2009B Accepted CINT User Proposals

Integrating Redox-Wired Nanoparticles into Nanoporous Anodic Aluminum Oxide, Juchao Yan, Eastern New Mexico University; Lead CINT Scientist: Gabe Montano

Ultrafast Dynamics in Pentacene Single Crystals and Films, Verner Thorsmolle, University of Geneva; Lead CINT Scientist: Sergei Tretiak

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

Investigating Telomere Structure and Function by Atomic Force Microscopy and Fluorescence Microscopy, Edwin Goodwin, Kroma TiD Inc; LEAD CINT Scientist: Peter Goodwin

Improvement of NEMS/MEMS Performance by Structural Vibrations, Zayd Leseman, University of New Mexico; LEAD CINT Scientist: John Sullivan

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

Combined optical and transport study of single semiconductor nanowire field effect transistors, Hongbin Yu, Arizona State University: LEAD CINT Scientist: Han Htoon

The effect of structure on carrier dynamics in lead chalcogenide-based heterostructured nanocrystal quantum dots, Jeffrey Pietryga, Los Alamos National Laboratory; LEAD CINT Scientist: Richard Schaller

In-situ Quantitative Nanomechanical investigation of Metallic Nanowires, Jun Lou, Rice University; LEAD CINT Scientist: Jianyu Huang

4.7 THz Local Oscillator Development for Airborne Astronomical Observations, Michael Wanke, Sandia National Laboratories, New Mexico; LEAD CINT Scientist: John Reno

Modeling Nanostructured Materials Networks for Energy Conversion and Computation, Jessika Trancik, Massachusetts Institute of Technology; LEAD CINT Scientist: Amalie Frischknecht

III-V Nanopillar Array Development for Photonic and Electronic Application, Diana Huffaker, University of California, Los Angeles; LEAD CINT Scientist: Aaron Gin

Characterization of Thermal Actuators using Atomic Force Microscope (AFM) Moire Method, Helena Jin, Sandia National Laboratories, California; LEAD CINT Scientist: John Sullivan

Method of Self-Assembling Nanowire Surface Pattern, Daniel Sheehan, University of San Diego; LEAD CINT Scientist: Jennifer Hollingsworth

Solution-Phase Growth of Ordered Arrays of Semiconductor Nanowires From "Printed" Metal Catalyst, Jennifer Hollingsworth, Los Alamos National Laboratory; LEAD CINT Scientist:

Jennifer Hollingsworth

Tunneling Transport and Strain Relaxation in SiGe and Ge Axial Heteronanowire, Alex Zavlasky, Brown University; LEAD CINT Scientist: Tom Picraux

In Situ Monitoring of Nanostructure Growth for Hybrid Photovoltaics, Yun-Ju Lee, Sandia National Laboratories, New Mexico: LEAD CINT Scientist: Sergei Ivanov

Light Trapping for Photovoltaics, Edward Gillman, Senspex, Inc., LEAD CINT Scientist: Willie Luk

Resonant Inelastic Transport, Michael Galperin, University of California, San Diego; LEAD CINT Scientist: Stuart Trugman

Dynamic Carrier Confinement at the Nanoscale Using Acoustic Phonon, David Hurley, Idaho National Engineering & Environmental Laboratory: LEAD CINT Scientist: John Sullivan

Visible Photonic Crystal Cavities for Tailored Light – Matter Interactions, Ganapathi Subramania, Sandia National Laboratories; LEAD CINT Scientist: Aaron Gin

Nancomposite Heteroepitaxial Films with Enhanced (Multi) Functionality, Judith Driscoll, University of Cambridge; LEAD CINT Scientist: Quanxi Jia

Monolithically Integrated Optoelectronic Circuits for Novel Ultrafast Injection-Locked Transmitters, Marek Osinski, University of New Mexico; LEAD CINT Scientist: Aaron Gin

Conductivity Measurements of Cooperative Binary Ionic Nanomaterials, John Shelnutt, Sandia National Laboratories, New Mexico; LEAD CINT Scientist: Brian Swartzentruber

Nano-Indentation on Ion Irradiated Uranium-bearing Delta Phase Compounds, Ming Tang, Los Alamos National Laboratory; LEAD CINT Scientist: Nathan Mara

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

Advanced Hot-Electron Nanobolometers for Infrared Detection and Photon Counting, Robin Cantor, Star Cryoelectronics, Inc; LEAD CINT Scientist: Aaron Gin

Investigation of the Microstructure of Ferromagnetic Double Perovskite La2BB'06 Nanoparticles by Transmission Electron Microscopy, Yuanbing Mao, Washington State University; LEAD CINT Scientist: Jianyu Huang

Effect of structural length scales on the magnetic field-induced martensitic phase transformation in NiMnColn meta-magnetic shape memory alloys, Nevin Ozdemir, Texas A & M University; LEAD CINT Scientist: Doug Pete

Integration of energy-creation and energy-saving functional-oxide devices, Hiroyuki Akinaga, Advanced Industrial Science & Technology; LEAD CINT Scientist: Normand Modine

Understanding Formation of Non-Cubic Halite Particles to Enable Predictions of Radiation Effects in Salt Repositories, Ahmed Ismail, Sandia National Laboratories, New Mexico; LEAD CINT Scientist: Hianyu Huang

Failure processes in plastic bonded explosives: Characterization of the crystal-binder interface structure and adhesions, John Yeager, Los Alamos National Laboratory; LEAD CINT Scientist: Andrew Dattlebaum

Short channel silicon nanowire field effect transistor with huge strain originated from epitaxial silicide source/drain contacts, Wei Tang, University of California, Los Angeles; LEAD CINT Scientist: Tom Picraux

Structural Characterization of Nanostructured Thermoelectric Materials, Wenzhi Li, Florida International University; LEAD CINT Scientist: Hianyu Huang

Simulation of Heat Transfer in Field Emission Devices Generating Large Currents at Terahertz Frequencies, Mark Hagmann, New Path Research; LEAD CINT Scientist: Normand Modine

Patterning Multiple Layers of Graphene, Ju Li, University of Pennsylvania; LEAD CINT Scientist: Jianyu Huang

Strain Engineering of Graphene Band Structure: A Raman Study, Stephen Doorn, Los Alamos National Laboratory; LEAD CINT Scientist: John Sullivan

Ultrafast optical investigation of interface and proximity effects in nanoscale oxide ferromagnet-superconductor Ineterostructures, Diyar Talbayev, Yale University; LEAD CINT Scientist: Toni Taylor

Field-Based Simulations of Directed Self-Assembly in a Mixed Brush System, Glenn Fredrickson, University of California, Santa Barbara; LEAD CINT Scientist: Amalie Frischknecht

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

Heteroepitaxial Growth of Compound Semiconductor Nanowires on Plastics (updated), Alp Findikoglu, Los Alamos National Laboratory; LEAD CINT Scientist: Jennifer Hollingsworth

Optical Characterization of Plasmon-Enhanced Photoluminescence from QD/Dielectric/Metal/Core/Intermediate/Shell) nanocomposite particles, Shisheng Xiong, University of New Mexico; LEAD CINT Scientist: Willie Luk

Size dependent Electron-Phonon Coupling and Phonon Transport, Masashi Yamaguichi, Rensselaer Polytechnic Institute; LEAD CINT Scientist: John Sullivan

Silica-Phospholipid Membrane Nanocomposites: Synthesis and Characterization of Robust Biological Transport Systems, Gabriel Lopez, University of New Mexico; LEAD CINT Scientist: Andy Shreve

AFM, STM and SEM measurements of the morphology of grapheme thin films, Taisuke Ohta, Sandia National Laboratories, New Mexico; LEAD CINT Scientist: Brian Swartzentruber

Investigation of self-organized nanocomposite 3-element thin film layers produced by high-power ion beam ablation, Timothy Renk, Sandia National Laboratories, New Mexico; LEAD CINT Scientist; Brian Swartzentruber

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

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

In-Situ TEM Electrochemistry and Nanoparticle Synthesis, Mike Shaw, Sandia National Laboratories, New Mexico; LEAD CINT Scientist: John Sullivan

Electronic Differentiation of NDA and Organic/Inorganic Hybrid Nanostructures, Hiroyuki Tanaka, Osaka University; LEAD CINT Scientist: Sasha Balatsky

Optical Tweezing and Injetion of Semiconductor Nanowires, Christian Brown, University of St. Andrews; LEAD CINT Scientist: Jennifer Hollingsworth

Advanced Characterization of Detonated Nanodiamonds for Energy Security, Kristin Bennett, U.S. Department of Energy –Washington, D. C.; LEAD CINT Scientist: Jianyu Huang

Vortex physics in superconductors with nano-engineered core and magnetic pinning landscapes, Leonardo Civale, Los Alamos National Laboratory; LEAD CINT Scientist: Quanxi Jia

A Superlattice Bragg Filter for electrons, Angelo Mascarenhas, National Renewable Energy Laboratory; LEAD CINT Scientist: John Reno

Plasmonic-Exitonic Interactions in Metal Sheet-giant Quantum Dot Constructs, Hsing-Lin Wang, Los Alamos National Laboratory; LEAD CINT Scientist: Jennifer Hollingsworth

Developing new techniques for the investigation of emergent behavior on the nanoscale, Kenneth Burch, University of Toronto; LEAD CINT Scientist: Toni Taylor