

2014 CEINT Annual Internal Meeting, May 22nd & 23rd



Wednesday May 21st		
<i>No formal plan; for anyone arriving early who would like to meet up informally we recommend Tyler's Taproom, 7:30pm (324 Blackwell St # 400, Durham, NC 27701)</i>		
Thursday May 22nd		
7:30	8:00	<i>Continental breakfast served in meeting room</i>
8:00	8:30	Director's welcome and introductory remarks – Mark Wiesner
Research presentations and discussions		
8:30	9:30	Session 1: CEINT Data Integration
Presentations	Christine Hendren	Introduction to approach and nanoAg pilot project
	Yuan Tian	The CEINT data sharing platform, and Designing of the CEINT Database
Panel-led Discussion	Moderator: Christine Hendren	Panelists: Greg Lowry Jeanne Van Briesen Mark Wiesner
9:30	10:45	Session 2: Characterizing releases, exposure potential, and life cycle considerations of engineered nanomaterials
Presentations	James Dale	Nanoparticulate cerium oxides in a diesel fuel catalyst from exhaust to ecosystem
	Nathan Bossa	Behavior of nanomaterials (TiO ₂) incorporated in self cleaning cement during its life cycle
	Ana Belén Hernández Sánchez	Thermal treatment of waste containing nanoparticles
	Niall O'Brien	Integrating engineered nanomaterial kinetics with environmental exposure modeling
	Carol Johnson	Natural vs. engineered green rust: A nanoscale comparison
	Paramjeet Pati	Life cycle assessment of gold and ceria nanoparticles
Panel-led Discussion	Moderator: Mike Hochella	Panelists: Jie Liu Jerome Rose Peter Vikesland
10:45	11:00	<i>Break</i>
11:00	12:00	Session 3: Nanomaterial bioassociation and bioaccumulation
Presentations	Alex Bertuccio	Silver adhesion to biofilm matrices
	Amalia Turner	An integrated approach to predicting bioaccumulation of nanomaterials in plants
	Clement Layet	Phytoavailability of ceria nanoparticles in soils
	John Stegemeier	Photoabsorption of Ag and Ag ₂ S NPs into various plant tissues
Panel-led Discussion	Moderator: Jason Unrine	Panelists: Jean-Yves Bottero Greg Lowry Joel Meyer Mark Wiesner
12:00	1:30	<i>Lunch</i>

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Thursday May 22 nd Continued...		
1:30	3:00	Session 4: Cellular and organismal responses to engineered nanomaterials
Presentations	Eric McGivney	Disruption of quorum sensing in bacteria by engineered nanomaterials
	Chun Chen	Toxicogenomic responses of the model legume <i>Medicago truncatula</i> to nanomaterials(Ag,TiO ₂ and ZnO) in aged biosolids amended soil
	Fabienne Schwab	Finding a needle in a needle stack - long term exposure of <i>Egeria densa</i> to nanoTiO ₂ under environmentally relevant conditions
	Carole Bertrand	Silver nanoparticles and salinity: What effect do they have on the estuarine bivalve <i>Scrobicularia plana</i> ?
	Danielle Gorka	Effect of shape and sulfidation on the toxicity of silver nanomaterials
	Joshua Osterberg	Toxicity of flame retardant nanocomposites in <i>Caenorhabditis elegans</i> and <i>Danio rerio</i>
	Mengchi Ho	A first look of bioassay at the Egeria–nanoparticle mesocosm
Panel-led Discussion	Moderator: Rich Di Giulio	Panelists: Salik Hussain, NIEHS Cole Matson Joel Meyer
3:00	3:30	Plenary discussion of results from Data Management Pilot Project planning meeting: specific research questions to drive data integration
3:30	4:00	A. Students and post-docs – Walk to the FCIEMAS building for the CEINT Scholar Steering Committee-run Sessions B. Faculty – Break and reconvene at 3:45
Special sessions		
4:00	7:00	A. All students, post-docs – CSSC Sessions 4:00 Ice cream social 4:30 Scientific speed-networking 5:15 Breakout sessions: Discussions of student & postdoc-elected topics 6:15 Panel discussion on career development 7:00 Cocktail hour with heavy h'ordeuvres
3:45	5:00	B. Faculty: Individual collaboration and paper-writing meetings, to be held in the plenary meeting room
6:30		Faculty Dinner at Rue Cler; transportation provided from R. David Thomas Center Lobby leaving at 6:15pm.

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Friday March 23 rd		
8:00	8:20	<i>Continental breakfast served in meeting room</i>
8:20	8:30	CSSC Leadership report out of Thursday CSSC session outcomes
Research presentations and discussions		
8:30	10:00	Session 5: Nanoparticle reactivity and transformations
Presentations	Andrea Tiwari	Oxidation of C60 aerosols by ozone
	Ronald Kent	Controlled evaluation of silver nanoparticle sulfidation in a full-scale wastewater treatment plant
	Chuanjia Jiang	Effects of natural organic matter properties on the dissolution kinetics of zinc oxide nanoparticles
	Jeff Farner-Budarz	Influence of surface interactions on nanoparticle reactivity
	Stacey Louie	Effects of the heterogeneity and variability of natural organic matter on gold nanoparticle aggregation
	Gabrielle Dublet	Effect of humic substances on the affinity of ferrihydrite for U(VI)
	Shauna-Gaye Campbell	Column studies of the fate and transformation of TiO ₂ , CeO ₂ and Ag ₂ S nanoparticles from biosolids through porous media
	Rui Maia	Reactivity, structure, and physico-chemical characteristics of (nano)particles of platinum group elements (PGEs) and their compounds
Panel-led Discussion	Moderator: Greg Lowry	Panelists: Helen Hsu-Kim Kim Jones Gordon Brown Linsey Marr
10:00	10:15	<i>Break</i>
10:15	11:45	Session 6: Nanoparticle fate in aquatic systems
Presentations	Amy Dale	Modeling nanosilver fate in the James River Basin
	Leanne Baker	Environmental fate and transport of CeO ₂ nanoparticles in stream mesocosms
	S.M. Hossein Abtahi	Fate and transformation of elongated shaped metallic nanoparticles in aquatic environments
	Yi Yang	Nanoparticles in natural and engineered aquatic systems: Occurrence, behavior and environmental risk
	Judith Winglee	Nanocellulose enhanced water treatment membranes
	Mathieu Therezien	Particle heterogeneous aggregation in environmental water
	Danielle Slomberg	Fate and heteroaggregation of titanium dioxide nanoparticles in natural surface waters
	Naresh Kumar	Understanding nanoparticle behavior at surface-aqueous interfaces
Panel-led Discussion	Moderator: Mark Wiesner	Panelists: Liz Casman Greg Lowry Melanie Auffan
11:45	1:00	<i>Lunch in the R. David Thomas Center Restaurant</i>

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Friday March 23 rd Continued		
Research presentations and discussions		
1:00	2:30	Session 7: Ecosystem level responses to engineered nanomaterials
Presentations	Blanche Collin	Environmental release, fate and ecotoxicological effects of manufactured ceria nanomaterials
	Agathe Bour	Assessment of nanoparticle toxicity on aquatic environments: From single species to mesocosm studies
	Joe Moore	Impacts of transformed versus pristine copper and silver nanoparticles on sapropel microbial communities in the CEINT mesocosms using 16s rRNA gene and metagenomic sequencing
	Jennifer Andrei	Ecotoxicity of environmentally realistic silver nanoparticle concentrations: From individual to functional impacts on <i>Gammarus sp. (amphipoda)</i>
	Carley Gwin	Silver nanoparticles and microbial resistance
	Mandy Mitchell	Impact of metal and metal oxide nanoparticles on bacteria under environmentally relevant conditions
	Maël Garaud	Long term effects of manufactured nanoparticles on a simplified food chain of micro-organisms and zebra mussels
Panel-led Discussion	Moderator: Cole Matson	Panelists: Ben Colman Claudia Gunsch Jerome Rose
2:30	3:00	Final discussions and director's wrap-up
3:00		<i>Adjourn</i>