

Rice University Smalley-Curl Institute



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**Transdisciplinary Symposium II
February 9, 2017**

Program

8:00 AM	Arrival, set-up, breakfast and coffee	
8:30 AM	Opening Remarks (Melia Bonomo)	
8:45 AM	Faculty Keynote Talk Dr. Antonios Mikos	Biomaterials for Tissue Engineering
	MORNING SESSION I	Session Chair: John Alred
9:15 AM	M1 Stephen Sanchez	Variance Spectroscopy: A New Bridge between Ensemble and Single-Particle Studies
	M2 Chloe Doiron	Semiconductor Selective Thermal Emitters for the Thermophotovoltaic Applications
	M3 Charlotte Flatebo	Understanding the conformational dynamics of the YfkE trimer using single-molecule Forster Resonance Energy Transfer (smFRET)
	M4 Ya He	Distinct Effects of Inducing or Non-Inducing Auxiliary Substrates on 1,4-Dioxane Biostimulation
	M5 Sung Hoon Hwang	Optimization of the early age strength of CaO-activated fly ash using Taguchi design and microstructural studies
10:15 AM	BREAK – VOTE	
	MORNING SESSION II	Session Chair: Charlotte Flatebo
10:20 AM	M6 Taylor Hernandez	Circular Differential Scattering Studies of Protein Nanorod Aggregate Complexes
	M7 Yilun Li	Three-dimensional Printed Graphene Monolith
	M8 Sonia Parra	A Portable, Lower-Cost High-Resolution Microendoscope (PiHRME) to Screen for Cervical Cancer in Underserved Areas
	M9 Morgan Barnes	Extrusion-Aligned Liquid Crystal Elastomer Fibers
	M10 Melia Bonomo	The CRISPR-Cas Immune System: Fundamentals, Applications, and Future Prospects
	M11 Liyang Lu	4D Compressive Imaging for Hyperspectral Video
10:50 AM	BREAK - VOTE	
	MORNING SESSION III	Session Chair: Melia Bonomo
11:00 AM	M12 Yara Kadria-Vili	Advanced Spectral Analysis for Quantitative Analysis of Single-Walled Carbon Nanotube Samples
	M13 Adam Lauchner	Multicolor Electrochromic Devices Based on Molecular Plasmonics
	M14 Xingcheng Lin	Seeking Out the Functional Mechanism of Influenza Hemagglutinin
	M15 Katherinne Requejo	Accelerating gold nanorod seedless synthesis with nanomolar concentrations of poly(vinylpyrrolidone)
	M16 Tien Tang	Using imaging derived features to predict radiation response
12:00 PM	BREAK - VOTE	
	BREAK FOR LUNCH	

12:45 PM	Faculty Keynote Talk		
	Dr. Guru Naik		Hot Nanophotonics for Clean Energy
	AFTERNOON SESSION I		Session Chair: Loah Stevens
1:15 PM	A17	Kimberly Mendoza	Antioxidant Nanocarbon Therapy of Oxidative Stress in Mild Traumatic Brain Injury
	A18	Samantha Paulsen	Design, Fabrication, and Characterization of 3D Printed Microscale Bicuspid Valves
	A19	Dayne Swearer	Aluminum Nanocrystals Decorated with Transition Metal Nanoislands as Antenna-Reactor Nanoparticles for Photocatalysis
	A20	Sangheon Han	Photoacoustic Imaging to Target Specific Cancer Cells Aided by 5nm Molecularly Activated Plasmonic NanoSensors
	A21	Amit Jain	Ion Exchange Polymeric Coatings for Selective Capacitive Deionization
	A22	Yiyu Cai	Mechanism of photoluminescence from plasmonic nanoparticles: Purcell effect enhanced emission from hot carriers
1:45 PM	BREAK - VOTE		
	AFTERNOON SESSION II		Session Chair: Mihika Tanzid
2:00 PM	A23	Ching-Wei Lin	In Vivo Detection and Spectral Triangulation of Single-Walled Carbon Nanotubes in Mice
	A24	Julia Vidonish	Pyrolytic Treatment of Soils Remediate Heavy Hydrocarbons and Enhances Fertility
	A25	Carlos de los Reyes	Chemical Decoration of Hexagonal Boron Nitride with Aliphatic Carbon Chains
	A26	Timothy Vu	Study of natural killer cell migration after tumor desensitization by shed NKG2D
	A27	Yu Zheng	Quenching of Single-Walled Carbon Nanotube Fluorescence by Physisorbed Oxygen Reveals Selective ssDNA Affinities
3:00 PM	BREAK - VOTE		
	AFTERNOON SESSION III		Session Chair: Melia Bonomo
3:15 PM	A28	Benjamin Hoener	Morphology Dependent Plasmon Shifts by Capacitive Charging
	A29	Barclay Lee	Acquisition of intrinsic cell motility defines natural killer cell maturation from hematopoietic stem cells
	A30	Andrea Miranda	Tailoring development and processing of conjugated polymer binders for use in Si-based Li-ion battery anodes
	A31	Satyajit Rao	Dynamics of stress response in Mycobacterium tuberculosis
	A32	Fengdan Ye	Brain Modularity Mediates the Relation between Task Complexity and Performance
3:40 PM	BREAK – VOTE		
3:45 PM	NETWORKING & RECEPTION		
5:00 PM	AWARDS CEREMONY		
5:30 PM	CONCLUSION		

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.*