2012B Accepted CINT User Proposals

A broadband and electrically tunable amplifier for THz light; David Cooke, McGill University: Mike Lilly

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

Carrier Diffusion Measurements in Silicon Nanowires; Joan Redwing, The Pennsylvania State University: Tom Picraux

Collaborative atomic-scale design, analysis, and nanofabrication for record breaking, single-crystal Zn(x)Cd(1-x)Te solar cell arrays; David Zubia, The University of Texas at El Paso: Willie Luk

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

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

Creation of a field effect nanowire covered by lipid bi-layer and ion channel associated with Cystic Fibrosis for rapid discovery of new treatments; Spencer Farr, Vista Therapeutics: John Nogan

Defective Nanowires: Doping and defects as tools for new electro-optical functionalities; Prashant Nagpal, University of Colorado Boulder: Jennifer Hollingsworth

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

Development of Coupled Nanoantenna Assisted Photodetectors; Sang-Yeon Cho, New Mexico State University: Jennifer Hollingsworth

Development of high-throughput procedure for preparing nanowire discovery platform through dip-pen nanolithography; Jinkyoung Yoo, Los Alamos National Laboratory: Tom Picraux

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

Direct Observation of Charge Separation and Migration in Carbon-Based Photovoltaic Solar Cell Devices using Electrostatic Force Microscopy (EFM); Sibel Ebru Yalcin, Los Alamos National Laboratory: Stephen Doorn

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

Electrochemically Induced Degradation in Nanostructured Electrodes for Lithium Ion Batteries: In Situ TEM and Multiphysics Modeling; Ting Zhu, Georgia Institute of Technology: Tom Harris

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

Estimating Vibrational Displacements from Resonance Raman Intensities of Conjugated Polymer Donor/Acceptor Charge Transfer Complexes; John Grey, The University of New Mexico: Stephen Doorn

Evolution of surface patch potentials with surface contamination by adsorbates; Claire White, Los Alamos National Laboratory: Gary Kellogg

Fabrication and assessment of high-performance photovoltaic devices based on Si radial p-i-n junction nanopillar arrays; Jinkyoung Yoo, Los Alamos National Laboratory: Tom Picraux

Fabrication and Characterization of MOM RRAM Memristors for Neuromorphic Device Applications; Marek Osinski, The University of New Mexico: John Nogan

Fabrication and Characterization of a Single Hole Transistor in p-type GaAs/AlGaAs Heterostructures; Lisa Tracy, Sandia National Laboratory: John Reno

Fabrication and near-field optical characterization of plasmonic and integrated nanomaterials; Terefe Habteyes, The University of New Mexico: Mike Lilly

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

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

Formation of Fe16N2 anisotropic nanocomposite magnets by nitrogen ion implantation; Jianping Wang, The University of New Mexico: Tom Picraux

FTIR ellipsometry of materials for nanoelectronics; Stefan Zollner, New Mexico State University: Igal Brener

Geo-microfluidics: Microscopic Model Systems of Deep Geologic Formations; Amr Abdel-Fattah, Los Alamos National Laboratory: Andrew Dattelbaum

High-capacity/high-power battery and supercapacitors based on novel Li-rich solid electrolytes; Luke Daemen, Los Alamos National Laboratory: Quanxi Jia

IMAGING INTERFEROMETRIC NANOSCOPY TO THE LIMITS OF AVAILABLE FREQUENCY SPACE; Yuliya Kuznetsova, The University of New Mexico: Sergei Ivanov

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

Interaction of Tau Protein with Model Lipid Membranes in Relation to Alzheimer's Disease; Emmalee Jones, The University of New Mexico: Dale Huber

In Situ Deformation of Metal Ceramic Nanolaminate Composites in a Transmission Electron Microscope (TEM); Nik Chawla, Arizona State University: Nathan Mara

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

In-situ TEM experiments of electrochemical lithiation and delithiation of carbon nanotube-SnO2 core-shell nanowires; Wenzhi Li, Florida International University: Yang Liu

In-Situ TEM Investigation of Electrokinetic Nanomanipulation and Nanoengineering of Molecular-to-Nanoscale Constructs; Arunkumar Subramanian, Virginia Commonwealth University: Tom Harris

Investigation of energy-creation and energy-saving functional-oxide devices; Shuichi Noda, National Institute of Advanced Industrial Science and Technology: Quanxi Jia

Ion-irradiation Induced Interfacial Structure Change in Nanocrystalline Oxides and Carbides; Yanwen Zhang, The University of Tennessee, Knoxville: Tom Picraux

Iron Complexes as Photosensitizers in Dye-Sensitized Solar Cells (Project Phase II); Elena Jakubikova, North Carolina State University: Andrew Dattelbaum

Low-dimensional metamaterial enhanced light-emitting devices; Yongyao Chen, Oklahoma State University: Igal Brener

Magnetoplasticity at the Nanoscale; Michael Lund, University of Minnesota: Nathan Mara

Mechanical Response and Radiation Tolerance in Nanoporous Foams; Magalena Serrano de Caro, Los Alamos National Laboratory: Nathan Mara

Metamaterial-based wideband terahertz modulators; Withawhat Withayachumnankal, The University of Adelaide: Hou-Tong Chen

Metamaterial Infrared Detectors for Multispectral and Polarimetric Sensitivity; Sanjay Krishna, The University of New Mexico: Jennifer Hollingsworth

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

Multi-exciton generation in quasi-type-II infrared core/shell quantum dots; Claudiu Cirloganu, Los Alamos National Laboratory: Anatoly Efimov

Nanoindentation investigation: Nanomechanics of semicrystalline polymer plasticity; Jevan Furmanski, Los Alamos National Laboratory: Nathan Mara

Nano-Scale Characterization of PBI based Hollow Fibers Membranes for Pre-combustion Carbon Dioxide Capture; Ganpat Dahe, Los Alamos National Laboratory: Nathan Mara

Nanoscale Piezoelectric Effect Induced Surface Electrochemical Catalysis in Fluidics; Haiqing Liu, Sandia National Laboratories: Tom Harris

Nanoscopic Recrystalization Dynamics and Phase Behavior in Liquid Crystals and Polymers; Nicholas Parra-Vasquez, Los Alamos National Laboratory: Stephen Doorn

Nanostructure Fabrication of Fiber-Bragg Gratings For High Speed Velocity, Position, Pressure and Temperature Measurements; Eric Udd, Columbia Gorge Research: Quinn McCulloch

Near field probe integration - towards nanometer scale THz spectroscopy and imaging; Oleg Mitrofanov, University College of London: Igal Brener

Novel Persistent Current Nanostructured Metamaterial for Magnetic and Magneto-Optic Applications; Palash Gangopadhyay, The University of Arizona: Igal Brener

Optical and Electronic Properties in Ferromagnetic Oxide Nanostructures; Wei Pan, Sandia National Laboratories: Quanxi Jia

Out-of-plane impurities and layers in high Tc superconductors and graphene: pairing similarities and differences; Armen Kocharian, California State University Los Angeles: Sasha Balatsky

Parallel Bottom-Up Nanomanufacturing of CNT-based NEMS; Horacio Espinosa, Northwestern University: Tom Harris

Polymer-Assisted Chemical Solution Approach to Metal Oxide Network Nanostructures for Lithium-Ion Batteries; Hongmei Luo, New Mexico State University: Quanxi Jia

Polymers at Air-Liquid Interfaces; Michael Rubinstein, The University of North Carolina: Gary Grest

Polymer Protected Nanoparticles; M Josefina Arellano-Jimenez, Universidad Nacional Autónoma de México: Yang Liu

Precision laser machining for ion etching masks fabrication; Vitaly Pavlenko, Los Alamos National Laboratory: Quinn McCulloch

Probing Reconstruction and Ordering in Perovskite Superlattices: Realisation of New Functional Materials at Interfaces; Judith Driscoll, University of Cambridge: Quanxi Jia

Probing the ultrafast dynamics of strongly coupled light matter states; Tal Ellenbogen, Tel Aviv University: Igal Brener

Profiling the Interfaces of Core Shell Quantum Dots using NMR Spectroscopy; Geoffrey Strouse, The Florida State University: Jennifer Hollingsworth

Quantifying the effect of multiple chromophores in proximity to a fluorogen on the photophysical and spectroscopic properties of multichromophores and tandem dyes; Marcel Bruchez, Carnegie Mellon University: Peter Goodwin

Quantum Dot - Fluorescent Protein FRET Biosensors; Gang Bao, Georgia Institute of Technology: Jennifer Hollingsworth
Quantum electronics in GaAs/AlGaAs by means of resistive NMR and scanned probe imaging; Guillaume Gervais, McGill University: Mike Lilly

Real Time Exciton Dynamics in Molecular Crystals; Johannes Gierschner, Madrid Institute for Advanced Studies: Sergei Tretiak

Relaxation dynamics of lattice and spin-lattice polaron; Janez Bonca, The Jozef Stefan Institute: Stuart Trugman

SEM in-situ Compression of Hollow Gold Nanosphers; Michael Lund, University of Minnesota: Nathan Mara

Separation- and Orientation-Dependence of Metal-Enhancement and Quenching of Quantum Dot Photoluminescence by Plasmonic Gold Nanorods; Javier Vela, Iowa State University: Peter Goodwin

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

Spectroscopic investigation of the one-dimensional confinement of water and gas molecules inside the narrow channels of single-walled carbon nanotubes; Sofie Cambre, University of Antwerp: Stephen Doorn

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

Strained axial heteronanowire tunneling devices and optical sources; Alex Zaslavsky, Brown University: Tom Picraux

Strained Deposition of Elastically Anisotropic Materials; William Mook, Los Alamos National Laboratory: Kevin Baldwin

Strong Exciton-Plasmon Interactions in Semiconductor-Metal Hybrid Nanostructures; Xuedan Ma, Los Alamos National Laboratory: Han Htoon

Structural Characterization of Nanostructured Thermoelectric Materials; Wenzhi Li, Florida International University: Yang Liu

Synthesis and Characterization of Highly Crystallined Boron Nitride Nanotubes; Yoke Khin Yap, Michigan Technological University: Yang Liu

The dynamics of cellulase on cellulose studied by time resolved, super-resolution optical imaging; Tina Jeoh, University of California, Davis: Peter Goodwin

The fabrication of integrated high sensitive magnetic field sensor based on BTO/Ni heterostructure; Yuan Lin, University of Electronic Science and Technology of China: Quanxi Jia

The Role of Interface Structure on the Irradiation disordering of Cu3Au: Michael Nastasi, University of Nebraska: Nathan Mara

Tunable THz metamaterial quantum cascade lasers; Benjamin Williams, The University of California at Los Angeles: John Reno

Tunable THz metamaterial structures on strained ferroelectric layers; Petr Kuzel, Institute of Physics ASCR: Hou-Tong Chen

Tuned Optical Properties of Low-Dimensional Carbon Nanomaterials for Energy Harvesting; Hisato Yamaguchi, Los Alamos National Laboratory: Stephen Doorn

Ultrafast Spectroscopy of Enhanced Intersystem Crossing; Martin Kirk, The University of New Mexico: Rohit Prasankumar