**CINT 2017A Accepted Proposals**

*2D THz spectroscopy of fractional excitations in quantum magnets; Peter Armitage, Johns Hopkins University: Rohit Prasankumar*

*3D Metafilm Optics; Bruce Burckel, Sandia National Laboratories: Igal Brener*

*A hybrid electron and nuclear spin two-qubit system based on tellurium donors in silicon; Malcolm Carroll, Sandia National Laboratories: Mike Lilly*

*A New Family of Nanocrystalline Copper-Based Chalcogenides CuMSnE4 (M = Al, Ga, or In E = S or Se) for Solar Energy Conversion; Karthik Ramasamy, UbiQD: Sergei Ivanov*

*Acoustoelectrics in two-dimensional electron systems; Johannes Pollanen, Michigan State Univesity: John Reno*

*Aging of low-temperature sol-gel coatings; Jan-Michael Gosau, Lotus Leaf Coatings, Inc.: John Nogan (Integration Lab)*

*Atomic step engineering for Intel 300mm SiGe epitaxy; Nicole Thomas, Intel: Ezra Bussman*

*Bioinspired polymer materials for control of multi-nanoparticle assembly on multiple length scales; Stacy Copp, Los Alamos National Laboratory: Gabe Montano*

*Boronic acid-involved, -organized (Bio) Self-healing Coatings for Structural Stabilization of Anode Materials in Li-ion Battery; Ji Hyun Ryu, University of California at San Diego: Jinkyoung Yoo*

*Calculations and STM studies of optical response of defects in InAs/InAsSb superlattices with nanoscale strained layers; Michael Flatté, University of Iowa: John Reno*

*Carbon nanotube single-photon source.; Christophe Voisin, Ecole Normale Superieure: Stephen Doorn*

*Cell Gels - Building Reversible Networks from Boronic Acid and Cell Membrane Chemistry; Brad Jones, Sandia National Laboratories: George Bachand*

*Characterization of a novel junction between carbon nanotube-structures and silicon substrate; Waqas Khalid, Jadoo Technologies Inc: Jinkyoung Yoo*

*Characterization of Bactericidal Nanoparticles for Gingivitis Prevention and Treatment; Marek Osinski, University of New Mexico: Dale Huber*

*Characterization of Ion-Induced Defects in Fusion Materials; Siegfried Glenzer, SLAC National Accelerator Laboratory: Yongqiang Wang*

*Characterizing irradiation resistance and irradiation hardening at the nanoscale in advanced steels for nuclear cladding applications; Jordan Weaver, Los Alamos National Laboratory: Nate Mara*

*Coherent transport in polymers: Establishing materials design criteria and predicting structure/property interrelations; Carlos Silva, Georgia Institute of Technology: Sergei Tretiak*

*Compact THz sources based on 2D materials on pre-patterned substrates; Francesca Cavallo, University of New Mexico: John Nogan (Integration Lab)*

*Composite photonic materials utilizing plasmonic cavities; Andrei Piryatinski, Los Alamos National Laboratory: Jennifer Hollingsworth*

*Computational study of structural and electronic properties of organohalide lead perovskites; Alex Zakhidov, Texas State University: Sergei Tretiak*

*Continuation of investigating nano/micro-porous polymeric membranes for organ-on-a-chips and nano-toxicology; Pulak Nath, Los Alamos National Laboratory: Quinn McCulloch*

*Co-Sputtered Nanolaminates with Strength and Toughness; Nikhilesh Chawla, Arizona State University: Nate Mara*

*CVD Growth of High Quality, Large Area Perovskite Film for Photovoltaic Applications; Yoosuf Ameen Musliyarakath, Los Alamos National Laboratory: Sergei Tretiak*

*Decoding Self-assembly in complex molecular machines.; Scott Hennelly, Los Alamos National Laboratory: Peter Goodwin*

*Dephasing Dynamics of Single Photon Emitters in Carbon Nanotubes; Xiaoqin (Elaine) LI, University of Texas at Austin: Han Htoon*

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

*Design and fabrication of polymer reinforced CNT for efficient micro air vehciles; Abdessattar Abdelkefi, New Mexico State University: Millie Firestone*

*Determination of electron and hole transport through nanometer-scale strained layers in InAs/InAsSb superlattices; Michael Flatté, University of Iowa: John Reno*

*Determination of iron oxidation state and location within hydroxyapaptite nanoparticles with unique biological properties; Katie Hailer, Montana Tech of the University of Montana: Millie Firestone*

*Development and Testing of Multi-modal Cell Stimulators for Tissue Engineering; Francesca Cavallo, University of New Mexico: John Nogan (Integration Lab)*

*Development of fast TD-DFTB QMD in time domain; Thomas Frauenheim, University of Bremen: Sergei Tretiak*

*Development of genetically-encoded structured optical polymers; Antonietta Lillo, Los Alamos National Laboratory: Jen Martinez*

*Development state of the art computational methods with neural networks; Olexandr Isayev, University of North Carolina at Chapel Hill: Sergei Tretiak*

*Development, Testing, and Application of Rigorous Trajectory-Based Methods for Simulation of Nonadiabatic Dynamics; Craig Martens, University of California, Irvine: Sergei Tretiak*

*Diamond photonic networks for few-photon optical logic; Victor Acosta, University of New Mexico: Igal Brener*

*Dielectric properties of 2-photon polymerizable resins in the mid-IR; Eric Weis, Los Alamos National Laboratory: Anatoly Efimov*

*Direct Deposition of IR-emissive gQDs onto ComNear-infrared Light-emitting Diodes Using Stable and Efficient Giant Quantum Dot Down-conversion Materials; Jennifer Hollingsworth, Los Alamos National Laboratory: Jennifer Hollingsworth*

*Disorder characterization and minimization in Si qubits; Daniel Ward, Sandia National Laboratories: Tom Harris*

*Donor-Dot Qubits in Silicon: A Stepping Stone Towards the Kane Architecture; Dwight Luhman, Sandia National Laboratories: Mike Lilly*

*Dual-ion beam irradiation response and stability of tungsten/graphene nanocomposite structures for enhanced thermomechanical properties; Xiangheng Xiao, Wuhan University: Yongqiang Wang*

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

*Dynamics of Polymers Under Strong Confinement in Polymer Nanocomposites; Robert Riggleman, University of Pennsylvania: Amalie Frischknecht*

*Effect of Shell Properties on the Luminescent Quantum Yield and Carrier Relaxation Dynamics in PbS/CdS Core/Shell Quantum Dots; Milan Sykora, Los Alamos National Laboratory: Jennifer Hollingsworth*

*Effects induced by graphene surface plasmon on the optical phonon properties of the substrate materials; Peter Qiang Liu, University at Buffalo: Igal Brener*

*Effects of InAs/InAsSb Type-II Superlattice Layer Thickness and Composition on Vertical Hole Transport and Carrier Localization; Eric Shaner, Sandia National Laboratories: John Reno*

*Electrically-driven single photon sources based on carbon nanotubes; Ralph Krupke, Karlsruhe Institute of Technology (KIT): Stephen Doorn*

*Electrochemical performances of Si-Ge core-shell heterosturcture Nanowires for anode materials of Li ion battery; Dongheun Kim, Los Alamos National Laboratory: Jinkyoung Yoo*

*Electro-optical Control over SiV Center Emission in Diamond; Edward Bielejec, Sandia National Laboratories: Ryan Camacho*

*Energetics and Migration Kinetics of Irradiation-induced Defect Clusters in Silicon; Remi Dingreville, Sandia National Laboratories: Normand Modine*

*Enhanced emission from carbon nanotube emitters coupled to photonic crystal microcavities; Yuichiro Kato, RIKEN: Stephen Doorn*

*Enhancing Electrocatalysis with DNA-templated Platinum Nanoclusters; Plamen Atanassov, University of New Mexico: Jen Martinez*

*Exploring the mechanisms and applications of Ge diffusion along an oxidizing Si/SiO2 interface; Kevin Jones, University of Florida: John Nogan (Integration Lab)*

*Exploring the role of the diffuse Cu/Nb interface in enhancing mechanical behavior by in situ nanoindentation in TEM; Youxing Chen, Los Alamos National Laboratory: Nate Mara*

*Fabrication and Processing of Multilayer Superconducting Electronic Circuits; Nancy Missert, Sandia National Laboratories: John Nogan (Integration Lab)*

*Fabrication of customized diamond field emitter array cathodes; Evgenya Simakov, Los Alamos National Laboratory: Jinkyoung Yoo*

*Fluorescent Silver Clusters with High Spin Multiplicity For Biolabels; Dmitri Kilin, University of South Dakota: Sergei Tretiak*

*Grain boundary structures, chemistries, and time dependencies in migration; Daniel Bufford, Sandia National Laboratories: Katie Jungjohann*

*Graphene-based high-performance mid-infrared and terahertz photodetectors; Peter Qiang Liu, University at Buffalo: Igal Brener*

*Heteroepitaxial growth of Si/Ge nanowire on 2D-materials for flexible electronic device applications; Gyu-Chul Yi, Seoul National University: Jinkyoung Yoo*

*Hierarchical Architectures of Quantum Dots and Plasmonic Nanoparticle within Nanostructured Ionic Liquids; Harsha Magurudeniya, Los Alamos National Laboratory: Millie Firestone*

*High Explosive Post-Detonation Soot Morphology Determination through Small Angle X-ray Scattering; Rachel Huber, Los Alamos National Laboratory: Millie Firestone*

*High-Cycle Fatigue Properties of Cu Matrix – W Nanoparticle Nanocomposites; Xavier Maeder, The Swiss Federal Laboratories for Materials Science and Technology (EMPA) - Materials Science and Technology: Khalid Hattar*

*Hybrid 0D-2D layered semiconductor mesoscopic structures as single photon sources; Chee Wei Wong, University of California, Los Angeles: Han Htoon*

*Hybrid Abiotic-Biotic Catalysts for Oxidation of Complex Substrates; Plamen Atanassov, University of New Mexico: Gabe Montano*

*Impact Ionization Engineered AlInAsSb Heterostructure Avalanche Photodiodes; George Williams, Voxtel, Inc.: John Nogan (Integration Lab)*

*Impact of mineralogy and organic matter on mechanical properties of nanoporous rocks using nanoindentation and dynamic modulus mapping; Hongkyu Yoon, Sandia National Laboratories: Nate Mara*

*Impact of Molecular Dopants on Nanoelectronic Materials; Sujitra Pookpanratana, National Institute of Standards and Technology: Taisuke Ohta*

*Improving (Ga)InAs/InAsSb superlattice material properties through the nanoscale interactions resulting from the incorporation of Ga; Elizabeth Steenbergen, Air Force Research Laboratory (AFRL): John Reno*

*Improving Emission of Carbon Nanotubes via Covalent Functionalization; Svetlana Kilina, North Dakota State University: Sergei Tretiak*

*Infrared spectrometer based on compressive sensing in nanophotonic structures; Zongfu Yu, University of Wisconsin, Madison: Willie Luk*

*In-situ Measurements of Strain within Deformed Microstructures; Mathew Cherukara, Argonne National Laboratory: Jon Kevin Baldwin*

*Integration of photonic and plasmonic nanomaterials by dip-pen nanolithography; Jun Wang, Los Alamos National Laboratory: Jennifer Hollingsworth*

*Investigation into maximum achievable external quantum efficiency in GaAs|AlGaAs double heterostructures and applications to laser cooling; Nathan Giannini, University of New Mexico: John Reno*

*Ionic Conductivity Investigation in Inorganic-Organic Hybrid Perovskites As Solid-State Electrolytes for Energy Storage Applications; Jarin Joyner, Rice University: Sergei Tretiak*

*Irradiation Effects on Microstructure and Mechanical Behavior of Metallic Nanowires; Yong Zhu, North Carolina State University: Yongqiang Wang*

*Iterative synthesis of peptoid blocks for Rosetta design of foldamers; Charlie Strauss, Los Alamos National Laboratory: Jen Martinez*

*JHU-APL DARPA MATRIX TA2a; Colleen Reynolds, Lockheed Martin Advanced Technology Laboratories: Normand Modine*

*Linking Biological Activity of Ocean Diatoms to Atmospheric Processing of Fe-containing Nanoparticles: Molecular Level Insights; Gayan Rubasinghege, New Mexico Institute of Mining and Technology: Sergei Ivanov*

*Magneto Optical Spectroscopy Solitary Covalent Dopant States in Carbon Nanotubes; Younghee Kim, Los Alamos National Laboratory: Han Htoon*

*Mapping of optical characteristics of wafer-scale two-dimensional transition metal dichalcogenides; Chul-Ho Lee, Korea University: Han Htoon*

*Material synthesis for subwavelength grating based semiconductor disk lasers; Zhou Yang, University of New Mexico: John Reno*

*Materials Engineering to Mitigate Superconducting Qubits Decoherence; Serena Eley, Los Alamos National Laboratory: Jon Kevin Baldwin*

*Materials Synthesis Under Extreme Conditions; Bryan Ringstrand, Los Alamos National Laboratory: Millie Firestone*

*Measuring mRNA and Protein Content from Single Cells; Dan Kalb, Los Alamos National Laboratory: Jim Werner*

*Mechanical characterization of W exposed to deuterium plasma by nanoindentation; Wei Liu, Tsinghua University: Nate Mara*

*Mechanistic Origins of Rupture; Philip Noell, Sandia National Laboratories: Doug Pete*

*Metal Doped Multinary Chalcogenide Semiconductor Nanoparticles and Thin Films; Richard Taylor, University of the West Indies: Sergei Ivanov*

*Microbridges for high density current density measurements; Boris Maiorov, Los Alamos National Laboratory: Doug Pete*

*Microfluidics and Nanofluidics for Subsurface Energy Resource Applications; Bill Carey, Los Alamos National Laboratory: Quinn McCulloch*

*Microfluidics for on chip labelling reaction; Edward Lemke, European Molecular Biology Laboratory (EMBL): George Bachand*

*MilliKelvin HEMT Amplifiers for Low Noise, High Bandwidth Measurement of Quantum Devices; Lisa Tracy, Sandia National Laboratories: John Reno*

*Mobility of Tethered Nanoparticles in Polymer Melts; Michael Rubinstein, University of North Carolina at Chapel Hill: Gary Grest*

*Modelling of hybrid perovskites for photovoltaics; Claudine Katan, CNRS Institut des sciences chimiques de Rennes: Sergei Tretiak*

*Molecular combing for optical analysis of chromatin; Edwin Goodwin, Angelina Biomedical Laboratories LLC: Peter Goodwin*

*Molecular Modeling of Pressure Induced Nanoparticle Assembly; J. Matthew Lane, Sandia National Laboratories: Gary Grest*

*Multi-band model studies for the iron chalcogenide FeSe; Qimiao Si, Rice University: Jian-Xin Zhu*

*Multi-Modal Nanoscale Cellular Probes; Shadi Dayeh, University of California at San Diego: John Nogan (Integration Lab)*

*Multiscale Radiation Effects and Plasma Material Interactions in Tungsten Based Materials; Osman El Atwani, Los Alamos National Laboratory: Nate Mara*

*Multi-Use Metal-Functionalized Nanoparticles; Ian Henderson, Omphalos Bioscience LLC: George Bachand*

*Nanocarrier Transport of Antigen Payloads for Broadly Protective, Single-Dose Vaccines; Peter Hraber, Los Alamos National Laboratory: Jen Martinez*

*Nanocomposite Microcalorimeter Absorbers, Energy Thermalization, and Nuclear Decay Energy Spectroscopy; Veronika Mocko, Los Alamos National Laboratory: Darrick Williams*

*Nano-Dot Messages – Using Nanoparticles to House DNA Messages; George Bachand, Sandia National Laboratories: George Bachand*

*Nanomaterials integration for low-noise mid-IR avalanche photodetection; Seth Bank, University of Texas at Austin: John Reno*

*Nanomechanical characterization of grain boundaries in tantalum before and after shock loading; Jordan Weaver, Los Alamos National Laboratory: Nate Mara*

*Nanoscale patterning of silicified mammalian cells on SAMs to regulate biomolecular transport; Haneen Martinez, Sandia National Laboratories: George Bachand*

*Nanoscale Terahertz Detectors for integration in Scanning Probe Microscopes; Oleg Mitrofanov, University College London: Igal Brener*

*Nanostructure Features and Phase Instability in Advanced Ceramics and Alloys; William Weber, University of Tennessee: Yongqiang Wang*

*Nonadiabatic dynamics in organo-metallic and inorganic perovskites; Alexey Akimov, University at Buffalo: Sergei Tretiak*

*Non-destructive high resolution measurements of semiconductors carrier density; Mark Hagmann, NewPath Research L.L.C.: Anatoly Efimov*

*Nonlinear terahertz response of magnetoelectric excitations in multiferroic material Sr2FeSi2O7; Rolando Valdes Aguilar, Ohio State University: Rohit Prasankumar*

*Nonporous metal organic framework catalysts for lignin depolymerization; Micahel Kent, Sandia National Laboratories: Wally Paxton*

*Novel Direct Measurements of Local Control of Ferroelectric Domain Dynamics in Multi-Functional Nanocomposites; Bryan Huey, University of Connecticut: Aiping Chen*

*Novel Doping Mechanisms in Organic Semiconductors; Guillermo Bazan, University of California, Santa Barbara: Sergei Tretiak*

*Novel quantum phases and magnetic excitations of the kagome spin liquid material Volborthite in a magetic field; Shoushu Gong, National High Magnetic Field Laboratory (NHMFL): Jian-Xin Zhu*

*Origin of magnetoelectric coupling in ferromagnetic/ferroelectric heterostructures; Qiang Wang, West Virginia University: Aiping Chen*

*Photodynamical Processes in Nanomaterials for Organic Photovoltaic Cells; Hans Lischka, Tianjin University: Sergei Tretiak*

*Photoinduced energy transfer and intramolecular changes in the energy localization/delocalization of donor-acceptor molecules and nonohoops; Sebastian Fernandez Alberti, Universidad Nacional de Quilmes: Sergei Tretiak*

*Photon Antibunching and Low-temperature Spectroscopy of Fluorescent Quantum Defects; YuHuang Wang, University of Maryland at College Park: Stephen Doorn*

*Preparation of Planar Waveguides for Sensing Applications; Aaron Anderson, Los Alamos National Laboratory: John Nogan (Integration Lab)*

*Probing and Controlling sp3 Defect Binding Configurations in Carbon Nanotubes; Ming Zheng, National Institute of Standards and Technology: Stephen Doorn*

*Probing magnetoelectric coupling in self-assembled multiferroic nanocomposites; Thomas Farmer, Oak Ridge National Laboratory: Aiping Chen*

*Quantification of Electron Tunneling Barrier Height in Polymers Relevant for Self-sensing Nano-Composites; David Fullwood, Brigham Young University: Nate Mara*

*Quantitative in situ TEM investigation of grain boundary mediated deformation mechanisms in ultrafine-grained Au thin films; Olivier Pierron, Georgia Institute of Technology: Katie Jungjohann*

*Radiation-resistant SiGe nanowire heterojunction bipolar transistors; Jinkyoung Yoo, Los Alamos National Laboratory: Yongqiang Wang*

*Raman scattering of overtones and combination of phonon modes in isolated Double- and Triple-Walled Carbon Nanotubes.; Paulo Araujo, University of Alabama: Stephen Doorn*

*Reaction of Lithium with Transition Metal Dichalcogenides; Matthew Janish, Los Alamos National Laboratory: Katie Jungjohann*

*Resistance of Grain without Grain Boundaries in Nanoscale Metal Thin Films; Rong Zhong, Wenzhou University: Brian Swartzentruber*

*Ruddlesden-Popper Perovskites for Optoelectronic Applications; Mercouri Kanatzidis, Northwestern University: Sergei Tretiak*

*Si/SiGe Heterostructure Sample Processing; Rui-Rui Du, Rice University: Mike Lilly*

*Smart Sensors Technologies; Anna Tauke-Pedretti, Sandia National Laboratories: Igal Brener*

*Soft Learning for Analyzing SAXS data; Paul Welch, Los Alamos National Laboratory: Millie Firestone*

*Spin-current Generation in Non-magnetic Interfaces (Sr2IrO4/Bi2Se3) from Emergent Spin-Orbit Coupling; Towfiq Ahmed, Los Alamos National Laboratory: Jian-Xin Zhu*

*Spray-coated interfaces for hybrid perovskite based optoelectronic devices; Aditya Mohite, Los Alamos National Laboratory: Sergei Tretiak*

*Stability of nanoporous metal alloys under elevated temperatures; Antonia Antoniou, Georgia Institute of Technology: Nate Mara*

*Structure Development in a Nanoparticle Haloing System under Gravitational and Temperature Gradients; Gerold Willing, University of Louisville: Millie Firestone*

*Studies of DNA transport in porous roofs and nanochaneles; Yuliya Kuznetsova, Armonica Technologies, LLC: Anatoly Efimov*

*Studies of the nonlinearity of chalcogenide materials in the mid-infrared; Juliet Gopinath, University of Colorado at Boulder: Rohit Prasankumar*

*Surface state capacitance measurements in topological insulators; Peter A. Sharma, Sandia National Laboratories: Tom Harris*

*synthesis of patterned monolayer-bilayer graphene junction by ion implantation; Zengfeng Di, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences: Yongqiang Wang*

*Synthesis, characterization and optical properties of Cu and In based quantum dots; Mahinda Ranasinghe, New Mexico Institute of Mining and Technology: Rohit Prasankumar*

*TEM Characterization of Intermetallic Nanocatalyts; Jacob Spendelow, Los Alamos National Laboratory: Nate Mara*

*Temperature dependent transport and optical properties of extreme high mobility CdO; Jon-Paul Maria, North Carolina State University: Igal Brener*

*Terahertz-to-X-Ray investigations of carrier-exciton dynamics in halide perovskite and two-dimensional materials; Elbert Chia, Nanyang Technological University: Jian-Xin Zhu*

*Testing the Mechanical Properties of 300 Nm Silica Nanospheres Used as Gravitational Test Masses; Siddhartha (Sid) Pathak, University of Nevada, Reno: Nate Mara*

*The link between nano and mesoscale mechanical behavior of alpha-omega Ti micropillars; Jordan Weaver, Los Alamos National Laboratory: Nate Mara*

*The Role of Irradiation on Structural and Mechanical Properties of Nanostructured Amorphous Silicon Oxycarbide; Qing Su, University of Nebraska: Yongqiang Wang*

*The self-organization of magnetic dumbbell nanoparticles; Mikhail Feygenson, Forschungszentrum Jülich: Sergei Ivanov*

*Thermoelectronics of Luttinger Liquids; Guillaume Gervais, McGill University: Mike Lilly*

*Three-Dimensional Molecular Tracking of EGFR in Live Renal Epithelial Cells; Cedric Cleyrat, University of New Mexico: Jim Werner*

*THz quantum cascade lasers as multi-beam local oscillators for NASA balloon borne GUSTO and future space observatories; Jian-Rong Gao, SRON Netherlands Institute for Space Research: John Reno*

*THz studies of mid-infrared materials; Juliet Gopinath, University of Colorado at Boulder: Rohit Prasankumar*

*Time evolution of a charged particle in a random potential coupled to magnetic and lattice degrees of freedom; Janez Bonca, University of Ljubljana: Stuart Trugman*

*Time-Domain Atomistic Simulation of the Relaxation dynamcis of Photogenerated Carriers in Nanoscale Systems; Oleg Prezhdo, University of Southern California: Sergei Tretiak*

*Topological Photonics for Ultimate Photon Control; Ganapathi Subramania, Sandia National Laboratories: John Nogan (Integration Lab)*

*Topological Quantum Materials for Quantum Computation; Wei Pan, Sandia National Laboratories: Normand Modine*

*Toward the ultimate performance of optoelectronics by metamaterial integration; CHUN-CHIEH Chang, Los Alamos National Laboratory: Hou-Tong Chen*

*Tracking Lithium Transport and Reactions in Individual Nanoparticles in a Liquid Electrochemical Cell; Wei Zhang, Brookhaven National Laboratory: Katie Jungjohann*

*Transient Thermal Conduction in Nonlinear Molecular Junctions; Dmitry Yarotski, Los Alamos National Laboratory: Anatoly Efimov*

*Tunable and nonlinear Fano resonant dielectric metasurfaces; Dragomir Neshev, Australian National University: Igal Brener*

*Ultrafast electronic and optical responses in materials and nanostructures; Jeff Wang, Los Alamos National Laboratory: Jinkyoung Yoo*

*Ultrafast Plasmon-Induced Electron Transfer from Gold Nanoparticles into Reactant Molecules; Sanchari Chowdhury, New Mexico Institute of Mining and Technology: Rohit Prasankumar*

*Ultrafast Pump-Probe Spectroscopy of Al-Catalyzed <110> and <100> Si Nanowires; Mel Hainey, Jr., Penn State University: Rohit Prasankumar*

*Ultrafast Pump-Probe Spectroscopy of Sn(S,Se)2 Alloys for Top-Layers of Tandem Si Solar Cells; Mel Hainey, Jr., Penn State University: Rohit Prasankumar*

*Ultrathin Efficient Nanostructured Mid-IR Detectors; Daniel Wasserman, The University of Texas at Austin: John Reno*

*Unconventional superconductivity in heavy fermion metals near a Kondo destruction quantum critical point; Qimiao Si, Rice University: Jian-Xin Zhu*

*Understanding Morphology and Proton Transport in Nanosegregated Polymer Membranes; Todd Alam, Sandia National Laboratories: Amalie Frischknecht*

*Understanding Nanocapillary Electrophoresis (Nano-CE); Michael Siegal, Sandia National Laboratories: Amalie Frischknecht*

*Understanding the Deformation Response of Mg/Nb Multilayered Nanocomposites; Siddhartha (Sid) Pathak, University of Nevada, Reno: Nate Mara*

*Understanding the dispersion of BaTiO3 in solution; Todd Monson, Sandia National Laboratories: Wally Paxton*

*Understanding the electrochemical processes in alkaline Zn-MnO2 batteries; Timothy Lambert, Sandia National Laboratories: Katie Jungjohann*

*Understanding The Photo-Physics of Layered Two-Dimensional Perovskites; Eli Kinigstein, Columbia University: Sergei Tretiak*

*Understanding the Relationship Between Inter-Molecular Interactions and Energy Flow in Molecular Nanowires; Sahar Sharifzadeh, Boston University: Sergei Tretiak*

*Universal Dynamic Scaling in Ferroelectric Phase Transitions; John Bowlan, Los Alamos National Laboratory: Anatoly Efimov*

*Using DNA-templates for Hybrid Electrocatalysis; Shelley Minteer, University of Utah Department of Chemistry: Jen Martinez*

*Van der Waals epitaxial growth and characterization of Si-Ge/2D semiconductor heterostructures; Chul-Ho Lee, Korea University: Jinkyoung Yoo*

*Visualization of magnetization vectors rotation in Ni2MnGa exposed to magneto-mechanical loading; Constantin Ciocanel, Northern Arizona University: Gabriel Montano*

*Wideband International System of Units (SI) Traceable Resistor; Collin Delker, Sandia National Laboratories: Tom Harris*