

# **Rice University Smalley-Curl Institute**



**RICE | SCI**  
SMALLEY-CURL INSTITUTE

**Transdisciplinary Symposium I  
April 26, 2016**

# Program

- 8:00 AM Breakfast and coffee
- 8:30 AM Opening Remarks (Melia Bonomo)
- 8:45 AM **Faculty Keynote Talk** Mapping Plasmons, Structure, and Composition in  
Dr. Emilie Ringe Complex Bimetallic Nanostructures
- 9:15 AM **MORNING SESSION I** (12 min talks)

*Presenter code:*

Block A	M1	John Alred	Enhancing Load Transfer in Carbon Nanotube Composite Interfaces
	M2	Rashad Baiyasi	Characterization and fitting of complex fluorescence point spread functions
	M3	Dayne Swearer	Pd decorated aluminum antenna-reactor nanoparticles for hot-carrier driven photochemistry
	M4	Oleg Melnikov	Dynamic PCA: multi air pollutant model
	M5	Elaa Hilou	Magnetically Driven Formation of Colloidal Droplets in Two-Dimensions
Block B	M6	Patrick O'Driscoll	Analyzing the Genesis of Willed Movement: a Multiple Subject functional Magnetic Resonance Image Study
	M7	Samantha Paulsen	3D Printing Vascularized Tissues: Closing the Loop between Computational and Experimental Models
	M8	Maria Kochugaeva	Theoretical investigation of RecA filaments search for DNA breaks
	M9	Marco Rodrigues	Electrolyte Composite for Li-Ion Battery Operation from Room Temperature to 150 °C
	M10	Pelham Keahey	Differential Structured Illumination Microendoscopy for Improving Early Detection of Cervical Cancer

11:15 AM **Coffee break**

11:25 AM **MORNING SESSION II** (5 min talks)

Block A	M11		
	M12	Alex Bui	Distribution, factors, and sources of aerosol liquid water content in Houston, TX and Dallas, TX
	M13	Shaghayegh Agah	Photoluminescence Properties Spectroscopic Characterization of Functionalized Single-Walled Carbon Nanotube
	M14	Taylor Hernandez	Circular Differential Scattering Studies of Bovine Serum Albumin Coated Nanorod Aggregates
	M15	Sudarshan Nagesh	Transient rendering: A framework for looking around corners
	M16	Jennifer Burnett	Hemozoin Absorbance Signal Feature Analysis for the Accurate Classification of Malaria-Infected Erythrocytes

Block B	M17	Ian Kinstlinger	Engineered tissues with perfusable vascular networks created by sacrificial templating of laser sintered carbohydrates
	M18	Alessandro Alabastri	Nano-photonics Enhanced Membrane Distillation
	M19	Andre Schultz	Genome-Scale Modeling of Mammalian Metabolism
	M20	Jian Yang	Potential Applications of Silicon Nanophotonics Modes
	<del>M21</del>		
	M22	Xiaoqun (Kevin) Mu	Density Gradient Theory in Interface Property Calculations
12:25 PM	<b>Lunch break</b>		
12:45 PM	<b>Faculty Keynote Talk</b>	Dr. Michael Deem	Performance, Flexibility, and Modularity in Adult Human Brains
1:30 PM	<b>AFTERNOON SESSION I</b> (5 min talks)		
Block A	A23	Anjli Kumar	Electrochemical Nanoparticle Surface Modification
	A24	Julie Liu	Non-invasive Colonoscopy by Molecular Imaging of Mucin Targeted Hyperpolarized Silicon Nanoparticles
	A25	Eduardo Villarreal	Single Gold Nanoparticles as Localized Plasmonic Transducers
	A26	Yilun (Ethan) Li	Fabrication of Laser-Induced Graphene in Controlled Gas Atmosphere
	A27	Patrick Sun	Non-Contact Strain-Sensing Smart Skin
	A28	Santiago Martinez	Regulation of Autophagy Through Surface-Modified Nanoparticles
Block B	A29	Gisele Calderon	Developing microvasculature in engineered tissue
	A30	Kimberly Mendoza	Antioxidant Nanocarbon Therapy of Oxidative Stress in Mild Traumatic Brain Injury
	A31	Jorge Wu Mok	All-conjugated Block Copolymer Additives for Organic Solar Cells
	A32	Lizanne Nilewski	Carbon Nanomaterials for Biomedical Applications as Antioxidants and Drug Delivery Vehicles
	A33	Rajkumar Vasudeva Raju	Inference by Re-Parameterization using Neural Population Codes
	A34	Xiao Yang	Bowtie Antennas with Nanoscale Gaps for Surface Enhanced Infrared Absorption Spectroscopy
2:35 PM	<b>Transition</b> (12 min talks)		
Block C	A35	Peter Owuor	Mimicking Biological Materials: Solid-Liquid Systems
	A36	Vida Jamali	Wetting behavior, Shape, and Morphology of Sessile Lyotropic Liquid Crystal Micro-droplets on Solid Surfaces
	A37	Jordan Trachtenberg	Extrusion-based printing of a model polymer for bone and cartilage tissue engineering
	A38	Ahmed Zubair	Generation, Detection, and Manipulation of Light with Ultrahigh-Conductivity Carbon-Nanotube Fibers

	A39	Elisabeth Bianco	Toward Selenene: A Two-Dimensional Topological Insulator
3:35 PM	<b>Coffee break</b>		
3:45 PM	<b>AFTERNOON SESSION II</b> (5 min talks)		
Block A	A40	Welman Curi Elias	Indium on Palladium Nanocubes as Catalyst for Nitrate Reduction Reaction
	A41	Adithya Pediredla	Deep Imaging in Scattering Media with Single Photon Selective Plane Illumination Microscopy (SPIM)
	A42	Runmin Zhang	Plasmonic Properties of Doped Silicon Nanocrystals
	A43	Kyle Smith	Chiral and Achiral Nanodumbbell Dimers: The Effect of Geometry on Plasmonic Properties
	A44	Matias Soto	Study of the dopant adsorption on carbon-nanotube-substrates and its effect on the electronic structure.
	A45	Amin Haghmoradi	A Theory on Association Interactions: From Molecular to Colloidal Scale
Block B	A46	Tien Tang	Using imaging derived features to characterize radiation response
	A47	Wenxiao Wang	Super Temporal-Resolved Microscopy (STReM)
	A48	Yue Zhang	Actively tuning plasmonics with electricity via quantum tunneling
	A49	Man-Nung Su	Ultrafast Optical Study on the Acoustic Vibrations of Lithographically Fabricated Au and Al Nanostructures
	A50	Hui Zhang	What is a plasmon: a comprehensive study on its origin from few-electron nanoclusters to carrier-dense noble metals
4:40 PM	<b>NETWORKING &amp; RECEPTION</b>		
5:30 PM	<b>AWARDS CEREMONY</b>		
6:00 PM	<b>CONCLUSION</b>		

#### INSTRUCTIONS FOR TEXT MESSAGE VOTING:

- Voting will take place immediately after each BLOCK of 5-6 talks per Session
- Text **SCIEVENTS** to **22333** first to enter the poll
- Then text the **presenter code** for your choice of best talk within that block. (The presenter code can be found to the left of the presenter name on this program and will begin with an A or M).
- *Note that polls will only be open for a short amount of time. Please place your vote shortly after the block of talks ends.*