ave., NW, Washington, D.C.

Tuesday, October 9, 2018: Taking Stock: Nanomaterial Exposure Science in 2018

8:00-8:30	Registration
8:30-8:45	Plenary Session (1) Workshop Opening and Welcoming Remarks Trey Thomas (CPSC, NNI Environmental, Health, and Safety Coordinator) Lisa Friedersdorf (Director, National Nanotechnology Coordination Office—NNCO)
8:45-10:15	Advances and Knowledge Gains Since QEEN I. Chuck Geraci (NIOSH) What Have We Learned About Environmental Realism with Respect to Nanomaterial Exposure? Paul Westerhoff (Arizona State U.)
10:15-10:30	Break
10:30-12:00	Concurrent Breakout Session (1) Session A. Quantifying Potential Acute and Chronic Exposure from 3D Printing/Additive Manufacturing. Co-chairs: Tim Nurkiewicz (W. Virginia U.) and Alyson Johnson (NIOSH) Speakers: Peter Byrley (EPA); Justin Gorham (NIST); Sandra Pirela (Harvard TS Chan School of Public Health); Souhail al-Abed (EPA) Session B. Consumer Exposure: Food, Food Contact, and Personal Care Products. Co-Chairs: Hongda Chen (USDA NIFA) and Jo Anne Shatkin (Vireo Advisors) Speakers: Hang Xiao (U. of Mass. Amherst); Cristina Sabliov (Louisiana State U.); Tim Duncan (FDA); Yanyun Zhao (Oregon State U.); Maria Rubino (Michigan State U. School of Packaging)

	<p>Session C. Integrating Exposure and Toxicity Assessments of Nanomaterials at Different Stages of the Life Cycle. Co-Chairs: Aaron Erdely (NIOSH) and Christie Sayes (Baylor University) Speakers: Kim Rogers (EPA); Aaron Erdely (NIOSH); Mark Wiesner (Duke U.)</p> <p>Session D. Exposure to Nanomaterials in Agroecosystems and Agricultural Production. Co-chairs: Jason White (Connecticut Agricultural Experiment Station- CAES) and Arturo Keller (UCSB Bren School) Speakers: Greg Lowry (Carnegie Mellon U.); Juan Pablo Giraldo (UC Riverside); Swadeshmukul Santra (U. Central Florida); Mathews Paret (U. of Florida); Carmen Gomes (Iowa State U.); Wade Elmer (CAES)</p>
12:00-1:30	Lunch Break (On your own)
1:30-2:30	<p>Plenary Session (2) Roundtable Discussion. Moderator: Igor Linkov (U.S. Army Engineer Research and Development Center—ERDC)</p> <p>Connecting the Pieces: Linking Manufacture and Use of Nanomaterials or Nanotechnology-Enabled Products with Exposure, Outcome, and Risk.</p> <p>Roundtable Panel: Benjamin Trump (U.S. Army ERDC); Will Boyes (EPA); Christine Hendren (Duke U.); Wu-Sheng Shih (Brewer Science)</p>
2:30-2:45	Break
2:45-4:15	<p>Concurrent Breakout Session (2)</p> <p>Session A. Exposure Scenario: Workplace Exposure. Co-chairs: Laura Hodson (NIOSH) and Scott Brown (Chemours) Speakers: Kevin L. Dunn (NIOSH); Delphine Bard (Health and Safety Laboratory, Health and Safety Executive, United Kingdom); Michele Shepard (Colden Corp.)</p> <p>Session B. Exposure Scenario: Consumer Exposure (General Products). Co-chairs: Joanna Matheson (CPSC) and Sandra Pirela (Harvard TH Chan School of Public Health) Speakers: Gedi Mainelis (Rutgers U); Sandra Pirela (Harvard TH Chan School of Public Health); Joanna Matheson (CPSC)</p> <p>Session C. Nanomaterial Exposure in Ecological Systems. Co-chairs: Elijah Petersen (NIST) and Monika Mortimer (UC Santa Barbara-UCSB) Speakers: Paul Westerhoff (Arizona State U.); Adeyemi Adelaye (UC Irvine); Monique Johnson (NIST); Elijah Petersen (NIST); Monika Mortimer (UCSB)</p> <p>Session D. Emerging Technologies and Advanced Materials: Stakeholder Perspectives on Exposure, Hazard, and Risk Assessment. Co-chairs: Shaun Clancy (Evonik-retired) and Silvia Maberti (ExxonMobil) Speakers: Bruce Lippy (CPWR — The Center for Construction Research and Training); Angela Hight-Walker (NIST); Rick Canady (Neutral Science)</p>
4:15-5:00	<p>Plenary Session (3): Chair: Deborah Burgin (Agency for Toxic Substances and Disease Registry)</p> <p>Reporting out from the day's sessions</p>
5:00-6:00	Evening Poster Session (Auditorium Lobby Area)

Wednesday, October 10: *Tackling the Challenges in Nanomaterial Exposure Science*

8:30-10:15	<p>Plenary Session (4) Chair: William Boyes (EPA) <i>Are Poorly Soluble, Low-Toxicity Particles a Model for Nanomaterial Inhalation Exposure and Risk Assessment?</i> Exposure driven risk assessment of engineered nanomaterials released from nanoenabled products across their life cycle: Lessons learned from case studies. Phil Demokritou (Harvard TH Chan School of Public Health) Roundtable panel: Alison Elder (U. Rochester); Gedi Mainelis (Rutgers U.)</p>
10:15-10:30	Break
10:30-12:00	<p>Concurrent Breakout Session (3)</p> <p>Session A. Dosimetry Modeling and Computational Approaches to Evidence Integration. Chair: Annie Jarabek (EPA) Speakers: Gunter Oberdoerster (U. Rochester); Jordan Smith (Pacific Northwest National Lab); Christine Hendren (Duke U.); Holger Behrsing (Institute for In Vitro Sciences Inc)</p> <p>Session B. Assessing Exposure and Health Effects for Nanomaterial Workers: Epidemiologic and Biomarker Approaches. Co-chairs: Gabriele Windgasse (CA Dept. of Public Health) and Paul Schulte (NIOSH) Speakers: Paul Schulte (NIOSH); John Beard (Brigham Young University); Robin Keeler (Dept. of Energy); Mike Kleeman (UC Davis); Gabriele Windgasse (CA Dept. of Public Health)</p> <p>Session C. Characterization and Quantification. Co-chairs: Todd Luxton (EPA) and Keana Scott (NIST) Speakers: Kirk Scheckel (EPA); James Ranville (Co. School Mines); Justin Clar (Elon U.); Ryan Beams (FDA); Jana Navratilova (EPA); Matt Bangert (NanoComp Ltd.)</p> <p>Session D. Meet the New Investigators: Fresh Perspectives on the Breakthroughs They are they Hoping to Make and the Challenges They Face. Co-chairs: Dilpreet Singh (Harvard TH Chan School of Public Health) and Lisa Friedersdorf (NNCO) Speakers: Dr. Nancy Monteiro-Riviere (Kanas State U.); Lila Thornton (Duke U.); Zach Shepard (U. Rhode Island); Silvia Maberti (Exxon Mobil)</p>
12:00-1:00	Lunch (On your own)
1:00-2:30	<p>Plenary Session (5) Chair: Janet Carter (OSHA) Fostering U.S.-International Collaboration in Integrating Exposure in Nanomaterial Risk Evaluation. Vladimir Murashov (NIOSH) Roundtable Panel: Christof Asbach (The Institute of Energy and Environmental Technology); Anil Patri (FDA); Rick Canady (Neutral Science); Nora Savage (National Science Foundation)</p>
2:30-3:00	<p>Workshop Wrap-Up: Lessons Learned and Next Steps Concluding Remarks</p>