

ICEIN 2011 - EPA Nano Grantees Conference, Duke University

Monday, May 9, 2011

7:30	Registration	
8:30	Introduction/Welcome	
8:45	Center Overviews (CEINT, Mark Wiesner; UC CEIN, Andre Nel)	
9:45	Plenary: James Hutchison, University of Oregon , Strategies, tools and design rules for greener nanomaterials	
10:40	Break	
11:10	Session 1: Risk Assessment Keynote: Alistair Boxall, University of York , Assessing exposure and effects for environmental risk assessment: The challenge of engineered nanoparticles	Session 2: Ecotoxicity Keynote: Marie-Noële Croteau, USGS , Assessing the bioavailability and toxicity of engineered nanoparticles in aquatic environments using enriched stable isotope tracers and biodynamic modeling
12:00	Lunch	
2:00	Session 1: cont. Jacqueline Isaacs , Implementation of life cycle assessment methodologies for commercializing nano-enabled products	Session 2: cont. Ben Colman , Short-term fate and toxicity of silver nanoparticles in wetland mesocosms
2:20	Candace Tsai , Control strategies for occupational and environmental exposure of nanomaterials	Audrey Bone , Silver nanoparticle toxicity to Atlantic killifish (<i>Fundulus heteroclitus</i>) and zebrafish (<i>Danio rerio</i>) in complex environmental media: A comparison of laboratory, mesocosm, and microcosm studies
2:40	Christian Beaudrie , Benefits, risks, bias and nanomaterial regulation: results of an expert survey	Mafalda Baptista , Phytoplankton as sentinels of nanomaterial toxicity in marine ecosystems
3:00	Barbara Harthorn , Intuitive cognition in the perception of air, water and soil as they interact with engineered nanomaterials: A study of US public views	Jorge Gardea-Torresdey , Biotransformation studies of CeO ₂ and ZnO NPs in mesquite plants
3:20	Break	
4:00	J. Michael Davis , Comprehensive environmental assessment of nanomaterials	Roger Nisbet , Modeling the ecotoxicity of nanomaterials through dynamic energy budgets
4:20	Sumit Gangwal , Informing selection of nanomaterial concentrations for ToxCast <i>in vitro</i> testing based on occupational exposure potential	Angela Ivask , High-throughput screening of <i>E. coli</i> gene deletion libraries uncovers the mechanistic ecotoxicology of nanomaterials
4:40	Marina Quadros , Aerosol emissions from nanotechnology-related consumer products	Tamara McNealy , Effect of bacteria and protozoa on engineered nanomaterials, and vice versa
5:00	Eric Money , Ecological risk forecasting of nanomaterials using Bayesian networks: A case study of nano-Ag exposure potential in a North Carolina river basin	Dana Hunt , Understanding the complex response of natural microbial populations to nanomaterial additions
5:20	Jeremy Gernand , Identification of information-rich attributes for nanoparticle toxicological risk assessment	Jason Unrine , Trophic transfer of Au nanoparticles along a simulated terrestrial food chain
5:40	Poster Session (ends at 7 p.m.)	

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8:30	<p>Session 3: Fate, Transport, & Transformation</p> <p>Keynote: Frank von der Kammer, University of Vienna, Engineered nanoparticles in environmental media: How to deal with inherent heterogeneity</p>	<p>Session 4: Toxicity</p> <p>Keynote: Robert Tanguay, Oregon State University, High-content/high-throughput zebrafish assays to define nanoparticle bioactivity</p>
9:20	<p>Kelvin Gregory, Effect of engineered and natural surface modification of nanoparticles on their interactions with bacteria</p>	<p>Tian Xia, Use of <i>in vivo</i> zebrafish model for nanoparticle toxicity screening</p>
9:40	<p>P. Somasundaran, Physico-chemical characteristics and control of bioreactivity and fate</p>	<p>Kevin Kwok, Effects of silver nanoparticles on early life stages of Japanese medaka: Inferences of different coating materials</p>
10:20	Break	
11:00	<p>Milka Montes, Fate, transport and bioprocessing of CeO₂ and ZnO nanoparticles by mussels</p>	<p>Emma Fauss, Correlating silver nanoparticle functionalization to generation of reactive oxygen species and silver ion release rates for disinfection applications</p>
11:20	<p>Ariette Schierz, Addressing challenges of single-walled carbon nanotube detection in environmental samples</p>	<p>Olga Tsyusko, Transcriptomic effects of Au-NP to <i>Caenorhabditis elegans</i></p>
11:40	<p>Raju Badireddy, Detection and analysis of engineered nanoparticles in environmental waters by dark-field based hyperspectral imaging microscopy</p>	<p>April Gu, Development of a new toxicogenomic index for nanotoxicity assessment</p>
12:00	Lunch	
2:00	<p>Session 3: cont.</p> <p>Clément Levard, Probing Ag nanoparticle surface oxidation in contact with (in)organics: An x-ray scattering and fluorescence yield approach</p>	<p>Session 4: cont.</p> <p>Amy Wang, Evaluation of compatibility of ToxCast high-throughput/high-content screening assays with engineered nanomaterials</p>
2:20	<p>Andreas Gondikas, Sorption of cysteine to silver nanoparticles: Implications for aggregation, dissolution, and silver speciation</p>	<p>Allison Horst, Towards an HTS toxicity assessment program with environmentally-relevant bacteria</p>
2:40	<p>Rui Ma, Size controlled dissolution of silver nanoparticles</p>	<p>Susan Brauhn, A living cell biosensor for continuous monitoring of cytotoxic cell responses to engineered nanomaterials (ENMs)</p>
3:00	<p>Ronald Kent, Controlled evaluation of silver nanoparticle dissolution</p>	<p>Yoram Cohen, Data mining, pathways and network analyses of nanoparticle toxicity based on high throughput screening data</p>
3:20	<p>Tong Zhang, Microbial methylation of mercury sulfide nanoparticles: Influence of particle size and crystallinity on methylation potential</p>	<p>Rong Liu, Classification nano-SAR development for cytotoxicity of nanoparticles</p>
3:40	Break	
4:20	<p>Session 3: cont.</p> <p>Brian Reinsch, The speciation of silver nanoparticles in CEINT mesocosm soils and Kentucky WWTP biosolids using synchrotron X-rays</p>	<p>Session 5: Nanochemistry</p> <p>C. Jeffrey Brinker, Synthesis and characterizations of monodisperse well-defined titania and silica nanoparticles</p>
4:40	<p>Erica Trump, Racing particles: Start your nanos!</p>	<p>Julian Taurozzi, Development of standardized dispersion and characterization methods for the environmental risk assessment of nanomaterials</p>
5:00	<p>Karel Morgan-Evans, Transport studies of <i>nano</i> titanium dioxide in porous medium</p>	<p>Jean-Yves Bottero, Imogolites: New inorganic nanotubes for nanotechnology hazard evaluation</p>
5:20	<p>Shihong Lin, Exact Analytical Expressions for the Potential of Electrical Double Layer Interactions for a Sphere Plate System</p>	<p>Ivy Ji, Fine tuning size and shape of nanomaterials by hydrothermal synthesis</p>
5:40	<p>Trishikhi Raychoudhury, Carboxymethyl cellulose-modified zero-valent iron nanoparticle transport through sand packed columns</p>	<p>Matt Hull, Evaluation of the colloidal persistence of gold nanoparticles by UV-Vis spectroscopy and dynamic light scattering</p>
6:00	Meeting Adjourned	

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8:30	Session 6: EPA Fate, Transport, and Transformation Qilin Li , Impact of sunlight and humic acid on the deposition kinetics of aqueous fullerene nanoparticles and multiwalled carbon nanotubes
8:50	Howard Fairbrother , Influence of surface chemistry on the sorption properties and colloidal stability of carbon nanotubes in the presence of NOM
9:10	William Ball , Transport of oxidized multi-walled carbon nanotubes through porous media
9:30	Wen Zhang , Ion release and aggregation kinetics of citrate-coated silver nanoparticles in aqueous environment
9:50	Break
10:30	Diana Aga , Behavior of quantum dots in the terrestrial environment: Soil column leaching and plant uptake studies
10:50	Martin Shafer , Speciation and transformations of platinum in environmental materials
11:10	Reginald Thio* , Deposition and transport of Ag nanoparticles on silica as a function of environmental conditions
11:30	Vicki Grassian , An integrated approach toward understanding the impact of aggregation and dissolution of metal and metal oxide nanoparticles
11:50	Lunch
1:00	Session 7: EPA Toxicity Warren Heideman , Phototoxicity of TiO ₂ nanoparticles in developing zebrafish
1:20	Amy Ringwood , Characterization of the potential toxicity of metal nanoparticles in marine ecosystems
1:40	Aaron Edgington , Effects of functionalization on the bioavailability of carbon nanotubes to <i>Daphnia magna</i>
2:00	Break
2:30	Brandon Seda , Carbon dot uptake, transfer, and toxicity in <i>Daphnia magna</i> and zebrafish (<i>Danio rerio</i>)
2:50	Yu Yang , Nanosilver inhibited anaerobic digestion under bioreactor landfill operations
3:10	Robert Yokel , The pharmacokinetics of ceria (a model engineered nanomaterial) with emphasis on the brain: Comparison to other engineered nanomaterials
3:30	Nian Du , Phase inverted poly (amic acid) membranes for sensing and isolating engineered nanoparticles
3:50	Meeting Adjourned

*Non-EPA Grantee ICEIN Speaker