

2016 CEINT Annual Internal Meeting

CSSC Meeting Beginning July 26th, Full Meeting July 27th & 28th

Tuesday July 26 th		
<i>CSSC Arrives</i>		
3:00	6:00	CSSC-planned programming
6:00	onward	Happy hour and hors d'oeuvres
Wednesday July 27 th		
8:00	8:20	Director's Welcome – Mark Wiesner
8:20	8:30	Agenda Description & Administrivia – Christine Hendren
Research Presentation and Discussion Sessions		
8:30	10:00	Session 1: Nanoparticles and Bacteria - Applications and Implications
Presentations	Temitope Adegboye	Impacts of silver nanoparticle transformation on Pseudomonas Aeruginosa GFP Biofilm
	Jacob Metch	Activated sludge microbial community response to variations in gold nanoparticle morphology and surface coating
	Yaolin Fennell	Antibiofouling studies on graphine oxide modified polyethersulfone membranes
	Alex Bertuccio	Effects of natural organic matter on bacterial viability and surface colonization in the presence of Ag ⁺ and AgNPs
Panel-led Discussion	Moderator: Kim Jones	Panelists: Bob Tilton, Claudia Gunsch
10:00	10:15	<i>Break</i>
10:15	10:45	Session 2: Modeling approaches to forecasting nanomaterial behavior
	Nick Geitner	Molecular dynamics screening for nano trojan horses
	Mathieu Therezien	Heterogeneous aggregation and viral inactivation modeling
Panel-led Discussion	Moderator: Liz Casman	Panelists: Mark Wiesner, Greg Lowry
10:45	12:00	Session 3: Fate, Transport and Transformations
Presentations	Nick Geitner	Alpha for understanding trophic transfer and transport
	Amalia Turner	Functional assays to predict nanomaterial mobility and phytoavailability in soils
	Xiaoyu Gao	Time and nanoparticle concentration affect the extractability of Cu from CuO-NP amended soil
	Danielle Gorka	Understanding the shape-based phytotoxicity of silver nanomaterials
Panel-led Discussion	Moderator: Mark Wiesner	Panelists: Greg Lowry, Jie Liu, Jason Unrine
<i>** Extended time to allow for a post-discussion-panel for Center-wide Facilitated Brainstorming Session on Functional Assays</i>		
12:00	1:00	<i>Lunch</i>

Meeting Location: Schiciano Auditorium, 1st floor of the Fitzpatrick Center for Interdisciplinary Engineering, Medicine and Applied Sciences, First building on the right when dropped at the Science Drive traffic circle • 101 Science Drive • Durham, NC 27708

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Wednesday July 27 th Continued		
1:00	1:45	Session 4: Cellular and Organismal Interactions – Applications and Implications
Presentations	Anye Wamucho	Investigating multigenerational effects of silver nanoparticles on genomic instability in <i>Caenorhabditis elegans</i>
	Laura Maurer	Silver nanoparticles induce mitochondrial toxicity in <i>Caenorhabditis elegans</i>
	S.M.Hossein Abtahi	Fate, transport, and organismal uptake of gold nanorods
	Stuart Lichtenberg	Chitosan nanoparticles as carriers of dsRNA
Panel-led Discussion	Moderator: Jason Unrine	Panelists: Joel Meyer, Olga Tsyusko, David Hinton
1:45	2:15	Session 5: Ecosystem Effects
Presentations	Marie Simonin	Eutrophication and nanopesticide interact to reduce ecosystem productivity and alter microbial functioning in wetland mesocosms
	Brittany Perrotta	Effects of environmentally relevant TiO ₂ NP concentrations on periphyton under snail grazing pressure in stream microcosms
Panel-led Discussion	Moderator: Emily Bernhardt	Panelists: Ben Colman, Ryan King, Cole Matson
2:15	2:30	<i>Break</i>
Special sessions		
2:30	5:00	Schicciano Side A: Mesocosm Team Working Session (those attending this have received separate communication)
2:30	5:00	Schicciano Side B: Group Discussions (for all non-mesocosm meeting attendees): 1. Exploring the experimental design trade-offs in selecting media characteristics for harmonized research across studies 2. Other topics of interest TBD
5:00	5:30	<i>Break</i>
5:30	7:00	Poster Session and Cocktail Hour
7:30		<i>Bus transportation to Hotel leaving from Science Drive Traffic Circle</i>

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Thursday July 28th		
8:00	<i>Meet in Hotel Lobby - Bus LEAVES at 8:00 sharp</i>	
8:15	9:00	<i>Continental Breakfast at Meeting</i>
8:45	9:00	CSSC Leadership report out of Thursday CSSC session outcomes
Research presentations and discussions		
9:00	10:10	Session 6: Nanomaterial Characterization
Presentations	Keira Liu	Separation and analysis of single walled carbon nanotubes in estuarine sediments using density gradient ultracentrifugation with NIRF and ICP-MS
	Alexandria Hoehner	Examining the structure of amorphous calcium phosphate
	Sarah Ulrich	Investigating biogenic Mn-oxide nanominerals with electron energy loss spectroscopy (EELS)
	Matt Chan	Utilizing low frequency surface enhanced Raman spectroscopy to characterize gold nanoparticles interaction with aqueous halides
	Corliss Johnson	Investigation of properties of engineered nanomaterials through characterization techniques
	Naresh Kumar	Sulfidation of iron oxide and hydroxide nanoparticles
	Jane Cooper	Investigating nanoceria concentration and degree of homoaggregation in natural waters by traditional and single particle ICP-MS
Panel-led Discussion	Moderator: Helen Hsu-Kim	Panelists: Bob Tilton, Mark Wiesner, Gordon Brown
10:10	10:45	Session 7: Fate and Transport of Nanomaterials
Presentations	Chang Liu	Controlled Evaluation the surfaces coating effects on Ag nanoparticles dissolution
	Hossein Safa	Fate and transport of titanium dioxide silver and gold nanoparticles in saturated natural soil
	Benjamin Castellon	Environmental fate and transport of titanium dioxide nanoparticles in municipal wastewater effluent in outdoor stream mesocosms
Panel-led Discussion	Moderator: Peter Vikesland	Panelists: Kim Jones, Greg Lowry, Mark Wiesner
10:45	11:00	<i>Break</i>
11:00	12:30	Session 8: Evaluating Nanomaterials in and from Real Products
Presentations	Manuel Montano	Release of bisphenol A and polymer additives from polymer-CNT nanocomposites
	Jacelyn Rice	Assessing the potential risk and benefit of nano-enabled water treatment membranes
	Jingjing Li	Electrowetting on membranes
	James Dale	Transformation of cerium oxide from a diesel fuel additive and its implications
	Seth Guldin	Nanoscale precipitate in environmentally degradable aluminum sacrificial anodes for oilfield industry application
	Nathan Bossa	Cellulose nanocrystal/nZVI nanocomposites to groundwater remediation
Panel-led Discussion	Moderator: Greg Lowry	Panelists: Mark Wiesner, Helen Hsu-Kim
<i>** Extended time to allow for a post-discussion-panel for Center-wide Facilitated Brainstorming Session on Product Releases</i>		
12:30	1:30	<i>Lunch</i>

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Thursday July 28 th Continued		
1:30	2:30	Session 9: Data Integration and Nanoinformatics
Presentations	Greg Lowry	Visualization tool for correlating nanomaterial properties and biological responses in Zebrafish
	Lila Thornton	NaKnowBase at EPA
	Christine Hendren	CEINT Nanoinformatics Knowledge Commons (NIKC) and global nanoinformatics efforts
Panel-led Discussion	Moderator: Christine Hendren	Panelists: Mark Wiesner, Greg Lowry
2:30	2:40	CSSC Report Out – Nick Geitner
2:40	3:00	CEINT Next Steps and Future Evolution – Mark Wiesner
3:00	<i>Adjourn</i>	