

Shangri La Auditorium, Doolittle Institute
Nicewille, FL 32578

Day 1 | Monday, December 3, 2018

Time	Title of Project	Speaker
730-830	Registration	
830-845	Welcome, Introduction and Background	J. Aura Gimm Air Force Office of Scientific Research
845-935	Theory-based design of synthetic genetic circuits incorporating biophysical models, stochastic dynamics, and evolutionary robustness	Hal Alper UTexas-Austin
935-1025	Electrochemical Imaging and Mechanistic Studies on the Nanometer Scale	Richard Van Duynes Northwestern
1025-1055	BREAK	
1055-1130	Active, Multi-functional Biopolymer Interfacial Constructs-Beyond Structural Nanocomposites	Vladimir Tsukruk Georgia Tech
1130-1205	Biomimetic Lipid Nanoparticles- Bio-Sensing and Bio-Functional Applications	Shad Thaxton Northwestern
1205-1400	LUNCH/SIDEBAR	
1400-1435	Synthetic Biology Approaches for Exploiting Sensing and Amplification Functionality of Cells and their Components	Jorge Chavez-Benavides AFRL
1435-1510	Optical, biochemical, and molecular characterization of new light producing systems from marine and terrestrial organisms, with emphasis on violet/blue	Dimitri Deheyn, UC-San Diego
1510-1540	BREAK	
1540-1615	Peptide-DNA tiles as building blocks for complex nanostructures	Nicholas Stephanopoulos Arizona State
1615-1650	Mapping molecular-level dynamics to mesoscale mechanics in composite DNA-based biomaterials	Rae Robertson-Anderson (sub) U of San Diego
	ADJOURNED FOR THE DAY	

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Day 2 | Tuesday, December 4, 2018

Time	Title of Project	Speaker
800-830	Registration	
830-920	Convergent Evolution to Engineering- Multiscale Structures and Mechanics in Damage Tolerant Functional Biocomposite and Biomimetic Materials	David Kisailus UC-Riverside
920-1010	Unraveling the Biology, Chemistry and Nanoscience of Natural and Synthetic Melanins	Nathan Gianneschi / Matthew Shawkey Northwestern/Gent
1010-1040	BREAK	
1040-1115	DNA-Programmed Epitaxy of Nanoparticle Superlattices	Robert MacFarlane MIT
1115-1150	Structural studies to elucidate the mechanisms of biobased nanoparticle synthesis	Brent Nannenga Arizona State
1150-1225	Exploitation of Natural Processes and Materials – Understanding Biointerfacial Properties and Structure-Function Studies of Biopolymers	Patrick Dennis AFRL
1225-1400	LUNCH	
1400-1435	Silk Modifications for Tunable Materials	David Kaplan Tufts
1435-1510	The Molecular Mechanisms Responsible for the Assembly of Spider Silk Fibers	Gregory Holland San Diego State
1510-1540	BREAK	
1540-1615	Biomechanics of Hierarchically-Structured Enamel in Grinding Dentitions: An Evolutionary-Guided Route to Designing Damage Tolerant Materials	Siddhartha Pathak U Nevada-Reno
1615-1650	Towards Advanced Functional Biopolymer Materials	Paul Trulove Naval Academy
ADJOURNED FOR THE DAY		

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Day 3 | Wednesday, December 5, 2018

Time	Title of Project	Speaker
800-830	Registration	
830-920	A 4D Nanoprinter for Making and Manipulating Macroscopic Material	Chad Mirkin Northwestern
920-955	Probing Mechanisms of Biological-Material interaction; towards realizing biomimetic materials by understanding molecular-level interactions	Carole Perry Nottingham Trent
955-1025	BREAK	
1025-1100	Examination of Key Enablers of Polyurethane Biodeterioration Under AF-Relevant Conditions	Wendy Goodson / John Russell AFRL / NRL
1100-1135	Carbohydrate Materials Discovery- Towards a Post-Cellulosic Future	Adam Braunschweig CUNY
1135-1210	Interphase Dynamics in Bio-nanocomposites	Jeffrey Gilman NIST
1210-1400	LUNCH/SIDEBAR	
1400-1435	PNA-Driven Remote Actuation of DNA Nanospring Strain Sensors	Rebecca Taylor Carnegie Mellon
1435-1510	Reconfigurable Matter from Programmable Atom Equivalents	Chad Mirkin Northwestern
1510-1540	BREAK	
1540-1615	Development and Characterization of Novel Bioluminescence Sources	Bruce Branchini Connecticut College
1615-1650	Biophysical investigations on additive manufactured nanoscale biosensors and biological materials	Shashank Priya Penn State
	ADJOURNED FOR THE DAY	

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Day 4 | Thursday, December 6, 2018

Time	Title of Project	Speaker
800-830	Registration	
830-905	New sensing modalities based on designed self-assembling protein nanomaterials	David Baker U Washington
905-940	Self-Assembled Biomimetic Conductive Fibers as a Novel Functional Materials Platform	Allon Hochbaum UC-Irvine
940-1015	Engineering Biosystems for Aromatic Nitration	Yousong Ding U Florida-Gainesville
1015-1045	BREAK	
1045-1120	S-Layer Directed Nanoscale Fluid Mechanics	Dietmar Pum Zentrum fuer Nanobiotechnologie
1120-1155	Peptide-driven Exfoliation and Organization of Multi-compositional 2D Nanomaterial	Marc Knecht University of Miami
1155-1230	TBA	
1230	MEETING ADJOURNED	