CINT 2016B Accepted Proposals

A thin film approach to topology tuning in heavy-fermion materials; Zhiqi Liu, Los Alamos National Laboratory: Quanxi Jia

Al\AlOx SETs for charge sensingand spin readout of electrons on helium (eons); Rupert Lewis, Sandia National Laboratories: Tom Harris

Atomic-precision bipolar devices; Josh Ballard, Zyvex Labs, Inc: John Nogan

Atomic-precision single-donor atoms for a Si quantum computer; Josh Ballard, Zyvex Labs, Inc: Brian Swartzentruber

Atomic-precision tunnel junctions for Si quantum computing; Richard Silver, NIST: John Nogan

Bright defects in zinc oxide nanowires for quantum photonic applications; Xuedan Ma, Argonne National Laboratory: Jinkyoung Yoo

Cesium adsorption and desorption on clay minerals in the presence of natural organic matter; Hongkyu Yoon, Sandia National Laboratories: Katie Jungjohann

Composite photonic materials: From quantum photon generation to efficient coherent multi-photon light emission; Oleksiy Roslyak, Fordham University: Han Htoon

Convergent study of SiGe epitaxy for Si quantum computing; Chris Richardson, University of Maryland: John Reno

Magnetic Targeting of Nanoformulations for Atrial Fibrillation; Kennet Dormer, Liberty University: Dale Huber

Coupling single nanocrystals to metallic antennas; Stephan Goetzinger, Max Planck Institute for the Science of Light: Jennifer Hollingsworth

Covalent Functionalization of Gold Nanorods and Transition Metal Layered Chalcogenides (TMD) Using the CINT Microfluidic Discovery Platform (MDP); Rich Vaia Air Force Research Laboratory (AFRL): Dale Huber

Degradation Mechanisms Specific to Nanoscale Li-Ion Electrodes; Subrahmanyam Goriparti, Sandia National Laboratories: Katie Jungjohann

Design and Evaluation of Nano-Composite Inductors for Extreme Power Density Converters; Robert Pilawa, University of Illinois at Urbana Champaign: Dale Huber

Developing a New Family of Wurtzite CuZn2ASe4 (A=Al, Ga, In) Nanocrystals for Solar Cell Application; Soubantika Palchoudhury, University of Tennessee: Katie Jungjohann

Digital Electronics at the Atomic Limit; Shashank Misra, Sandia National Laboratories: Mike Lilly

Discovery of wide band gap bulk insulating topological insulators; Madhab Neupane, University of Central Florida: Jian-Xin Zhu

Disrupting the coffee-ring deposition effect via externally induced Marangoni flows for precise placement of nanowires; Ron Salesky, Vista Therapeutics: John Nogan

Doping-Induced Tuning of the Thermochromic Phase Transition in Atomic Layer Deposited VO2; Virginia Wheeler, U.S. Naval Research Laboratory: Katie Jungjohann

Ductile to Brittle Transition of Silicon at the Nanoscale; William Gerberich, University of Minnesota: Nate Mara

Effects of Electrical Fields on Ionic Polymeric Membranes; Dvora Perahia, Clemson University: Gary Grest

Electronic Properties of Benzyne-functionalized Graphene and Graphite; Liliya Frolova, New Mexico Institute of Mining and Technology: Sergei Tretiak

Elucidating the electronic bandstructure of layered 2D materials using photoelectron spectroscopy; Aditya Mohite, Los Alamos National Laboratory: Taisuke Ohta

Examination of Grain Boundary Solute Segregation in Nanocrystalline Binary Alloys as a Function of Grain Boundary Character: Toward Improved Thermal Stability; Christopher Barr, Sandia National Laboratories: Katie Jungjohann

Exploring highly conducting oxides by combining high-pressure and thin-film techniques; Xujie Lu, Los Alamos National Laboratory: Aiping Chen

Fabrication and Characterization of III Nitride Superluminescent Diodes; Daniel Feezell, University of New Mexico: John Nogan

First-principles statistical mechanics of ionic alloys; Anton Van der Ven, University of California at Santa Barbara: Normand Modine

Growth of Ge/Si core/shell nanowires for quantum bits and Majorana fermions; Sergey Frolova, University of Pittsburgh: Jinkyoung Yoo

High-efficiency Mie-resonant nanostructures for visible frequencies; Isabelle Staude, Friedrich-Schiller University: Igal Brener

High-power and single-mode quantum cascade lasers for terahertz sensing; Sushil Kumar, Lehigh University: John Reno

Implementation of Terahertz Devices by Integrating Metamaterials and 2D materials; Xin Zhang, Boston University: Hou-Tong Chen

In Situ SAXS on Semi-Crystalline Polymers under Tensile Deformation; Cynthia Welch, Los Alamos National Laboratory: Millie Firestone

In situ TEM Nanomechanics of 3D Printed Nanotwinned Metallic Micro/Nanostructures Fabricated via Localized Electrodeposition; Majid Minary, University of Texas at Dallas: Khalid Hattar

In-situ Electrochemical TEM on All Solid State Batteries; Albert Alec Talin, Sandia National Laboratories: Katie Jungjohann

In-situ Heating TEM Study of Metal-alloyed Contact Formation in III-V Nano-channels; Shadi Dayeh, University of California at San Diego: Katie Jungjohann

In-situ TEM Analysis of Sodiation Reactions in Sn and Sn Alloys; David Mitlin, Clarkson University: Katie Jungjohann

In-situ TEM Characterization of Solid Electrolyte in 3D Lithium Ion Nanobattery; Jane Chang, University of California at Los Angeles: Katie Jungjohann

Interface study on heterojunctions formed by the transfer-printed semiconductor nanomembrane; Jung Hun Seo, University at Buffalo: Jinkyoung Yoo

Interplay of strain and oxygen vacancies on functional properties in lanthanide cobaltate double perovskite thin films; Chonglin Chen, The University of Texas at San Antonio: Quanxi Jia

Ion Beam Analysis of Highly Mismatched Alloy Films; Rachel Goldman, University of Michigan: Yongqiang Wang

Ion Binding and Transport in Nanoscopic Pathways; Susan Rempe, Sandia National Laboratories: Mark Stevens

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

Lithography for Atomic Physics Applications in Space; Mayer Landau, Air Force Research Laboratory (AFRL): John Nogan

Low-dimensional electron/hole systems in SiGe heterostructures; Tzu-Ming Lu, Sandia National Laboratories: Mike Lilly

Mechanical and radiation response of nanolayered and nanotwinned metals; Xinghang Zhang, Purdue University: Nate Mara

Mechanical Test on Additive Manufacture Parts Utilizing Nanoindention; Joseph Torres, Los Alamos National Laboratory: Nate Mara

Mesoscale LASER Sample Milling; Ross McDonald, Los Alamos National Laboratory: Quinn McCulloch

Metamaterial-Based Infrared Modulators; Jason Valentine, Vanderbilt University: Igal Brener

Metasurface Enabled Illusion Optics; Jensen Li, University of Birmingham: Hou-Tong Chen

Micromachined Thermal Platforms for Nanoscale Thermoelectrics and Spintronics; Barry Zink, University of Denver: John Nogan

Modeling of conducting conjugated polymers. Part 2: Modeling electronic structure and its coupling to molecular dynamics; Andriy Zhugayevych, Skolkovo Institute of Science and Technology: Sergei Tretiak

Molecular shuttles and dynamic nanostructures; Henry Hess, Columbia University: George Bachand

Morphological Effects on the Mechanical Properties of Bicontinuous Metal Composites; Ian McCue, Texas A&M University: Nate Mara

Multicolor IR Photodetectors using Plasmonic Interactions; Mayer Landau, Air Force Research Laboratory (AFRL): Doug Pete

Nanocomposite Heteroepitaxial Films with Enhanced Magnetoelectric Coupling; Judith Driscoll, University of Cambridge: Quanxi Jia

Nanopatterning of gas-bubble superlattice in bcc metals; Cheng Sun Idaho National Laboratory: Yongqiang Wang

Nanoscale generation of terahertz radiation; Mark Hagmann, NewPath Research L.L.C.: Anatoly Efimov

Nanoscale phenomena in two-dimensional electron gases at extreme magnetic fields; Denis Karaiskaj, University of South Florida: John Reno

Nanoscale Structure in Low Miscibility, Narrow Band Gap Semiconductor Alloys; Joanna Millunchick, University of Michigan: Normand Modine

Nanoscale thermoelectric device based on 2D-layered materials;Chiyui Ahn, The University of Texas at San Antonio: Tom Harris

Nanostructured Alloys and Grain Boundary Structure in Radiation Environments; Mitra Taheri, Drexel University: Khalid Hattar

Nanostructured Kondo Topological Insulators as Highly Efficient Thermoelectric Materials; Julio Martinez, New Mexico State University: Brian Swartzentruber

Non-Classical Photon Emission from Cooper Pairs; Michael Gehl, Sandia National Laboratory: Willie Luk

Nonlinear Conductance of Quantum Point Contacts Due to Phonon-Controlled Disorder; Jonathan Bird, University at Buffalo: John Reno

Novel magneto-transport phenomena in two-dimensional electron systems via hybridized electron-photon modes enabled by metamaterials; Chun-Chieh Chang, Los Alamos National Laboratory: Hou-Tong Chen

Novel Metal-Oxide Nanocomposites in Epitaxial Thin Film Form; Haiyan Wang, Purdue University: Hou-Tong Chen

Observation of Nucleation and Growth Dynamics of Condensed Droplets on Nanostructured Superhy hobic Surfaces; Ronggui Yang, University of Colorado at Boulder: Tom Harris

Observing temperature effects on nanobattery anode degradation; Zoey Warecki, University of Maryland College Park: Katie Jungjohann

Optoelectronic properties of 0D-2D heterostructures; Anupama Kaul, University of Texas at El Paso: Han Htoon

Photon sources based on spontaneous parametric down-conversion in integrated periodic nanostructures; Frank Setzpfandt, Friedrich-Schiller University: Igal Brener

Physics of electrostatic discharge; Ezra Bussmann, Sandia Laboratories: Brian Swartzentruber

Poly-crystalline Material Characterization; Sadasivan Shankar, Harvard University: Normand Modine

Preparation of Wafers for Solar Composition Analysis; Roger Wiens, Los Alamos National Laboratory: John Nogan

Probing the Structure-Property Relationship of Mixed Polymer Brushes; Chester Simocko, San Jose State University: Dale Huber

Quantification of Thermal Instability within Commercial Lithium-Ion Battery Components; Heather Barkholtz, Sandia National Laboratory: Sergei Ivanov

Quantum Cascade Laser for Elevated Temperatures; Lutfi Ozyuzer, Izmir Institute of Technology: John Reno

Radiation response in nanocrystalline spinels; Juan Wen, Lanzhou University: Yongqiang Wang

Real-time in-line magnetic metrology for magnetic nanoparticle synthesis; Thomas Crawford, University of South Carolina: Dale Huber

Rigorous Measurement Scheme for Sizing Magnetic Nanoparticles; Maarij Syed Rose-Hulman, Institute of Technology: Dale Huber

SAXS Characterization of Pluronic Block Copolymers/Oil/Water; Reza Foudazi, New Mexico State University: Millie Firestone

Secure Timing Authentication Via Silicon Nanophotonics Based Quantum Correlations; Junji Urayama, Sandia National Laboratories: Ryan Camacho

SEI formation and growth characteristics on Sn thin films; James Browning, Oak Ridge National Laboratory: Jon Kevin Baldwin

Single Quantum Emitters in Atomically Thin Materials; Ajit Srivastava, Emory University: Han Htoon

Study of Resonant Light Scattering By Artificial Nanostructures; Sang-Yeon Cho, New Mexico State University: Igal Brener

Studying ultrafast non-equilibrium cooper pairs in resonant plasmonic nanoresonators on superconductors; Jiangfeng Zhou, University of South Florida: Hou-Tong Chen

Superconducting Nuclear Recoil Sensor for Directional Dark Matter Detection; Markus Hehlen, Los Alamos National Laboratory: John Nogan

Switchable Terahertz Metasurfaces; Daniel Mittleman, Brown University: Hou-Tong Chen

Synthesis of SiO2 coated Cu Nanoparticles for use as SERS probes; Gary Rayson, New Mexico State University: John Nogan

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

The Nanoscience of III-nitride Heterointerfaces; Jonathan Wierer, Lehigh University: Igal Brener

Theoretical study for topological superconducting material in mirror symmetry based nano devices; Hongchul Choi, Los Alamos National Laboratory: Jian-XinZhu

Theoretical understanding of structural stability and multiferroic property of Bi3Fe2Mn2O10 supercell; Haiyan Wang, Purdue University: Jian-Xin Zhu

Thermoelectric effect in S/F hybrid nanostructures; Meenakshi Singh, Colorado School of Mines: Mike Lilly

THz Coherent Absorption and Polarization Control Using Chiral Metamaterials; Zhimin Shi, University of South Florida: Hou-Tong Chen

THz/IR QCL frequency combs for threat detection; Qing Hu, Massachusetts Institute of Technology: John Reno

Time-resolved Measurements of Defect States and Transport in Type II Superlattices; Sanjay Krishna, University of New Mexico: Rohit Prasankumar

Toward Tunable Functionalities Using Epitaxial Nanoscaffolding Films; Quanxi Jia, University of Buffalo: Aiping Chen

Understanding Si-Decorated Nanoporous-Carbon Anodes for High-Performance Li-Ion Energy Storage; Katharine Harrison, Sandia National Laboratories: Katie Jungjohann

Understanding The Role of Dose Rate and Temperature on the Phase Stability of Ni based alloys; Osman Anderoglu, University of New Mexico: Khalid Hattar

Understanding two-level system losses and the proximity effect using superconducting resonators; Rupert Lewis, Sandia National Laboratories: Tom Harris

Unlocking Nanoscale Charge Transport Dynamics in Thin Films using Multiple Integrated Tips Device; Kwame Amponsah, Xallent LLC: John Nogan

Unraveling novel electronic states at the interface of Dirac materials; Elbert Chia, Nanyang Technological University: Jian-Xin Zhu

Vibrationally mediated exciton spin interconversion processes; John Grey, University of New Mexico: Rohit Prasankumar