CINT 2014B Accepted Proposals

Ab initio Simulations of Interfaces in Quantum Dots; *Svetlana Kilina, North Dakota State University:* Sergei Tretiak

Abrupt Electrical Junctions in Nanowire Devices by Catalyst Alloying; Yossi Rosenwaks, Tel Aviv University: Jinkyoung Yoo

Active Plasmonics in the Near Infrared; Gordon Keeler, Sandia National Laboratories: Willie Luk

Advanced Functional Biomimetic Soft/Composite Nanoparticle Protocells; Eric Carnes, Sandia National Laboratories: Wally Paxton

All-dielectric nanostructures for structured light manipulation on a chip; Natalia Litchinitser, State University of New York: Igal Brener

All-dielectric thin-film infrared metasurfaces; Nanfang Yu, Columbia University: Hou-Tong Chen

Atomic Layer Deposition for High Performance Graphene Electronics; Thomas Beechem, Sandia National Laboratories: John Nogan

Biomimetic Membranes for Ion Transport; Susan Rempe, Sandia National Laboratories: Mark Stevens

Characterization of a novel junction between carbon nanotube-structures and silicon substrate; Waqas Khalid, Jadoo Technologies Inc: Jinkyoung Yoo

Compact THz sources based on 2D materials on pre-patterned substrates; Francesca Cavallo, University of New Mexico: John Nogan

Computational study of nanoparticle self-assembly at polymer-air interfaces; Guido Raos, Politecnico di Milano: Amalie Frischknecht

Copy of Growth and fabrication of multiferroic BiFeO3 samples for high resolution soft x-ray imaging of magnetic domains; Richard Sandberg, Los Alamos National Laboratory: John Nogan

Copy of Local Evanescent Array Coupled Integrated Optics for Molecular Sensing; Kevin Lear, Colorado State University: John Nogan

Correlation of Atomic Structure and Photophysics for Probing the Dark Fraction of "Giant" Nanocrystal Quantum Dots; Sandra Rosenthal, Vanderbilt University: Jennifer Hollingsworth

Crystallization and Deformation of Refractory Metals; Matthew Janish, University of Connecticut: Katie Jungjohann

Defect Modeling of InAs/GaSb Type-II Strained-Layer Superlattices using Hybrid Density Functional Theory; Sanjay Krishna, University of New Mexico: Normand Modine

Designing Many-Body Functionality Using Complex Nanostructures; Cristiano Nisoli, Los Alamos National Laboratory: Jennifer Hollingsworth

Deterministic Ion Implantation for Optimization of Donor-SET Tunneling Rates for Two Qubit Formation in Silicon MOS Devices; Ed Bielejec, Sandia National Laboratories: Mike Lilly

Developing tri-component nano-laminate thin films that exhibit age hardening behavior Renewal and additional work proposal; Dave Bahr, Purdue University: Jon Kevin Baldwin

Development of non-metallic Fano-resonant infrared metamaterials with high quality factors and unusual optical functionalities; Gennady Shvets, The University of Texas at Austin: Igal Brener

Development of thin-film metal oxide-graphene multifunctional hybrid structures; Enkeleda Dervishi, Los Alamos National Laboratory: Quanxi Jia

Directed assembly of tip-functionalized carbon nanotubes; Ron Salesky, University of New Mexico: Jen Martinez

Effects of Nanoscale Aggregates on Dynamics in Ionomer Melts; James Runt, Penn State University: Amalie Frischknecht

Electric Field Induced Damage to DNA: Pathway to New Vaccines; Tanvir Ahmed, VBI Vaccines, Inc.: Peter Goodwin

Electrical characterization of nano-scale free-form wires; Bryan Kaehr, Sandia National Laboratories: Brian Swartzentruber

Electron Dynamics in Low-Dimensional Systems; Eric Shaner, Sandia National Laboratories: Tom Harris

Electronic Interactions in van der Waals Materials; Joshua Robinson, Pennsylvania State University: Taisuke Ohta

Engineering Inorganic Nanomaterials, Films, and Nanofibers; Chris Cornelius, University of Nebraska: Katie Jungjohann

Excition behavior in monolayer transition metal dichalcogenides; Chih-Kang Shih, University of Texas at Austin: Han Htoon

Exploring Cooperative Behaviors in Mesoscopic Aerogel Networks of "giant"-Nanocrystal Quantum Dots; Stephanie Brock, Wayne State University: Han Htoon

Exploring Revolutionary Thermoelectric Performance via Quantum Confinement; Michael Siegal, Sandia National Laboratories: Mike Lilly

Exploring the Antibacterial Properties of Various Carbon Nanostructures; Kristin Omberg, Los Alamos National Laboratory: Stephen Doorn

Extreme nondegenerate two-photon absorption in bulk and MQW structures; Eric Van Stryland, University of Central Florida: John Reno

Fabrication and Optical Characterization of III-Nitride Core-Shell Nanostructures; Daniel Feezell, University of New Mexico: Igal Brener

Fabrication of metal-organic templates: A route for more efficient solar cells; Manuel Ramos, University of Texas at El Paso: John Nogan

Fabrication of subwavelength and Low loss Negative Index Metamaterials using Dark Dielectric Resonators; Aditya Jain, Ames Laboratory: Igal Brener

Fast and tunable infrared thermal sources; Francois Marquier, Institut d'Optique, Laboratoire Charles Fabry: Igal Brener

Functional Boron Nitride Nanostructures; Yoke Khin Yap, Michigan Technological University: Katie Jungjohann

Gas phase photophysics of DNA-templated Au and Ag nanoparticles; Scott Anderson, University of Utah: Jen Martinez

Gate Tunable Nano-Hybrid Superconducting Qubits; Yong-Joo Doh, Korea University Sejong Campus: Jinkyoung Yoo

Ge/Si core/shell nanowires for quantum devices; Sergey Frolov, University of Pittsburgh: Jinkyoung Yoo

Graphene modified biocatalytic anode for enhanced electron transfer in enzymatic power sources; Vojtech Svoboda, Binergy Scientific, Inc.: Jinkyoung Yoo

Graphene Polymorphism; Karsten Pohl, University of New Hampshire: Taisuke Ohta

Graphene-Nanowire Heterostructures for High-Performance Battery Anodes; Enkeleda Dervishi, Los Alamos National Laboratory: Jinkyoung Yoo

High-efficiency, on-chip arrays of single photon sources and detectors; Dirk Englund, Massachusetts Institute of Technology: Ryan Camacho

Imaging Nanoscale Chemical and Electronic Structure Variations in Thin Film Photovoltaic Materials with Low Energy Electron Microscopy; Calvin Chan, Sandia National Laboratories: Taisuke Ohta

Impact of High Current Pulses on Dense VCSEL Arrays; Mial Warren, TriLumina Corporation: Willie Luk

In situ Mechanical Testing of Metallic and Semiconducting Nanowires using the CINT Discovery Platform; Daniel Gianola, University of Pennsylvania: Tom Harris

In Situ TEM Characterization of Metal Oxide Memristors; Matthew Marinella, Sandia National Laboratories: Katie Jungjohann

In situ TEM observation of insulator-metal transition in homogenous and core-shell nanoparticles; Paul Clem, Sandia National Laboratories: Katie Jungjohann

Integrated quantum photonics; Damien Bonneau, University of Bristol: Ryan Camacho

Integration of Ion Transport Proteins into Electrochemical Energy Storage Systems; Erik Spoerke, Sandia National Laboratories: George Bachand

Investigating the Phase Stability of New Transition Metal Dichalcogenides for Li-ion Batteries through In-Situ TEM; Christopher Hinkle, University of Texas at Dallas: Katie Jungjohann

Investigation of Curvature and Grafting Effects on PNIPAM Cononsolvency; Michael J.A. Hore, Case Western Reserve University: Dale Huber

Investigation of the fundamental mechanisms involved in rolling contact fatigue through nano-indention testing of plastically graded (case hardened) bearing steels; Tom Kanaby, IBC Coating Technologies Inc: Nate Mara

Irradiation Effects on Electrochemical Charge Storage in Nanostructured TiO2 Electrode for Li-ion Batteries; Hui Xiong, Boise State University: Yongquiang Wang

Junctionless Nanowire Transistor-Continuation; Roderick Devine, Think-Strategically: John Nogan

Lattice Dynamics of complex metal oxides; Stefan Zollner, New Mexico State University: Igal Brener

LEEM/PEEM study of 2D nanomaterial hetero-structures; Aditya Mohite, Los Alamos National Laboratory: Taisuke Ohta

Light-matter interaction phenomena using subwavelength engineering of material properties; Salvatore Campione, Sandia National Laboratories: Igal Brener

Lithiation Mechanisms in Tin Nanostructures; M. Grant Norton, Washington State University: Katie Jungjohann

Micro- and Nano-domain Modulation of Fungal Pathogen Interaction with Human Dendritic Cells; Aaron Neumann, University of New Mexico: George Bachang

Microstructural Evolution of Ion-irradiated Nanocomposite Gallium Nitride; Debbie Senesky, Stanford University: Yongquiang Wang

Modeling phonon-coupled electron dynamics across pi-conjugated heterojunctions; Xi Lin, Boston University: Sergei Tretiak

Nanocrystalline Metals: Towards Radiation Tolerance; Mitra Taheri, Drexel University: Jon Kevin Baldwin

Nanoengineering polymer-enzyme conjugates for efficient enzyme-recycling; Michael Kent, Sandia National Laboratories: Wally Paxton

Optical Microring Resonators for Add-Drop Filters; Glenn Li, Skorpios Technologies: Ryan Camacho

Optimizing nanoscale thin film structure for the determination of SEI chemistry in energy storage materials; James Browning, Oak Ridge National Laboratory: Jon Kevin Baldwin

Optoelectronic Properties of III-Nitride Nanostructures; George Wang, Sandia National Laboratories: Igal Brener

Photocurrent Generation Dynamics in Organic/Inorganic Composite Nanofibers; Yang Qin, University of New Mexico: Rohit Prasankumar

Photon Sensing Structures Created from Two-Dimensional Transition-Metal Dichalcogenide Semiconductors; Elias Towe, Carnegie Mellon University: Willie Luk

Physics of Interactions of SWNTs and Ion Complexes/Macromolecules inside a Hydrogel as a Biomimetic Crowded Environment; Slava V. Rotkin, Lehigh University: Stephen Doorn

Polyelectrolyte elasticity; Omar Saleh, University of California at Santa Barbara: Mark Stevens

Probing the existence and manipulation of Majorana fermions in strongly correlated topological insulators; Filip Ronning, Los Alamos National Laboratory: John Nogan

PVD Synthesis and Nanomechanics of Ni/C Nanolayered Thin Films; Amit Misra, University of Michigan: Jon Kevin Baldwin

Quantum Plasmonics of Graphene/TMD-Semiconductor Nanostructures; Oleksiy Roslyak, Fordham University: Han Htoon

Renewal of Nanoparticle Mass Spectrometry of Giant Quantum Dots; Scott Anderson, University of Utah: Jennifer Hollingsworth

Room Temperature Deformation and Melting Point Suppression of Alumina Nanoparticles; Pylin Sarobol, Sandia National Laboratories: William Mook

Selective CdTe and Zn Doped CdTe Nanoheteroeptaxial Growth on Si Substrates using Close-Spaced Sublimation; Aryzbe Najera, University of Texas at El Paso: Doug Pete

Silicon photonic devices; Jeffrey Shainline, National Institute of Standards and Technology (NIST): Anthony James

Simulations and Experiments to Understand Nano-Scale Aggregates in Precise Copolymers and Ionomers; Karen Winey, University of Pennsylvania: Amalie Frischknecht

Single Molecule Spectroscopy and Microscopy of Semiconductor Quantum Dot Clusters Higher Order Structure; Alan van Orden, Colorado State University: Peter Goodwin

Small Angle X-Ray Scattering Analysis of Bipyridinium- Based Template-Directed Soft Matter in Water; Mark Olson, Texas A&M University-Corpus Christi: Millie Firestone

Stability and sink efficiency of different bilayer interfaces upon heavy ion irradiation; Engang Fu, Peking University: Yongquiang Wang

Stress-Induced Effects on the Optical Response of Doped ZnO Thin Films; Don Lucca, Oklahoma State University: Quanxi Jia

Strongly-Injection-Locked Cascaded Microring Lasers for Chirp-Suppressed Ultrafast Optical Transmitters; Marek Osinski, University of New Mexico: John Nogan

Structural and Electronic Properties of Chemically Modified Graphene and 2D semiconductors; Eric Shaner, Sandia National Laboratories: Tom Harris

Studies of Excitons and Photons in Single- and Double-Wall Carbon Nanotubes Using Resonance Raman Scattering; Junichiro Kono, Rice University: Stephen Doorn

Superparamagnetic Nanoparticles for Biomagnetic Imaging; Erica Vreelander; Senior Scientific: Dale Huber

Super-resolution imaging of nano- and mesoscopic membrane remodeling; Gregory Voth, University of Chicago: Jen Martinez

Tailoring Spontaneous Emission of Quantum Dots with Metamaterial Nanostructures; Xiaodong Yang, Missouri University of Science and Technology: Willie Luk

Terahertz Quantum Cascade Lasers for Atmospheric and Planetary Spectroscopy; Albert Betz, University of Colorado at Boulder: John Reno

The Nanomechanical Response of X/Nb (X = Cu, Zr, Mg) Nanolamellar Composites Fabricated via Accumulative Roll Bonding; John Carpenter, Los Alamos National Laboratory: Nate Mara

Three Dimensional Photonic Crystals for Enhanced Light Matter Interaction; Shawn-Yu Lin, Rensselaer Polytechnic Institute: Willie Luk

Three-Dimensional Nanostructured Surfaces for the Multi-Length Scale Self-Organization of an Artificial Pancreas; Joseph Reiser, CureDM, Inc.: George Bachand

Topological Nano-thermoelectrics: Enhancing Thermoelectric Properties of Tellurides through Nanostructuring; Shixiong Zhang, Indiana University: Han Htoon

Transparent sol-gel Electronics; Mark Phillips, 1N1 Materials: John Nogan

Transport studies in superconductors, skyrmions and multiferroic systems; Leonardo Civale, Los Alamos National Laboratory: Quanxi Jia

Tunable THz metamaterial quantum cascade lasers and high power quantum-cascade layers; Benjamin Williams, University of California, Los Angeles: John Reno

Ultra-dilute Two-dimensional Electron Systems for Probing Electron-electron Interaction-driven phenomena and Novel Nano-devices; Jian Huang, Wayne State University: John Reno

Ultrafast Probes of Non-thermal, Hidden Spin State Transitions and Coherent Magnon Generation in LaCoO3; Jigang Wang, Ames Laboratory: Rohit Prasankumar

Understanding Mechanical Grain Coarsening in Nanocrystalline Metals; Brad Boyce, Sandia National Laboratories: William Mook

Understanding the interfacial effects on ionic transport in Li ion batteries; Yang Liu, North Carolina State University: Katie Jungjohann

Utilizing giant-QDs for Highly Efficient Lasing Systems that Exhibit Novel Energy Transfer Phenomena; Vladimir Tsukruk, Georgia Institute of Technology: Jennifer Hollingsworth

Van der Waals epitaxial semiconductor/2-dimensional atomic layer heterostructures: doping and heterojunction device applications; Young Joon Hong, Sejong University: Jinkyoung Yoo