2011A Accepted CINT User Proposals

Dopant Distribution and Interface Studies of Si and Ge Nanowire Heterostructures; Daniel Perea, Los Alamos National Laboratories: Tom Picraux

Effects of aggregation on the properties of oligomers used for organic LEDs; Linda Peteanu, Carnegie Mellon University: Andy Shreve

In Situ Electro-chemo-mechanical Investigation of Low Dimensional Nanomaterials; Jun Lou, Rice University: Jianyu Huang

Conductivity Measurements of Cooperative Binary Ionic Nanomaterials; John Shelnutt, Sandia National Laboratories: Brian Swartzentruber

Non-equilibrium dynamics of the Holstein polaron driven by an external electric field; Janez Bonca, Faculty of Mathematics and Physics, University of Ljubljana: Stuart Trugman

The effect of structure on carrier dynamics in lead chalcogenide-based heterostructured nanocrystal quantum dots; Jeff Pietryga, Los Alamos National Laboratories: Sergei Ivanov

Design and Engineering of Optical Nano-Materials Based on Organic Branched Structures; Vladimir Chernyak, University of Michigan: Sergei Tretiak

Structural Characterization of Nanostructured Thermoelectric Materials; Wenzhi Li, Florida International University: Jianyu Huang

Short channel silicon nanowire field effect transistor with huge strain originated from epitaxial silicide source/drain contacts; Wei Tang, UCLA: Tom Picraux

AFM and SEM studies of the morphology of graphene thin films; Taisuke Ohta, Sandia National Laboratories: Brian Swartzentruber

Directed Self-Assembly in a Mixed Brush; Glenn Frederickson, UCSB: Amalie Frischknecht

Transport through mesoscopic structures with vibrational degrees of freedom; Holger Fehske, University of Greifswald: Stuart Trugman

A Superlattice Bragg filter for electrons; Angelo Mascarenhas, National Renewable Energy Laboratory: John Reno

Investigation of energy-creation and energy-saving functional-oxide devices; Shuichi Noda, AIST: Quanxi Jia

Failure processes in plastic bonded explosives: Characterization of the crystal-binder interface structure and adhesion; John Yeager, Los Alamos National Laboratories: Andrew Dattelbaum

Strained axial Si/SiGe heteronanowire tunneling devices; Alex Zaslavsky, Brown University: Tom Picraux

Numerical Study on Transports through Double Quantum Dots; Jian-Xin Zhu, Los Alamos National Laboratories: Sasha Balatsky

Investigation of self-organized nanocomposite 3-element thin film layers from ionbeams; Timothy Renk, Sandia National Laboratories: Brian Swartzentruber

Improvement of MEMS Performance by Structural Vibrations; Zayd Leseman, University of New Mexico: John Sullivan

Dynamics of localized excitations in quasi-one-dimensional systems; Susan Dexheimer, Washington State University: Stuart Trugman

Influence of misorientation on the effects of radiation at grain boundaries at the nanometer scale; Dhriti Bhattacharyya, Australian Nuclear Science and Technology Organization: Amit Misra

Copy of Nanomechanical Studies of Pseudoelastic Metal Nanowires and Their Nanocomposites; Anagi Balachandra, Technova Corporation: Nate Mara

Assessing the mechanical properties of battery electrodes during charging and discharging; Julia Greer, California Institute of Technology: Jianyu Huang

Nanowire Devices: Shadi Dayeh, Los Alamos National Laboratories: Tom Picraux

Nano-spintronics: Spin Injection, Transport and Detection in One-dimensional Semiconductor Nanowires; Shixiong Zhang, Los Alamos National Laboratories: Tom Picraux

Fabrication of photovoltaic devices based on non-catalyzed Si radial p-n junction nanopillar arrays and their electrical characterizations; Jinkyoung Yoo, Los Alamos National Laboratory: Tom Picraux

Controlled Synthesis of Ultra Small Metallic Nanorods via Physical Vapor Deposition; Hanchen Huang, University of Connecticut: Amit Misra

Interconnected Heterogeneous Nanowires for Energy Storage; Jeong-Hyun Cho, Los Alamos National Laboratories: Tom Picraux

Semiconductor Heterostructures for a Majorana Fermion Study; Guillaume Gervais, McGill University: John Reno

GaAs Hole Nanostructures for Quantum Computing Applications; Lisa Tracy, Sandia National Laboratories: John Reno

Chiral dependent, vibrationally induced gating effects in functionalized single wall carbon nanotubes; Darren Brock, Lockheed Martin Nanosystems: John Sullivan

STM Lithography for Atomically-Precise Qubit Fabrication; Ezra Bussmann, Sandia National Laboratories: Brian Swartzentruber

Modeling the Interaction of oligo-phenylene ethynylenes (OPEs) with Biological Substrates; Deborah Evans, University of New Mexico: Sergei Tretiak

Nanomechanics of semicrystalline polymer plasticity; Jevan Furmanski, Los Alamos National Laboratories: Nate Mara

In-situ TEM studies of 1D Si nanostructures; John Cumings, University of Maryland at College Park: Tom Picraux

Genetically Engineered Polymer Libraries: Development of cell-reactive polymers; Csaba Kiss, Los Alamos National Laboratories: Jen Martinez

Nanomechanics of Shape Memory Polymers; Walter Voit University of Texas at Dallas: John Sullivan

Creation of artificial absorbers in optical samples for characterization and validation of a photothermal microscope; Luke Emmert, University of New Mexico: John Nogan

Capacitance-Voltage Measurements of Si/SiGe Heterostructures; Mark Eriksson, University of Wisconsin: Mike Lilly

Analysis and characterization of Single-Walled Carbon Nanotube (SWNT) fibrils fabricated using Dielectrophoresis; Matteo Pasquali, Rice University: Stephen Doorn

Thin Films for Barrier Layer Protection of Printed Circuit Board Substrates; Jesse Jur, North Carolina State University: Jianyu Huang

Artificial SEI Formation Through Atomic Layer Deposition; Keith Gregorczyk, University of Maryland: John Sullivan

Depositing, Understanding, and Exploiting Competing Interactions in Complex Oxides; Li Yan, Los Alamos National Laboratories: Quanxi Jia

Programmable pH Buffers; Dara Gough, Sandia National Laboratories: Bruce Bunker

On-chip electrometry of single electrons in silicon for quantum computing applications; Nathaniel Bishop, Sandia National Laboratories: Mike Lilly

Scanning Tunneling Microscopy of Single DNA Bases on Graphene and Carbon Nanotube Surfaces; Dmitry Yarotski, Los Alamos National Laboratories: Jen Martinez

Photochemistry of Carbon-Based Nanostructures; Heather Jaeger, University of Rochester: Sergei Tretiak

Simulation of Radiation Damage Cascades with Electronic Excitations; Alfredo Caro, Los Alamos National Laboratories: Normand Modine

Acoustic Trapping, Concentration, and Mixing of Ultralow Concentrations of Micro/Nano Particles using a Microbubble Array; Amr Abdel-Fattah, Los Alamos National Laboratories: Andrew Dattelbaum

Synthesis and Characterization of Highly Crystallined Boron Nitride Nanotubes; Yoke Khin Yap, Michigan Technical University: Jianyu Huang

Nonlinear responses of metamaterials under irradiation of broadband intense terahertz waves; Fabrication of metamaterial samples at CINT; Jianming Dai, Rensselaer Polytechnic Institute: Hou-Tong Chen

Single molecule study of cellulose catalysis by cellulases; Jaemyeong Jung, Los Alamos National Laboratories: Peter Goodwin

Spatially resolved carbon nanotube photocurrent generation; Phillip Collins, University of California at Irvine: Han Htoon

Field-effect Optical Hall investigations of semiconductor junction properties; Mathias Schubert, University of Nebraska: Igal Brener

Influence of chemical adsorbents on the free charge carrier properties in epitaxial graphene; Mathias Schubert, University of Nebraska: Andrew Dattelbaum

Integrated Fluorescence Detection for Quantitative PCR on a DNA Dipstick; Hong Cai, MesaTech International: Jim Werner

NonLinear Metamaterials; Abul Azad, Los Alamos National Laboratories: Hou-Tong Chen

Coulomb drag studies in vertically-coupled quantum wires; Dominique Laroche, McGill University: Mike Lilly

Terahertz radiation emission from surface modified Tin Oxide nanowires; Ayan Kar, NASA Ames Research Center: Rohit Prasankumar

Low Pressure Current-Voltage Characterization of Metal/Insulator/Metal Memristors; Matthew Marinella, Sandia National Laboratories: Mike Lilly

Aging Effects on Morphology of Nafion Ionomers Using AFM Techniques; Rodney Borup, Los Alamos National Laboratories: Peter Goodwin

Synthesis of DNA-templated silver nanoclusters for small angle neutron studies; Sunil Sinha, UCSD: Jen Martinez

Characterization of phase-separated block copolymer films for reactive membranes; Michael Kent, Sandia National Laboratories: Dale Huber

In-Situ TEM Investigation of Electrokinetic Nanomanipulation and Nanoengineering of Molecular-to-Nanoscale Particles; Arunkumar Subramanian, Sandia National Laboratories: John Sullivan

Metamaterial perfect absorbers to enable terahertz generation; Willie Padilla, Boston College: John Reno

Theoretical and Experimental Characterization of the Thermoelectric Properties of Electrochemically Grown Nanowires and Nanotubes; Ryan Hatcher, Lockheed Martin: Normand Modine

Ligand-Mediated Quantum Dot Sensitization of Lanthanide Ion Emission; Ana de Bettencour-Dias, University of Nevada, Reno: Jennifer Hollingsworth

Engineering Glial Networks for Optical and Electrical Analysis of Cellular Activity; Elba Serrano, New Mexico State University: George Bachand

Understanding the Photovoltaic Properties of Conjugated Block Copolymers; Rafael Verduzco, Rice University: Han Htoon

Effect of resonant coupling between metal surface plasmons and intersubband plasmons on THz generation and intersubband transitions in InGaN/GaN multiple quantum wells; Arup Neogi, University of North Texas: Rohit Prasankumar

Research and Development of High-Sensitivity Magnetic Sensors; Sy Hwang Liou, University of Nebraska: Quanxi Jia

Nanomaterial Characterization of Lipid-Prodrug Conjugates in Liposomes for Targeted Drug Delivery; Michaelann Tartis, New Mexico Institute of Mining and Technology: Andy Shreve

Adhesion mitigations and surfaces with uniform potential for precision tests of gravity; James Phillips, Smithsonian Astrophysical Observatory: Bruce Bunker

Nanoscale Pairing Instabilities and Inhomogeneities in Clusters; Armen Kocharian, California State University of Los Angeles: Sasha Balatsky

Nanomechanical testing of fuel cell electrodes; Christina Johnston, Los Alamos National Laboratory: Nate Mara

Optically-Addressed Multiband Infrared Photodetectors; Yong-Hang Zhang, Arizona State University: John Reno

Dielectrophoretic Manipulation of Assorted Biomolecular Shuttles in Vertical Electrodes Integrated Microfluidic systems; Haiqing Liu, Sandia National Laboratories: John Nogan

Noise spectroscopy of nonequilibrium quantum fluctuations; Boris Spivak, University of Washington: Sasha Balatsky

Chromosomal Structures in Normal and Leukemic Cells Visualized by Atomic Force Microscopy; Ragnhild Rosengren-Lindquist, Karolinska Institute: Sasha Balatsky

Monolithically Integrated Optoelectronic Circuits for Novel Ultrafast Injection-Locked Transmitters; Marek Osinski, University of New Mexico: John Nogan

Mid-infrared Ultrafast Spectroscopy of Bulk and Nanoscale Vanadium Dioxide; Dave Hilton, University of Alabama at Birmningham: Rohit Prasankumar

Measurement of Stress Generation in Li-ion Battery Electrodes Using the CINT Discovery Platform; Gerald Gulley, Dominican University: John Sullivan

Probing Deformation Behavior in Near Defect-free Volume in FCC Nanograined Alloys; Devesh Misra, University of Louisiana at Lafayette: Amit Misra

Deuterated surfaces for ultra-cold neutrons; Jeff Wang, Los Alamos National Laboratories: Peter Goodwin

Nanofabricated arrays of light-harvesting complexes; Neil Hunter, University of Sheffield: Gabe Montano

Probing Electrical Properties at the Nanoscale in Strain Tuned, Supported Nanowires; Judith Driscoll, Los Alamos National Laboratories: Quanxi Jia

Out-of-plane and isotope effects on superconductivity in inhomogeneous cuprates; Anders Rosengren, Royal Institute of Technology: Sasha Balatsky

Ultrashort-pulse optical inactivation of viruses; Boian Alexandrov, Los Alamos National Laboratory: Anatoly Efimov

Cellulose decrystallization thermodynamics measured by CFM pulling experiments; Gregg Beckham, National Renewable Energy Laboratory: Peter Goodwin

Grayscale Flow Cytometry – flow cytometry integrating superparamagnetic nanoparticles, microcoils and NMR relaxometry.; Pulak Nath, Los Alamos National Laboratories: Andrew Dattelbaum

High-directivity terahertz antennas based on anisotropic zero-index metamaterials; Bin Zhou, Southeast University: Hou-Tong Chen

Iron complexes as photosensitizers in dye-sensitized solar cells; Elena Jakubikova, North Carolina State University: Andy Shreve

Novel Devices on Graphene; Kenneth Burch, University of Toronto: Andrew Dattelbaum

Origami Testbeds for Organic/Inorganic Hybrid Dipole Radiators/Absorbers; Michael Norton, Marshall University: Jen Martinez

Structure-Function Relationships for Two Methods of Nuclear Waste Disposal; Andrew Miller, Sandia National Laboratories: Jianyu Huang

In situ Investigation on Degradation Mechanism of Nano-Si Anodes; Yujie Zhu, University of Maryland: Jianyu Huang

Characterization of Calcium Cobalt Oxide Nanoshell Thermoelectrics; Tim Fisher, Purdue University: Jianyu Huang

Nanoparticle contrast agents for magneto-motive ultrasound Imaging and magneto-photo-acoustic imaging; Stanislav Emilianov, University of Texas at Austin: Dale Huber

Directed core-to-periphery energy transfer in branched and dendritic conjugated architectures. Towards artificial light-harvesting systems for solar cells; Mireille Blanchard-Desce, CNRS: Sergei Tretiak

Fraction quantum Hall effect and 5/2 state excitations in the vicinity of an etch defined quantum point contact; Wei Pan, Sandia National Laboratories: John Nogan

Directed Assembly of Lipid Domains via Surface Patterned Lipid Tethers; Darryl Sasaki, Sandia National Laboratories: Andy Shreve

Understanding the role of plasmon in the enhanced solar hydrogen production; Zhengdong Cheng, Texas A&M University: Willie Luk

Fabrication of Large Area Functional Transparent Electrodes and Smart Window using High Aspect Metallic Nanostructure; Kai-Ming Ho, Iowa State University: John Nogan