

POSTER ASSIGNMENTS

Abstract #	Name	Affiliations	Title
1	Wendy Shaw	Pacific Northwest National Laboratory	Applications of Solid-State Nuclear Magnetic Resonance (SSNMR) and Neutron Reflectivity (NR) to the Investigation of Protein/Surface Interfaces
2	H. Robert Guy	National Institutes of Health	Potential for Utilizing Ion Channels in Nanotechnology
3	Timothy N. Lambert	Sandia National Laboratories	Naturally Occurring Fluorescent Ceramic Bioimaging Probes
4	Olgica Bakajin	Lawrence Livermore National Laboratory	Microfluidic Mixers for Measuring the Kinetics of Protein Folding
5	Alexander J. Malkin	Lawrence Livermore National Laboratory	Unraveling the Architecture and Structural Dynamics of Pathogens by High-Resolution in vitro Atomic Force Microscopy (AFM)
6	Timothy V. Ratto	Lawrence Livermore National Laboratory	Force Spectroscopy of Single-Molecule Adhesive Interactions in Three Polymer-Tethered Systems: Protein-Receptor, Thiol/Thiolate-Gold, and Lipid-Lipid
7	David W. Chandler	Sandia National Laboratories	Confocal Microscope for Simultaneous Time- and Frequency-Resolved Photon Detection With Single-Molecule Detection Sensitivity
8	George D. Bachand	Sandia National Laboratories	Kinesin- and Microtubule-Based Transport Systems: Nanoscale Science and Engineering Perspectives and Applications
9	Timothy McKnight	Oak Ridge National Laboratory	Manipulation and Monitoring of Cellular Matrices With Arrays of Nanostructured Electrophysiological Probes
10	J. Alexander Liddle	Lawrence Berkeley National Laboratory	Lithographically Directed Nanofluidic Assembly
11	George M. Dougherty	Lawrence Livermore National Laboratory	Multiplex Immunoassays Using Biofunctionalized Nanorod Particles and Automated Optical Readout
12	D.B. Geohegan	Oak Ridge National Laboratory	Controlled Synthesis and Processing of Multifunctional Nanostructures for Biological Sensing and Delivery

Abstract #	Name	Affiliations	Title
13	A.V. Melechko	University of Tennessee, Knoxville, and Oak Ridge National Laboratory	Characterization of Nuclear Impalement Event During Gene Delivery Using Arrays of Vertically Aligned Carbon Nanofibers
14	Alexander B. Artyukhin	Lawrence Livermore National Laboratory	Functional One-Dimensional (1-D) Lipid Bilayers on Carbon Nanotube Templates
15	T. Rajh	Argonne National Laboratory	Hybrid Nanoparticles Enable Intracellular Manipulation
16	Samuel P. Forry	National Institute of Standards and Technology	Culturing Neural Cells for Microfluidic Networks
17	David Tiede	Argonne National Laboratory	Nanoscience at the Argonne National Laboratory (ANL) and the Center for Nanoscale Materials (CNM)
18	Sarada Kanakagiri	University of California, Davis	Apolipoprotein E4 (apoE4) Conformational Changes: Relationship to the Alcohols
19	S. Roger Qiu	Lawrence Livermore National Laboratory	Toward Understanding the Molecular Modulation of Renal Stone Formation
20	B. Panessa-Warren	Brookhaven National Laboratory	Carbon Nanotube Drug Delivery Immunocarriers Identify and Block gClq-R Expression on Human Colon Cells During Bacterial Attack
21	B. Panessa-Warren	Brookhaven National Laboratory	Human Cell Cytotoxicity Model Shows Cell Processing of Functionalized Nanoparticles
22	J.J. De Yoreo	Lawrence Livermore National Laboratory	A Nanolithography-Based Platform for Investigating Protein Aggregation
23	Anna Gutowska	Pacific Northwest National Laboratory	Nanostructured, Stimuli-Responsive Hydrogels for Biomedical Applications
24	Julie L. Herberg	Lawrence Livermore National Laboratory	Micro-Nuclear Magnetic Resonance (NMR) Imaging and Magnetic Resonance Imaging (MRI) With Lithographically Fabricated Radiofrequency Coils (RFCs)
25	F. Tokumasu	National Institutes of Health	Accelerated Band 3 clustering in <i>Plasmodium falciparum</i> -Infected Homozygous Hemoglobin C Erythrocytes Assayed by Single-Cell Autocorrelation Analysis Using Quantum Dots

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26	Takayuki Arie	National Institutes of Health	Host Genotype Modulates the Surface Topography of <i>Plasmodium falciparum</i> -Infected Erythrocytes
27	Daniel Barsky	Lawrence Livermore National Laboratory	Nano-Traincars Moving Down DNA Tracks: Single-Molecule Fluorescence Resonance Energy Transfer (FRET) and Simulations of a DNA Sliding Clamp Moving Along DNA
28	T. Vo-Dinh	Oak Ridge National Laboratory	Nanosensors and Nanoprobes for Molecular Diagnostics and Imaging
29	Fanqing Chen	Lawrence Berkeley National Laboratory	Multimodality Nanoparticles as Imaging Reagents for Antibody-Based Therapeutics
30	Joseph Kalen	Virginia Commonwealth University	High-Throughput, Small-Animal Single Photon Emission Computed Tomography (SPECT) for “in vivo” Kinetic Studies of Novel Radiolabeled Nanostructures
31	Oleg Gang	Brookhaven National Laboratory	Functionalization of Silica Surfaces and Nanoparticles With Receptor-Binding Proteins of Adenovirus
32	Surya Mallapragada	Ames Laboratory	Novel Self-Assembling Systems for Drug Delivery and Gene Therapy
33	Brian H. Lower	Pacific Northwest National Laboratory	Simultaneous Force and Fluorescence Measurements of a Protein That Forms a Bond Between a Living Bacterium and a Solid Surface
34	Sergei V. Kalinin	Oak Ridge National Laboratory	Bioelectromechanical Imaging by Scanning Probe Microscopy (SPM): Repeating Galvani's Experiment on the Nanoscale
35	Lee Makowski	Argonne National Laboratory	Magnetic Virus
36	Jason K. Holt	Lawrence Livermore National Laboratory	A High-Flux Carbon Nanotube-Based Synthetic Membrane for Dialysis Applications
37	Phillip F. Britt	Oak Ridge National Laboratory	Synthesis and Self-Assembly of Amphiphilic Block Copolymers as Potential Drug Delivery Agents
38	Peter Goodwin	Los Alamos National Laboratory	Single-Molecule Detection of Unamplified Nucleic Acid Sequences
39	Jason D. Fowlkes	Oak Ridge National Laboratory	A Cell Mimic Structure With Tailored Pore Sizes: Synthesis and Modeling

Abstract #	Name	Affiliations	Title
40	Kirk Rector	Los Alamos National Laboratory	In vivo SERS Sensors of Local Chemical Environment in Live THP-1 Human Macrophages
41	Jie Song	Lawrence Berkeley National Laboratory	Bioinspired Organic-Inorganic Composites and Their Potential Applications in Bone Tissue Engineering
42	Christian Hilty	Lawrence Berkeley National Laboratory	Xenon-Enhanced Nuclear Magnetic Resonance (NMR) and Microfluidics for Applications in Biomedical Diagnostics
43	Yadong Yin	Lawrence Berkeley National Laboratory	Inorganic Nanocrystals: Synthesis, Surface Modification, and Biomedical Applications
44	Paul Ashby	Lawrence Berkeley National Laboratory	Biomolecular Imaging and Probing of Intermolecular and Intramolecular Interactions Using Atomic Force Microscopy
45	Fanqing Chen	Lawrence Berkeley National Laboratory	Single-Nanoparticle Molecular Ruler-Based Nanoplasmonic Detection of Enzymatic Activity With Subnanometer Precision
46	Kevin Minard	Pacific Northwest National Laboratory	Optical and Magnetic Resonance Imaging for Targeted Nanoparticle Development
47	John Moreland	National Institute of Standards and Technology	Chip-Scale Instruments for Single-Molecule Separators and Sorters and High-Resolution Magnetic Resonance Imaging (MRI) Applications Based on Magnetic Particles.
48	Dev Kambhampati	Accelrys Software Inc.	Computer-Aided Nanodesign™ (CAN): Innovative Solutions for Nanobiology and Engineering
49	John Kasianowicz	National Institute of Standards and Technology	Elucidating the Structure-Function Relationships of Transmembrane Nanopore Toxins: Mechanisms of Action and New Applications
50	Idan Mandelbaum	National Institute of Standards and Technology	Surface-Enhanced Raman Spectroscopy (SERS) of Biomolecules Encapsulated in Liposomes
51	R.H. Kraus, Jr.	Los Alamos National Laboratory	Magnetocarcinotherapy: A Nanotechnology Method for the Treatment of Cancers

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52	Michelle A. Espy	Los Alamos National Laboratory	Bioassay With Magnetic Microspheres in Flow: A Method for Highly Parallel Molecular Separations of Complex Biological Systems
53	Peter K. Weber	Lawrence Livermore National Laboratory	Chemical Imaging of Biological Materials by Nano-Secondary Ion Mass Spectrometry (SIMS)
54	Ian D. Hutcheon	Lawrence Livermore National Laboratory	Quantitative Analysis of Membrane Composition by Secondary Ion Mass Spectroscopy
55	Vincent A. Hackley	National institute of Standards and Technology	Flow Cell for in vitro Studies of Nanoscale Structures and Assemblies by Ultrasmall-Angle X-Ray Scattering (USAXS)
56	Meng-Dawn Cheng	Oak Ridge National Laboratory	Methods for Evaluating Biological Responses to Engineered Nanophase Materials
57	C. Orme	Lawrence Livermore National Laboratory	Unexpected Energetic Controls During Mineralization of Biominerals
58	Chad E. Talley	Lawrence Livermore National Laboratory	Intracellular Sensors Based on Surface-Enhanced Raman Scattering
59	Aleksandr Noy	Lawrence Livermore National Laboratory	Direct Determination of Affinity in Individual Protein-Protein Complexes in Monovalent and Multivalent Configurations Using Dynamic Force Spectroscopy
60	J.P. Bearinger	Lawrence Livermore National Laboratory	Molecular Patterning via Photocatalytic Lithography
61-62	C. Orme	Lawrence Livermore National Laboratory	The Physical Biosciences Institute (PBI) at the Lawrence Livermore National Laboratory (LLNL): Linking U.S. Department of Energy (DOE) Technology With Single-Cell Physiology
63	Darwin R. Reyes	National Institute of Standards and Technology	Using Micropatterned Polyelectrolyte Multilayers (PEMs) on Polydimethylsiloxane (PDMS) To Direct Neuronal Cell Adhesion and Growth