

Sunday, 16 November 2014

1600 - 2000	Early Registration (<i>Grand Foyer - 2nd Floor</i>)
1300 - 1600	Tour of the Smithsonian National Air and Space Museum Steve F. Udvar-Hazy Center

Monday, 17 November 2014

0715 - 0800	Speaker Meeting for Monday's Presenters
0700 - 0800	Attendee Continental Breakfast (<i>Grand Foyer - 2nd Floor</i>)
0700 - 1700	Registration Open (<i>Grand Foyer - 2nd Floor</i>)
1130 - 1300	Attendee Networking Lunch - Full Buffet \$10 (<i>Fairfax Room</i>)
1700 - 1830	Exhibits & Posters Open (<i>Grand Dominion</i>)
1700 - 1830	Exhibit Kick-Off & Poster Session Technical Interchange (with light hors d'oeuvres & cash bar) (<i>Grand Dominion</i>)

Innovators & Small Business Forum (*Jeffersonian 1 & 2*)

Session Chairs: Dr. Don DiMarzio, Northrop Grumman Aerospace Systems; Mr. Dave Furdek, Boeing Research & Technology; and Ms. Clare Rivero-Baleine, Lockheed Martin

0800 - 0805	Welcome & Announcements
0805 - 0905	Leveraging and Partnership Opportunities in the Army Research Laboratory Mr. Steven Taulbee, U.S. Army Research Laboratory
0905 - 0935	DoD SBIR/STTR Program Overview Mr. Larry Pollack, Defense Threat Reduction Agency
0935 - 1005	Moving Manufacturing Left: A Structured Approach for Manufacturing Planning Dr. Karla Strong, Air Force Research Laboratory
1005 - 1035	Break (<i>Grand Foyer - 2nd Floor</i>)
1035 - 1125	Acquiring R&D Funding from Federal Mission Agencies Dr. James Murday, University of Southern California
1125 - 1130	One-on-One Instructions & Final Sign-Ups
1130 - 1300	Attendee Networking Lunch - Full Buffet \$10 (<i>Fairfax Room</i>)

		Tutorials & Workshops	
Track One (<i>Washingtonian 1</i>)	Track Two (<i>Jeffersonian 1 & 2</i>)	Track Three (<i>Jeffersonian 3 & 4</i>)	
Innovators & Small Business Forum One-on-One Appointments	2D Materials Beyond Graphene for DoD Electronics Workshop Workshop Organizers: Dr. Ken Goretta, Air Force Office of Scientific Research; Dr. Pani Varanasi, U.S. Army Research Laboratory; and Dr. Andrey Voevodin, Air Force Research Laboratory	EM Characterization of Nanomaterials Workshop Workshop Organizers: Dr. Rick Beyer, U.S. Army Research Laboratory and Dr. Lawrence Drummy, Air Force Research Laboratory	
1300 - 1500 One-on-One Appointments	1300 - 1305 Introduction	1300 - 1305 Introduction	

	1305 - 1340 2D Materials and their Heterostructures for RF Devices and Sensors Dr. Joshua Robinson, Penn State University	1305 - 1350 Advances in Acquisition and Analysis of Hyperspectral Images: The Basis for 2- and 3D Microanalysis Dr. Paul Kotula, Sandia National Laboratories
	1340 - 1415 Device and Thermal Energy Fundamentals and Applications of 2D Materials Prof. Eric Pop, Stanford University	1350 - 1435 In-Situ Characterization near Atomic-Resolution using Graphene Liquid Cells in an Aberration-Corrected Scanning Transmission Electron Microscopy Prof. Robert Klie, University of Illinois - Chicago
	1415 - 1450 2D Materials for Flexible Electronic Applications Prof. Deji Akinwande, University of Texas at Austin	1435 - 1520 Ultrafast Electron Microscopy: Materials Science at the Space-Time Limit Prof. David Flannigan, University of Minnesota
1500 - 1530 Break (<i>Grand Foyer - 2nd Floor</i>)	1450 - 1520 Break (<i>Grand Foyer - 2nd Floor</i>)	1520 - 1550 Break (<i>Grand Foyer - 2nd Floor</i>)
1530 - 1700 One-on-One Appointments, cont.	1520 - 1555 The Advantages and Disadvantages of New 2D Materials Over Graphene and Industry Role in Commercialization Dr. Chun-Yun Sung, Lockheed Martin	1550 - 1700 Panel Discussion
	1555 - 1630 Perspectives of 2D Material Insertions in DoD Device Applications Dr. Chae Lee, Raytheon	
	1630 - 1700 Panel Discussion	
1700 - 1830	Exhibitor Kick-Off & Poster Session Technical Interchange (with light hors d'oeuvres & cash bar) (<i>Grand Dominion</i>)	
Tuesday, 18 November 2014		
0700 - 0800	Attendee Continental Breakfast (<i>Grand Dominion</i>)	
0700 - 1730	Registration Open (<i>Grand Foyer - 2nd Floor</i>)	
0700 - 0900	Exhibits & Posters Open (<i>Grand Dominion</i>)	
1200 - 1330	Attendee Networking Lunch - Full Buffet \$10 (<i>Fairfax Room</i>)	

1245 - 1330	Speaker Meeting for Tuesday Afternoon Presenters		
1330 - 1730	Exhibits & Posters Open (<i>Grand Dominion</i>)		
Plenary Session (<i>Jeffersonian 1 - 6</i>) Session Chairs: Dr. Rick Beyer, U.S. Army Research Laboratory; Dr. John Busbee, Xerion Advanced Battery Corporation; Dr. Anthony Esposito, Defense Threat Reduction Agency; Dr. Paul Sheehan, Naval Research Laboratory; and Dr. Richard Vaia, Air Force Research Laboratory			
0800 - 0815	Plenary Session Welcome & Announcements Moderator: Dr. Michael Meador, Director, National Nanotechnology Coordination Office		
0815 - 0845	Keynote Address Dr. Tom Russell, Director, U.S. Army Research Laboratory		
0845 - 0915	An Update on the National Nanotechnology Initiative Dr. Lloyd Whitman, Assistant Director, Nanotechnology, White House Office of Science and Technology Policy		
0915 - 0945	Biology is Technology Dr. Alicia Jackson, Deputy Director, Biological Technologies Office, Defense Advanced Research Projects Agency		
0945 - 1015	Nanotechnology Tomorrow: To System Integration and Societal Immersion Dr. Mihail (Mike) Roco, Senior Advisor for Nanotechnology, National Science Foundation		
1015 - 1045	Break (<i>Grand Foyer - 2nd Floor</i>)		
1045 - 1115	Implications of 10⁻⁹ in Aerospace Programs Dr. H.D. Stevens, Director, STAR Labs, Lockheed Martin Space Systems		
1115 - 1145	High-Rate Nanoscale Offset Printing Process using Reusable Damascene Templates Dr. Ahmed Busnaina, Director, Center for High-Rate Nanomanufacturing, Northeastern University		
1145 - 1200	Poster Session Awards Dr. Akbar Khan, Defense Threat Reduction Agency; Dr. James Murday, University of Southern California; and Dr. Revell Phillips, Defense Threat Reduction Agency		
1200 - 1330	Attendee Networking Lunch - Full Buffet \$10 (Fairfax Room)		
Track One		Track Two	
Advanced Coatings & Films (<i>Jeffersonian 1 - 4</i>) Session Chairs: Dr. Kay Blohowiak, The Boeing Company; Dr. Jill Seebergh, The Boeing Company; and Dr. Andrey Voevodin, Air Force Research Laboratory		Energy Storage & Conversion (<i>Jeffersonian 5 & 6</i>) Session Chairs: Dr. John Busbee, Xerion Advanced Battery Corporation; Dr. Justin Golightly, Lockheed Martin Space Systems; and Dr. Benjamin Leever, Air Force Research Laboratory	
1330 - 1335	Session Introduction	1330 - 1335	Session Introduction
1335 - 1400	In-Situ Control of Nanostructured Ti-6Al-4V via Laser Cold Spray Processing Mr. Aaron Birt, Worcester Polytechnic Institute	1335 - 1400	The Road Beyond Lithium Batteries is Paved with Zinc Dr. Debra Rolison, Naval Research Laboratory
1400 - 1425	Grain Refinement, Surface Alloying, and Corrosion Response using Surface Mechanical Attrition Treatment Dr. Heather Murdoch, U.S. Army Research Laboratory	1400 - 1425	Layered Carbon Nanotube Architecture for High Power Lithium Ion Batteries Prof. Sivasubramanian Somu, Center for High-Rate Nanomanufacturing, Northeastern University

1425 - 1450	Counter-Rotational Blown Film Processing's Effects on the Mechanical and Barrier Properties of Bio-Based Polymers and Additives Mr. Corey Hauver, U.S. Army - Natick Soldier Research, Development, and Engineering Center	1425 - 1450	Nanotechnology Advances in Early Storage and Conversion Devices Dr. Cynthia Lundgren, U. S. Army Research Laboratory
1450 - 1515	Printable Integrated Photonic Devices with a High Refractive Index Dr. Christophe Peroz, aBeam Technologies & LBNL	1450 - 1515	Nanotechnology Uses for Thermoelectric Applications Dr. Douglas Crane, Alphabet Energy
1515 - 1545	Break (<i>Grand Dominion</i>)		
1545 - 1610	Nanoscale, Antireflective Surface Structures on Optics for High Energy Laser Applications Dr. Lynda Busse, Naval Research Laboratory	1545 - 1610	Nanotechnology Breakthroughs in Energy Storage Applications Dr. Kurt Swogger, Molecular Rebar, Inc.
1610 - 1635	Airship Leakage Control via Nanomaterial-Containing Light-Weight Coating Mr. Jaime Ballester, Lockheed Martin Aeronautics - Palmdale	1610 - 1635	Lithium Sulfur Chemistry: Challenges & Progress Dr. Surya Moganty, NOHMs Technologies
1635 - 1700	Engineered Room Temperature Thermochromic Nanomaterial and Nanocomposite Coatings Dr. Qingwu Wang, Agiltron, Inc.	1635 - 1700	Highly Efficient Light-Trapping Structure Design Inspired by Natural Evolution Prof. Cheng Sun, Northwestern University
1700 - 1725	Functionalized Organosilicate Materials Dr. Brandy White, Naval Research Laboratory	1700 - 1725	Nano-Enhanced Portable Photovoltaic Power to Enhance Warfighter Sustainability Dr. Richard Osgood, III, U.S. Army - Natick Soldier Research, Development, and Engineering Center

Wednesday, 19 November 2014

0715 - 0800	Speaker Meeting for Wednesday's Presenters
0700 - 0800	Attendee Continental Breakfast (<i>Grand Dominion</i>)
0700 - 0900	Exhibits & Posters Open (<i>Grand Dominion</i>)
0700 - 1700	Registration Open (<i>Grand Foyer - 2nd Floor</i>)
1155 - 1330	Attendee Networking Lunch - Full Buffet \$10 (Fairfax Room)
1330 - 1930	Exhibits & Posters Open (<i>Grand Dominion</i>)
1730 - 1930	Poster Session Technical Interchange (with light hors d'oeuvres & cash bar) - Sponsored by Lockheed Martin (<i>Grand Dominion</i>)

Track One

Nano-Biology & Biotechnology for Health (*Jeffersonian 1 - 4*)
Session Chairs: Dr. Anthony Esposito, Defense Threat Reduction Agency;
 Dr. Jennifer Weisman, Strategic Analysis, Inc.; and Dr. Natalie Wisniewski,
 PROFUSA, Inc.

Track Two

Advanced Manufacturing (*Jeffersonian 5 & 6*)
Session Chairs: Dr. Khershed Cooper, National Science Foundation;
 Dr. Joey Mead, University of Massachusetts Lowell; and Dr. James Murday,
 University of Southern California

0800 - 0805	Session Introduction	0800 - 0805	Session Introduction
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0805 - 0830	Engineered Oponins for Pathogen Diagnosis and Sepsis Therapy Dr. Michael Super, Wyss Institute, Harvard University	0805 - 0830	Inkjet-Printed Nanotechnology-Enabled "Zero-Power" Wireless Sensor Nodes for "Smart Skin" Applications Prof. Manos Tentzeris, Georgia Tech
0830 - 0855	Combining Evolution and Intelligent Design for Creating Functional Biomimetic Materials Dr. Rajesh Naik, Air Force Research Laboratory	0830 - 0855	Flexible and Printed Nanotube and Nanowire Sensors Dr. Jin-Woo Choi, Louisiana State University
0855 - 0920	Design of Aptamer-Gold Nanoparticle Conjugates for Fast Detection of Human Performance Biomarkers Dr. Nancy Kelley-Loughnane, Air Force Research Laboratory	0855 - 0920	Novel Direct Printing Process for Fabrication of Tooling with Micro and Nanostructured Surfaces Dr. Carol Barry, University of Massachusetts Lowell
0920 - 0945	Semiconducting SWCNT Sensor Platform for Pathogen Detection and Physiological Monitoring Prof. Sivasubramanian Somu, Center for High-Rate Nanomanufacturing, Northeastern University	0920 - 0945	Compact, Low-Cost, High-Resolution Spectrometer-On-Chip Dr. Christophe Peroz, aBeam Technologies & LBNL
0945 - 1015	Break - Sponsored by The Boeing Company (Grand Foyer - 2nd Floor)		
1015 - 1040	Surface Enhanced Raman Spectroscopy Based Biological Warfare Agent Analyzer Dr. Wayne Weimer, Agiltron, Inc.	1015 - 1040	Controllably Fabrication and Nitrogen Doping of Holey Graphene via Rapid One-Step Reactions Dr. Huixin He, Rutgers University - Newark
1040 - 1105	Targeted Delivery of Antibiotics to Cells Infected with Francisella Tularensis Using Mesoporous Silica Nanoparticle-Supported Lipid Bilayers Dr. Carlee Ashley, Sandia National Laboratories	1040 - 1105	3-D Printing Carbon Composites Dr. Kenneth Church, Sciperio
1105 - 1130	Building Synthetic Vaccines with DNA Nanotechnology and Computer-Aided Design Software Dr. David Danley, Parabon NanoLabs, Inc.	1105 - 1130	ThermoChemical NanoLithography Prof. Elisa Riedo, Georgia Tech
1130 - 1155	Glycelles - A Bio-Nanotechnology for the Collection and Immobilization of Biohazards from Fluids and Surfaces Ms. Elaine Mullen, The MITRE Corporation	1130 - 1155	Nanomanufacturing's Role within the Advanced Manufacturing Paradigm Dr. Khershed Cooper, National Science Foundation
1155 - 1330	Attendee Networking Lunch - Full Buffet \$10 (Fairfax Room)		
1200 - 1330	Steering & Technical Programming Committee Wrap-Up Meeting (Treaty Room)		
Track One		Track Two	
Metamaterials (Jeffersonian 1 - 4) Session Chairs: Dr. Luke Bissell, Air Force Research Laboratory; Dr. Ned Thomas, Rice University; and Dr. Richard Vaia, Air Force Research Laboratory		Advanced Manufacturing, cont. (Jeffersonian 5 & 6)	
1330 - 1335	Session Introduction	1330 - 1335	Session Announcements
1335 - 1400	Multifunctional Fibers for Defense Applications Dr. Yoel Fink, MIT Research Laboratory of Electronics	1335 - 1400	NASCENT Dr. S.V. Sreenivasan, The University of Texas at Austin

1400 - 1425	Light Emitters Based on Hyperbolic Metamaterials Prof. Vinod Menon, The City College of New York	1400 - 1425	Center for Hierarchical Manufacturing - Selected Highlights of Materials and Processes for Scalable Nanoscale Device Fabrication Prof. James Watkins, University of Massachusetts
1425 - 1450	Fabrication of Novel 3-D Homogenous and Hybrid Nanostructures through Directed Nanoparticle Assembly for Highly Sensitive Plasmonic Based Biosensing Prof. Ahmed Busnaina, Center for High-Rate Nanomanufacturing, Northeastern University	1425 - 1450	Polymer Based Products and Continuous Offset Printing for Nano-Enabled Applications Dr. Joey Mead, University of Massachusetts Lowell
1450 - 1515	Icosahedral Plasmonic Nanoclusters: From Viruses to High-Throughput Metamolecules Dr. Jake Fontana, Naval Research Laboratory	1450 - 1515	Toward a Continuous Process in CNT Rollstock Manufacturing Dr. Edward Chan, General Nano, LLC
1515 - 1545	Break (Grand Dominion)		

Track One		Track Two	
Metamaterials, cont. (Jeffersonian 1 - 4)		Warfighter Capabilities/Energetic Materials for Propulsion & Power (Jeffersonian 5 & 6) Session Chairs: Dr. Rick Beyer, U.S. Army Research Laboratory and Dr. Revell Phillips, Defense Threat Reduction Agency	

1545 - 1550	Session Announcements	1545 - 1550	Session Introduction
1550 - 1615	Inkjet Printing of Metamaterial Chaff Mr. Kendall Mills, U.S. Army ARDEC	1550 - 1615	New Wide Band IR Laser Eye Protection Technology Dr. Milan Buncick, AEgis Technologies Group, Inc.
1615 - 1640	Chiral Plasmonic Nanolens Arrays via Directed Assembly of Gold Nanoparticles Dr. Richard Vaia, Air Force Research Laboratory	1615 - 1640	Motion of Liquid Drops on Spindle-Knot Fibers Dr. Stephen Michielsen, North Carolina State University
1640 - 1705	Flexible and 3-Dimensional Conformal Polarization Controllable THz Stereometamaterial Absorber Prof. Patrick Kung, University of Alabama	1640 - 1705	Tunable Performance for On-Chip Porous Silicon Combustion Dr. Nicholas Piekielek, U.S. Army Research Laboratory
		1705 - 1730	Biomimetic Strategies for Energetic Nanomaterials Dr. Joseph Slocik, UES, Inc. at AFRL

1730 - 1930 **Poster Session Technical Interchange (with light hors d'oeuvres & cash bar) - Sponsored by Lockheed Martin (Grand Dominion)**

Thursday, 20 November 2014

0715 - 0800	Speaker Meeting for Thursday's Presenters
0700 - 0800	Attendee Continental Breakfast (Grand Foyer - 2nd Floor)
0700 - 1500	Registration Open (Grand Foyer - 2nd Floor)
1155 - 1330	Attendee Networking Lunch - Full Buffet \$10 (Fairfax Room)

Track One	Track Two
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Next Generation Electronics (<i>Jeffersonian 1 - 4</i>) Session Chairs: Dr. Ashok Maliakal, LGS Innovations and Dr. Paul Sheehan, Naval Research Laboratory		Nanostructured Materials (<i>Jeffersonian 5 & 6</i>) Session Chairs: Dr. Wade Adams, Rice University; Dr. Mike Meador, National Nanotechnology Coordination Office; and Dr. Hamid Saghizadeh, The Boeing Company	
0800 - 0805	Session Introduction	0800 - 0805	Session Introduction
0805 - 0830	Nano-Enabled Sensing Platform Dr. Padraig Moloney, Lockheed Martin Space Systems	0805 - 0830	NanoEngineered Materials Prof. Pulickel Ajayan, Rice University
0830 - 0855	Physically Flexible High Performance Single Crystal CMOS Integrated with Printed Electronics Mr. Richard Chaney, American Semiconductor, Inc.	0830 - 0855	Nanofiber Sensors for Trace Chemical Detection Mr. Benjamin Rollins, Vaporsens, Inc.
0855 - 0920	Challenges and Frontiers in Wearable Electronics Mr. Sanjay Gupta, MC10, Inc.	0855 - 0920	Optoelectronic Vapor Sensors Based on Organic Nanofibers Prof. Ling Zang, University of Utah
0920 - 0945	DNA-Carbon Nanotube Vapor Sensors for Monitoring of Warfighter Status Mr. Nick Kybert, University of Pennsylvania	0920 - 0945	Low Filler-Concentration Advanced Thermal Management Materials for Power Systems Components Dr. Sayangdev Naha, ADA Technologies, Inc.
0945 - 1015	Break (<i>Grand Foyer - 2nd Floor</i>)		
1015 - 1040	Applications of Nano-Scale Multiferroic Materials Dr. Scott Keller, TANMS - UCLA	1015 - 1040	CNT Composites for High Energy Dissipation Dr. Veera Boddu, U.S. Army Engineer Research and Development Center
1040 - 1105	Scalable High Mobility Graphene Transistor Arrays Dr. Mitchell Lerner, SPAWAR Systems Center Pacific	1040 - 1105	Durable Superhydrophobic Coatings for Icephobic Applications Dr. John Shearer, University of Massachusetts Lowell, Nanomanufacturing Center
1105 - 1130	Development of the World's First Nanocomputers Dr. James Ellenbogen, The MITRE Corporation	1105 - 1130	Microporous Networks of Platinum Nanourchins on Microfibrilated Cellulose Films for Propelling Underwater Vehicles via Hydrogen Peroxide Decomposition Dr. Jonathan Claussen, Iowa State University
1130 - 1155	Radiation Exposure Characteristics of Electrically Biased and Unbiased ZnO TFTs Mr. Israel Ramirez, Penn State University	1130 - 1155	Stabilization and Mechanical Properties of Nano-Crystalline Copper by Alloying with Tantalum Dr. Kris Darling, U.S. Army Research Laboratory
1155 - 1330	Attendee Networking Lunch - Full Buffet \$10 (Fairfax Room)		
Track One		Track Two	
Tech Insertion Success Stories (<i>Jeffersonian 1 - 4</i>) Session Chairs: Dr. James Murday, University of Southern California and Dr. Edward Silverman, Northrop Grumman Corporation		Nanostructured Materials, cont. (<i>Jeffersonian 5 & 6</i>)	
1330 - 1335	Session Introduction	1330 - 1335	Announcements

1335 - 1400	Nanotechnology Propellant Health Monitoring Sensors: Success Through Multi-Stakeholder Interest Mr. Kenneth Watkins, Polymer Aging Concepts, Inc.	1335 - 1400	Synergistic Behavior of Tubes, Junctions and Sheets Imparts Mechano- and Thermo-Mutable Functionality in 3-D Porous Boron Nitride Nanostructures Prof. Rouzbeh Shahsavari, Rice University
1400 - 1425	Carbon Nanotube Structural Core Emergence and the Demonstrated Advantages for Spacecraft Composite Sandwich Structures Mr. Anthony Bluth, ATK	1400 - 1425	Recent Advances in Flash Sintering of <i>n</i>-Ceramics Dr. Lawrence Kabacoff, Office of Naval Research
1425 - 1450	Carbon Nanotube Flexible Thermal Interface Materials for Cooling Aerospace Microelectronics Applications Dr. Jesse Tice, Northrop Grumman Aerospace Systems	1425 - 1450	Fully Dense 3-D Periodic Multiphase Nanostructures by Enhanced High Pressure Sintering Dr. Boris Feigelson, Naval Research Laboratory
1450 - 1515	GRAPHENE: From Tape to Tons Mr. Ian Fuller, Angstrom Materials, Inc.	1450 - 1515	Pyrolysis of Agricultural Waste to Form Nano-Structures of β-SiC Dr. Edward Gorzkowski, Naval Research Laboratory
1515 - 1545	Break (Grand Foyer - 2nd Floor)		
1545 - 1610	Nano Adaptive Hybrid Fabric (NAHF-X) System – 60-Inch Commercial-Scale Pilot Trial Results and Technical Opportunities and Challenges Dr. Paul Kladitis, University of Dayton Research Institute	1545 - 1610	Directed Assembly of Plasmonic Antennas Using Molecular Engineering and Polymer Scaffolding Dr. Jennifer Shumaker-Parry, University of Utah
1610 - 1635	High Capacity, No-Power-Needed, Transparent Organosilica Sorbents for Passive Sampling and/or Colorimetric Detection of Volatile Chemical Agents Dr. Stacey Dean, ABS Materials, Inc.	1610 - 1635	Novel Silicon Carbide Polymers for Electro-Optics Applications Dr. Larry Burggraf, Air Force Institute of Technology
1635 - 1700	Manufacturing of Lightweight CNT Cables Mr. Tom Kukowski, Minnesota Wire	1635 - 1700	Effective Nanoscale Energy Distribution through Quantum Dot-Anchored DNA Photonic Wires Dr. Christopher Spillmann, Naval Research Laboratory
1700 - 1725	Commercializing Carbon Nanotube Technology for 21st Century Defense Applications Mr. John Dorr, Nanocomp Technologies, Inc.	1700 - 1725	DNA Organized Nanostructures for Optimizing FRET Efficiency Dr. Susan Buckhout-White, George Mason University
1725	Conference Adjourns		
1730 - 1830	NT4D Networking Happy Hour (Marriott Wellington Pub)		