

2013B Accepted CINT User Proposals

Unstable Resonator Cavity Quantum Cascade Lasers; Chi Yang; Air Force Research Laboratory: Doug Pete

Frequency Agile IR Detectors and IR/THz Metamaterials for Space; Christian Morath; Air Force Research Laboratory: Mike Lilly

AFRL VECSEL Fabrication; Shawn Hackett; Air Force Research Laboratory: John Nogan

Continuation of Optical characterization of ultradense DNA assembled single walled carbon nanotube arrays; William Goddard III; California Institute of Technology: Jen Martinez

IMPACT OF IONIC GROUPS ON POLY-DOTS, NEW SOFT NANOPARTICLES; Dvora Perahia; Clemson University: Gary Grest

Transport Properties of Novel Meso-Scale Materials Derived from Ionic Self Assembly (ISA) and Single-Walled Carbon Nanotubes (SWNTs) Helically Wrapped by Charged, Semiconducting Polymers; Michael Therien; Duke University: Gabe Montano

Dark Electronic States in DNA-Bound Silver Clusters; Jeff Petty; Furman University: Peter Goodwin

Abinitio Modelling of Electronic Correlated Systems; Chao Cao; Hangzhou Normal University: Jian-Xin Zhu

Electrodynamics of amino acid-lipid bilayer interactions with applications to antimicrobial peptides; Merrell Johnson; Indiana University: Millie Firestone

The study of phosphoinositol containing membranes and their role in protein-lipid binding; Ann Kimble-Hill; Indiana University: Millie Firestone

Integrated mid-infrared gas sensing with plasmonic nanostructures; Young Chul Jun; Inha University: Igal Brener

Investigation of the electronic and optical properties of LAO/STO multilayers; Jason Haraldsen; James Madison University: Sasha Balatsky

BKT transition for bilayer graphene-based granular superconductors; Francesco Mancarella; KTH (Royal Institute of Technology): Sasha Balatsky

Modeling of water filtration and desalination through graphene nanopores; Konstantin Zakharchenko; KTH (Royal Institute of Technology): Sasha Balatsky

New design schemes for terahertz quantum cascade lasers; Sushil Kumar; Lehigh University: John Reno

NanoMed Targeting Systems; Kenneth Dormer; Liberty University: Dale Huber

Microscopic dynamics of photo-electronic transition processes in molecular systems; Yang Zhao; Nanyang Technological University: Sergei Tretiak

Exciton Population Dynamics in Organic-Inorganic Perovskites; Tze Chien Sum; Nanyang Technological University: Rohit Prasankumar

Nanomaterial Characterization of Lipophilic Prodrug Conjugates in Liposomes for Targeted Drug Delivery; Michaelann Tartis; New Mexico Institute of Mining and Technology: Sergei Ivanov

Thermoelectric Studies of Band Engineered Nanowires: Superlattice Quantum Well Nanowires; Julio Martinez; New Mexico State University: Brian Swartzentruber

Ab initio simulations of the interfaces in quantum dots; Svetlana Kilina; North Dakota State University: Sergei Tretiak

Characterization and Screening of Photo-Active Compounds for Use in Multi-Color Lithography Photoresists; John Petersen; Periodic Structures, Inc.: Rohit Prasankumar

Broadband perfect antireflection coatings by using metasurfaces; Li Huang; Harbin Institute of Technology: Hou-Tong Chen

Measuring Single Electrons with a Heterogeneously Integrated CMOS/III-V Circuit; Stephen Lyon; Princeton University: Mike Lilly

Ion Irradiation Induced Structural Disorder and Property Changes in Flexible Graphene Paper and Graphene-based Nanocomposites; Jie Lian; Rensselaer Polytechnic Institute: Yongqiang Wang

Faraday and Kerr rotation studies in patterned grapheme and MoS₂ micro-ribbons; Stephane Boubanga Tombet; Tohoku University: Rohit Prasankumar

Electrically controllable terahertz modulators; Daniel Mittleman; Rice University: Hou-Tong Chen

Separation of Carbon Nanotubes by Non-Destructive Chemistries for Applications in Optics and Electronics; Robert Hauge; Rice University: Stephen Doorn

Nanotwinned metals with superior radiation tolerance; Xinghang Zhang; Texas A&M University: Nate Mara

All-Dielectric Nanoantennas and Metasurfaces; Isabelle Staude; The Australian National University: Igal Brener

Utilizing and Manipulating Light-Matter Interactions in Plasmonic and Metamaterials Active Devices; Ronen Rapaport; The Hebrew University of Jerusalem: Igal Brener

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

Controlling Quantum Dynamics of Semiconductor Emitters via Its Interaction with Metallic Nanostructures; Xiaoqin Li; The University of Texas at Austin: Jennifer Hollingsworth

Magnetic activity at terahertz frequencies from ferroelectric cubic metamaterials; Xomalin Peralta; The University of Texas at San Antonio: Quinn McCulloch

Super-thin noble metals for efficient light emission and detection; Zongfu Yu; The University of Wisconsin-Madison: Willie Luk

Non-Adiabatic Excited States Molecular Dynamics: Photodynamics in conjugated macromolecules; Sebastian Fernandez Alberti; Universidad Nacional de Quilmes: Sergei Tretiak

Quantum Transport in 1D Nanostructures; Jonathan Bird; University at Buffalo: John Reno

Graphene-based multiplex approach for circulating tumor cells detection in blood; Alexandru S. Biris; University of Arkansas: Stephen Doorn

Near-Surface Thermomechanical Characterization of Plasma Facing Materials; Renkun Chen; University of California at San Diego: Nate Mara

Adhesion of Nanoparticles; Andrey Dobrynin; University of Connecticut: Mark Stevens

Measuring Ultrafast Carrier Dynamics in Nanostructured Semiconductors; Matthew Doty; University of Delaware: Rohit Prasankumar

Micromachined Thermal Platforms for Nanoscale Thermoelectric Materials and Thermal Spintronic Research; Barry Zink; University of Denver: John Nogan

GaAs Quantum Well Samples Tailored for Optically Pumped NMR Studies; Clifford Bowers; University of Florida: John Reno

Active transport by molecular motors in crowded environments; Steve Granick; University of Illinois at Urbana Champaign: George Bachand

Improving MoS₂ Nanowires as a Photo-Electrocatalyst for Renewable Hydrogen Production; Dustin Cummins; University of Louisville: Andrew Dattelbaum

The effect of Surface Reconstructions on Nanostructure Formation in Compound Semiconductors; Joanna Millunchick; University of Michigan: Normand Modine

Ion Beam Analysis of Highly Mismatched Semiconductor Alloys; Rachel Goldman; University of Michigan: Yongqiang Wang

The Role of Irradiation on Structural, Chemical, and Electrical Properties of Nanostructured Boron Carbide; Michael Nastasi; University of Nebraska: Yongqiang Wang

Nanostructure characterization of poly(pyridinium salt)s lyotropic phases; Pradip Bhowmik; University of Nevada, Las Vegas: Millie Firestone

Magnetic Microcalorimetry Using Nano-Scale Sensing Coil Geometries; Stephen Boyd; University of New Mexico: John Nogan

3D Single Particle Tracking of Binding and Internalization of Targeted Mesoporous Silica Nanoparticles; Jeff Brinker; University of New Mexico: Jim Werner

Origins of 1/f noise in low-Tc SQUIDs; Stephen T.P. Boyd; University of New Mexico: Nate Mara

Characterization of Multifunctional Nanoparticles for Enhanced Drug Delivery to the Lung; Marek Osinski; University of New Mexico: Dale Huber

Investigating the Effect of Surface Charge Regulation on Conductivity in Fluidic Nanochannels; Mark Fleharty; University of New Mexico: Wally Paxton

Surface Plasmon Modulation with Electric Field; Zhou Yang; University of New Mexico: John Nogan

AFM Active Optical probe (AAOP) for single molecular spectroscopy; Tito Busani; University of New Mexico: John Nogan

Characterization of 1020 nm semiconductor saturable absorber mirrors; Alexander Albrecht; University of New Mexico: Rohit Prasankumar

Studies of Visible Light Emission from Silicon Nanowires coupled with Plasmonic Nanocavities; Ritesh Agarwal; University of Pennsylvania: Jinkyong Yoo

Electronic energy dissipation in Semiconductor Nanowires; Dmitri Kilin; University of South Dakota: Sergei Tretiak

Exploring nano scale phenomena in two-dimensional electron gases with coherent 2DFT optical spectroscopy; Denis Karaickaj; University of South Florida: John Reno

Energy transfer from semiconductor nanocrystals into radial Silicon nanowires for solar energy conversion; Anton Malko; University of Texas at Dallas: Jennifer Hollingsworth

Temperature and Frequency Dependence of Magnetic Properties in Iron Nanoparticles; Julia Hsu; University of Texas at Dallas: Dale Huber

Strain Engineered Epitaxial Crystallographic Oriented Epitaxial Germanium Quantum well and Tunnel Field Effect Transistors; Matu Hudait; Virginia Polytechnic Institute and State University: Igal Brener

The statistical mechanics of 3D disordered semiflexible polymer networks; Frederick MacKintosh; Vrije Univeristy, Amsterdam: Mark Stevens

Radiation tolerance study on nanochannel materials; Feng Ren; Wuhan University: Yongqiang Wang

Thin-film Deposition of Anti-Perovskite Solid-state Electrolytes via Pulsed Laser Deposition (PLD); Yusheng Zhao; University of Nevada, Las Vegas: Quanxi Jia

Depletion Region Characterization in Semiconducting Nano-wires using In Situ Electrical Biasing; Matthew Mecklenburg; University of Southern California: Katie Jungjohann

Spin dynamics in strained Ge nanostructures; Yan Li; University of Utah: Jinkyong Yoo

Ge/Si heterostructured nanowires: materials and devices; Minh Nguyen; Los Alamos National Laboratory: Quanxi Jia

Understanding Sodiation of TiO₂ through In-situ Microscopy and First Principles Modeling; David Mitlin; University of Alberta: Katie Jungjohann

In-situ Studies of Metal/III-V Solid-State Reactions and Abrupt Interface Devices; Shadi Dayeh; University of California at San Diego: Jinkyong Yoo

Characterization of Li-air and Na-air discharge and charge behavior using ex-situ and in-situ transmission electron microscopy; Yang Shao-Horn; Massachusetts Institute of Technology: Katie Jungjohann

Three-Dimensional (3D) Mesoporous Carbon Networks for Energy Storage Applications; Ronggui Yang; University of Colorado at Boulder: Yang Liu

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

Nanoparticle Assisted Enzymology; Steven Hayden; Los Alamos National Laboratory: Millie Firestone

Characterization of Single Nanowire Based 3-D Li-ion Battery for Energy Storage; Jane Chang; University of California at Los Angeles: Jinkyong Yoo

Thin Films for Passivation of Polymeric Substrates for Flexible Electronics; Jesse Jur; North Carolina State University: John Nogan

Optical Characterization of Genomic Sensor based on DNA-Directed Gold Nanorod Assemblies; Susan Brozik; Sandia National Laboratories: Katie Jungjohann

Nano-material processing and characterization of integrated hybrid photovoltaic and thermoelectric; Hope Quintana; New Mexico State University: Sergei Ivanov

High-Strength Carbon Nanotube Fiber and Composites; Terry Holesinger; Los Alamos National Laboratory: Nate Mara

Core-Shell Type-II Nanocrystals for Studies of Excitonic Aharonov-Bohm Effect; Igor Kuskovsky; Queens College of CUNY: Sergei Ivanov

Morphology control of colloidal nanocrystals for novel photophysics and charge transport; Weonkyu Koh; Los Alamos National Laboratory: Sergei Ivanov

Synthetic Explorations of Novel 'Inverted Nanoshells'; Niladri Karan; Los Alamos National Laboratory: Sergei Ivanov

Radiation Effects on Mechanical Properties of Coated Nanoscale Gold Foams; Magalena Serrano de Caro; Los Alamos National Laboratory: Nate Mara

Coherent Control of Exchange Coupling Between Electrons Bound to Donors in Silicon; Dwight Luhman; Sandia National Laboratories: Mike Lilly

Two electrons donor-island qubit in silicon; Malcolm Carroll; Sandia National Laboratories: Mike Lilly

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

3D Metal Optomechanics; Bruce Burckel; Sandia National Laboratories: Ryan Camacho

Modeling of Electronic and Thermo-electric Transport through Tunable Tunneling Junctions and Thermal Links; Towfiq Ahmed; Los Alamos National Laboratory: Jian-Xin Zhu

electron-hole bilayers in Si/SiGe heterostructures; Tzu-Ming Lu; Sandia National Laboratories: Mike Lilly

Active Control of Slow Light Using Terahertz Plasmonic Crystals; Greg Dyer; Sandia National Laboratories: Rohit Prasankumar

Energy - Electron transfer and Electrochemical Studies Using Separated Chiral Nanotubes; Navaneetha Krishnan Subbaiyan; Los Alamos National Laboratory: Stephen Doorn

Engineering intrinsic and Extrinsic Interference in Electronic States of One-Dimensional Materials as Measured by Resonant Raman Scattering; Erik Haroz; Los Alamos National Laboratory: Stephen Doorn

Controlling Charge Transfer Dynamics at P3HT/C60 Interfaces; Dmitry Yarotski; Los Alamos National Laboratory: Anatoly Efimov

THz Signatures of Macromolecules: Spectroscopy in Nano Basins; Boian Alexandrov; Los Alamos National Laboratory: Jen Martinez

Lab-on-a-chip device based on active transport of receptor-modified artificial microtransporters; Ronen Polsky; Sandia National Laboratories: Wally Paxton

3D Molecular Tracking of a Disordered Bacterial Spore Protein; Dung Vu; Los Alamos National Laboratory: Jim Werner

Understanding Semiconductor Defects with a Bounds-Analysis Approach and Hybrid Density-Functional-Theory Calculations; Alan Wright; Sandia National Laboratories: Normand Modine

Correlation of Microstructure with Strength within Weld Nuggets of Bulk Friction Stir Welded Cu/Nb Nanolamellar Composites; John Carpenter; Los Alamos National Laboratory: Nate Mara

Nano-Scale Characterization of PBI-Based Hollow Fiber Membranes for Pre-combustion Carbon Dioxide Capture; Ganpat Dahe; Los Alamos National Laboratory: Nate Mara

Decoupling Superconducting Qubits from the Measurement Bus for Improved Gating and Coherence; Rupert Lewis; Sandia National Laboratories: John Nogan

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

Sodium intercalation oxides as thin film sodium ion cathodes; Jon Ihlefeld; Sandia National Laboratories: Quanxi Jia

Thermal Transport at Interfaces; Leslie Phinney; Sandia National Laboratories: Tom Harris

Directed Search for a New Family of Layered Heavy Fermion Superconductors; Nirmal Ghimire; Los Alamos National Laboratory: Darrick Williams

Tracking Carrier Dynamics in Nitride-Based Nanowires; George Wang; Sandia National Laboratories: Rohit Prasankumar

Light Funneling through Ultra-subwavelength Channels for Broadband Detection; Ganapathi Subramania; Sandia National Laboratories: Dale Huber

High fidelity engineering of neural networks for correlating architecture with function; Conrad James; Sandia National Laboratories: Wally Paxton

A Portable Microfluidic Device for Manipulation and Detection of Biological Cells; Jim Coons; Los Alamos National Laboratory: Jon Kevin Baldwin

Nanostructured charge gating electron source; Roger Shurter; Los Alamos National Laboratory: John Nogan

Terahertz Quantum Cascade Lasers for Security and Military Applications; Qing Hu; Massachusetts Institute of Technology: John Reno

Dynamic nonequilibrium states in cooperating autonomous systems; Henry Hess; Columbia University: George Bachand

High Power Photoconductive Switches; Daniel Derkacs; Emcore: Ganapathi Subramania

Direct Evaluation of As-grown Multi-junction Solar Cells using Photoluminescence; Yong Lin; Emcore: Igal Brener

