	-	2015 N14D Agenda	
Sunday, 15	November 2015		
1600 - 2000	Early Registration		
Monday, 1	6 November 2015		
0700 - 0830	Attendee Continental Breakfast		
0700 - 1700	Registration Open (Colonial Foyer by Escalator)		
1000 - 1700	Exhibits & Posters Set-Up		
1130 - 1300	Lunch Break (On-Your-Own)		
1700 - 1830	Exhibit & Poster Session Kick-Off/Welcome Networking Reception	on (Light Snacks & Cash Bar) (Majestic A,	В, I)
	Tutorials, Workshops, & Innovators	and Small Business Forum (ISBF)	
	Tutorial & Workshop Chair: Dr. Khershed	d Cooper, National Science Foundation	
	ISBF Chairs: Dr. Don DiMarzio, Northrop Grumman Aerosp		ng Company; and
	Dr. Susan Ermer, L	ockheed Martin	
	Track One (Colonial A)	Track Two (Colonial B)	Track Three (Majestic C&D)
	Innovators & Small Business Forum Presentations		
0800 - 1000	Presentations to be Announced Soon		
1000 - 1030	Bre	ak (Colonial Foyer)	
	Innovators & Small Business Forum Presentations, cont.	Corporate Espionage in the	
		Science & Technology World	
		Speaker TBA, Federal Bureau of	
		Investigation	
1030 - 1130			
1130 - 1300	Lunch Brea	ak (On-Your-Own) (Cima)	
	Human and Environmental Health and Safety for	Workshop on Nanoinformatics	Innovators & Small Business Forum
	Nanotechnology: Basics of Nano EHS	Organized by Dr. Mark Tuominen,	One-on-One Appointments
	Dr. Charles Geraci, National Institute for Occupational Safety	University of Massachusetts	
	and Health; Dr. Jeffrey Steevens, U.S. Army Corps of Engineers;		
	and LT Kevin Dunn, U.S. Public Health Service		
1300 - 1500			
1500 - 1530	Break (Colonial Foyer)		
	A Workshop on Cloaking for Sound and Light using	Workshop on Nanoinformatics,	Innovators & Small Business Forum
	Metamaterials	cont.	One-on-One Appointments
	Organizers: Dr. Ned Thomas, Rice University and Dr. Clara		
1530 - 1700	Rivero-Baleine, Lockheed Martin		
1700 - 1800	Exhibit & Poster Session Kick-Off/Welcome Networking Reception	on (Light Snacks & Cash Bar) (Majestic A,	B, I)

Tuesday, 1	.7 November 2015		
0700 - 0830	Attendee Continental Breakfast		
0700 - 1730	Registration Open (Colonial Foyer by Escalator)		
1200 - 1330	Networking Lunch in the Exhibit Hall (Pay-As-You-Go)		
1200 - 1600	Exhibits & Posters Open (Majestic C&D)		
1245 - 1330	Speaker Meeting for Tuesday Afternoon Presenters		
Plenary Sessio	n (Colonial A&B)		
Session Chairs:	Dr. John Busbee, Xerion Advanced Battery Corporation;		
Dr. Anthony Esp	posito, Defense Threat Reduction Agency;		
Dr. Randy Mroz	ek, U.S. Army Research Laboratory; Dr. Paul Sheehan,		
Naval Research	Laboratory; and Dr. Richard Vaia, Air Force Research		
Laboratory			
0800 - 1200	Moderator: Dr. Tim Bunning, Chief Scientist, Air Force Research	ch Laboratory	
	• Dr. Steve Wax, Chief Scientist, J9, Defense Threat Reduction A	gency	
	Mr. Charles Chase, Sr Program Manager, Revolutionary		
	Technology Programs, Lockheed Martin Skunk Works		
	• Mr. Richard Floyd, Director of Strategic Initiatives, Joint Progra	am	
	Executive Office for Chemical and Biological Defense		
	 Additional speakers to be announced soon. 		
1200 - 1330	Networking Lunch in the Exhibit Hall (Pay-As-You-Go)		
	Track One (Colonial A&B)	Track Two (Cherry Hill)	
Next Generati	on Flectronics	Safety & Health	
	Dr. Ashok Maliakal, LGS Innovations and Dr. Quoc Ngo, Lockheed	Session Chairs: Dr. Matt Hull, Virginia Polytechnic Institute and State	
	ystems Company	University; Dr. Michael Meador, National Nanotechnology Coordination	
		Office; and Dr. Randy Mrozek, U.S. Army Research Laboratory	
Sub-Session 1: I	Flexible and Printed Electronics		
1330 - 1335	Session Introduction	Session Introduction	
1335 - 1400	2D Thin Film Transistors for Flexible Electronics	Consumer Product Safety Commission	
1333 1400	Dr. Saptarshi Das, Argonne National Laboratory	Speaker to Be Announced [Selected]	
1400 - 1425	Solving Integration Challenges for Flexible Hybrid Electronics	NIOSH	
1400 - 1423	Mr. Rich Chaney, American Semiconductor, Inc.	Speaker to Be Announced [Selected]	
	Wil. Nich Chaney, American Semiconductor, inc.	Speaker to be Announced [Selected]	
1425 1450	Name India A Brinta d Florible Law Coat Name are to rial Euroble d	Negative to the Diel Accessor at Cofety and Costainshills, by Davier	
1425 - 1450	Novel Inkjet-Printed Flexible Low-Cost Nanomaterial-Enabled Chemical Sensors	Nanomaterials – Risk Assessment, Safety and Sustainability by Design	
		Prof. Ashok Vaseashta, IASC/ICWI/NUARI	
	Mr. Jimmy Hester, Georgia Institute of Technology		
1450 - 1515	Flexible Electrochemical Energy-Storage cYarns™	NanoGRID: A Strategy for Testing the Environmental Consequences of	
	Dr. David Kim, Lintec of America, Inc., NSTC	Nanotechnologies	
		Dr. Jonathon Brame, U.S. Army Engineer Research & Development Center	
4545 4545			
1515 - 1545	Break (Majestic A, B, I)		

	2	oro NT+D Agenda	
ub-Session 2:	Low-Dimensional Electronics		
1545 - 1610	Radiation Effects in Individual CNT FETs Dr. Adam Bushmaker, The Aerospace Corporation	Nanomedicine Measures for the Warfighter Dr. Nicholas Panaro, Leidos Biomedical Research	
1610 - 1635	Transitioning Carbon Nanomaterials for Next-Generation Electronics Production Mr. Aaron Sell, Lockheed Martin Space Systems Company	The Dilemma of Null Results in Environmental and Human Health Nanotoxicology Dr. Steven Oldenburg, nanoComposix, Inc.	
1635 - 1700	Advanced Technologies for Carbon Nanotube Property Control at Large Scale Mr. Robert Praino, Chasm Technologies, Inc.	Mesoporous Oxide Nanoparticles for Controlled Release and Targeted Delivery of Antigens for Superior Vaccines and Adjuvants Dr. Eric Carnes, Sandia National Laboratories	
1700 - 1725	To Be Announced	Rapid Bacterial Pathogen Detection Ms. Monika Weber, Fluid-Screen	
0700 - 0830	y, 18 November 2015 Attendee Continental Breakfast		
0700 - 1730 0930 - 1930	Registration Open (Colonial Foyer by Escalator) Exhibits & Posters Open (Majestic A, B, I)		
1155 - 1330	Networking Lunch in the Exhibit Hall (Pay-As-You-Go)		
1730 - 1900	Exhibitor & Poster Session Technical Interchange &		
	Reception (Hors d'oeuvres & Cash Bar) (Majestic A, B, I)		

	Track One (Colonial A)	Track Two (Colonial B)	Track Three (Cherry Hill)
Nano/Biotechnology: Advanced Materials and Detection Capabilities		Session Chairs: Dr. Edward Silverman, Northrop Grumman Corporation & Dr. Richard Vaia, Air Force Research Laboratory	Advanced Coatings & Films Sub-Session 1: Electronic and Optical Coatings Session Chairs: Dr. Kay Blohowiak, The Boeing Company and Dr. Andrey Voevodin, Air Force Research Laboratory
Sub Topic 1: Nano-Enabled Advances in Sensing Session Chairs: Dr. Anthony Esposito, Defense Threat Reduction Agency; Prof. Charlie Johnson, University of Pennsylvania; & Dr. Natalie Wisniewski, Profusa, Inc.			
0800 - 0805	Session Introduction	Session Introduction	Session Introduction
0805 - 0830	Nanomaterials and Devices in Implantable Sensing Applications Dr. Fotios Papadimitrakopoulos, University of Connecticut	The NNI at 15 - Past Accomplishments and Future Directions Dr. Michael Meador, National Nanotechnology Coordination Office	Nano and Emerging Technologies in Polymers and Coatings Dr. Jamil Baghdachi, Coatings Research Institute
0830 - 0855		Mechanical Benefits of VACNT - Reinforcement of CFRP Laminates Mr. Dan Chebot, N12 Technologies	Broadband Optical Limiting Adhesive Coatings Utilizing Nanocomposites Prof. Nigel Alley, University of Houston
0855 - 0920	In Vivo Nanosensors for Continuous Health Monitoring Dr. Natalie Wisniewski, Profusa, Inc.	Advanced Abrasion Resistant Nanocomposite Coatings Mr. Patrick Lake, Applied Sciences, Inc.	A Novel Nanoimprint Resist for Printable Active Photonic Devices Dr. Keiko Munechika, aBeam Technologies, Inc.
0920 - 0945	Carbon Nanotubes Based Resistive Sensor for Detection of Chemical and Bio Analytes Prof. Ahmed Busnaina, Northeastern University	The Multifaceted Process of Moving a Technology From Invention to Implementation – With a Focus on Nanocopper Based Electronic Interconnect Technology Dr. Susan Ermer, Lockheed Martin Space Systems Company	Performance of Semiconductor Quantum Dots in Epoxy Coatings Dr. Satyaveda Bharath, U.S. Army Research Laboratory [Selected]
0945 - 1015	Break (Majestic A, B, I)		

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Sub Topic 1: Nano-Enabled Advances in Sensing, cont.		Tech Insertion Success Stories, cont.	Sub-Session 2: New Concepts in Coatings and Test Methods
			Session Chairs: Dr. Kay Blohowiak, The Boeing Company and Dr. Andrey Voevodin, Air Force Research Laboratory
1015 - 1040	Ultrathin Silk Fibroin Films with Incorporated Antimicrobial Peptides for Improved Biological Agent Discriminatory Sensors Dr. Joshua Uzarski, U.S. Army NSRDEC	Managing Organizational Risks to Achieve Successful Innovations: Case Study in Nanotechnology Innovation Dr. Edward Silverman, Northrop Grumman Aerospace Systems	Graphene Enabled Technologies for Defense Applications Mr. Ian Fuller, Angstron Materials, Inc.
1040 - 1105	Improving Immunoassay Sensitivity with Upconverting Nanoparticles Dr. Jeff Ballin, U.S. Army Edgewood Chemical Biological Center (Excet, Inc.)	Nanostructured Thermal Interfaces for Cooling Aerospace Platforms Dr. Jesse Tice, Northrop Grumman Aerospace Systems	Polymeric Gradient Integrated Layer Films and Coatings Dr. Jamil Baghdachi, Coatings Research Institute
1105 - 1130	Surface-Enhanced Raman Scattering (SERS) Immunoassay Based on the Filtration of Antigen-Assembled Gold Nanoparticles Dr. Jeremy Driskell, Illinois State University	Presentation Title To Be Announced Dr. Bob Hilty, Xtalic	Adhesion Testing of Thin Films Mr. Jeffrey Hicks, Uncopiers, Inc.
1130 - 1155	Sensitive Detection of Chemical Agents using a Graphene Based Optical Sensor Dr. Ashok Maliakal, LGS Innovations	Nanosilicon Enabled High-Speed Gas Chromatograph Dr. Joshua Whiting, APIX Analytics	Conductive Polymer Additives in Coatings and Composites Ms. Volha Hrechka, PolyDrop, LLC
1155 - 1330	Networking Lunch in the Exhibit Hall (Pay-as-you-go)		

	Track One (Colonial A)	Track Two (Colonial B)	Track Three (Cherry Hill)
Nano/Biotechnology: Advanced Materials and Detection Capabilities, cont.		Power & Energy Generation	Advanced Coatings & Films, cont.
-	iomaterials for Defense Applications Dr. Jennifer Weisman, Strategic Analysis, Inc. and Dr. Natalie ofusa, Inc.	Session Chairs: Prof. Jonathan Claussen, Iowa State University and Dr. Benjamin Leever, Air Force Research Laboratory	Sub-Session 3: Coatings for Control of Surface Energy Session Chairs: Dr. Jamil Baghdachi, Coatings Research Institute and Dr. Michael Weibel, JRAD, Inc.
1330 - 1305	Session Announcements	Session Introduction	Session Announcements
1335 - 1400	3D Printed Bionic Nanomaterials Prof. Michael McAlpine, University of Minnesota	Air Force Power & Energy Technology Challenges Dr. Leslie Perkins, Air Force Research Laboratory	Waterproofing of Printed Circuit Boards and Electronic Components using Nanomaterial Coatings for Microelectronics Mr. Patrick Tang, Aculon, Inc.
1400 - 1425	Targeted Delivery of Antibiotics to Cells Infected with Burkholderia pseudomallei using Mesoporous Silica Nanoparticle-Supported Lipid Bilayers Dr. Carlee Ashley, Sandia National Laboratories	High Performance Organic- Inorganic Hybrid Perovskite- Based Solar Cell Prof. Yang Yang, University of California, Los Angeles	A Multifunctional Coating Based on an Amphiphilic Block-Copolymer System Dr. Timothy Lawton, U.S. Army NSRDEC
1425 - 1450	Development and Application of Pressure Responsive Bio- Nano Hybrid Materials Towards TBI Analysis Dr. Abby West, U.S. Army Research Laboratory	To Be Announced	Omniphobic Coatings on Fabrics: Advantages to the CB Community and Remaining Challenge Dr. Natalie Pomerantz, U.S. Army NSRDEC
1450 - 1515	Convergent Evolution to Engineering: Multi-Functional Bio-Composite and Biomimetic Materials Prof. David Kisailus, University of California Riverside	Benergy Advanced Coating and Films Mr. Glenn Mesa, Benergy, LLC	Nanomanufacturing for Durable Superhydrophobic/Icephobic Coatings Dr. Joey Mead, University of Massachusetts Lowell
1515 - 1545	Break (Majestic A, B, I)		

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	Track One (Colonial A)	Track Two (Colonial B)	Track Three (Cherry Hill)
Sub Topic 3: Human Health and Performance Monitoring Session Chairs: Dr. Anthony Esposito, Defense Threat Reduction Agency and Dr. Jennifer Weisman, Strategic Analysis, Inc.		Power & Energy Generation, cont.	Sub-Session 4: Corrosion and Protective Coatings Session Chair: Dr. Jamil Baghdachi, Coatings Research Institute and Dr. Michael Weibel, JRAD, Inc.
1545 - 1610	Detection of Human Performance Biomarkers via Plasmonic Paper Dr. Abrin Schmucker, National Research Council	Nanotechnology for Energy Conversion and Power Generation Dr. Deryn Chu, U.S. Army Research Laboratory	Corrosion-Resistant AR Coating of High Energy Alkali Laser Components using Refractory Materials Dr. Zsolt Marton, Radiation Monitoring Devices, Inc.
1610 - 1635	Human Cognition Biomarker Sensor using Peptide Functionalized Nanotransistor Dr. Steve Kim, Air Force Research Laboratory	Graphene-Based Supercapacitors Prof. Richard Kaner, University of California, Los Angeles	Green Barrier Coatings for Corrosion Protection of Ferrous and Nonferrous Metals Mr. Valentin Ryabov, Advenira Enterprises, Inc.
1635 - 1700	Electronic Olfaction System for Detection of Volatile Organic Compounds in Human Samples Prof. Charlie Johnson, University of Pennsylvania	Batteries Speaker To Be Announced, Jet Propulsion Laboratory	Environmental Testing of Nanoscale, Antireflective Surface Structures on Windows Dr. Lynda Busse, Naval Research Laboratory
1700 - 1725	A NANOeSPRi-Based IVD Assay for Multiple Organ Injury Dr. Siqi Li, Luna Innovations, Inc.	Atomistic Modeling of Nonlinear Nano-Dielectrics for High Power Microwave (HPM) Applications Dr. Renee Van Ginhoven, Air Force Research Laboratory	Nanotechnology Innovations in Corrosion Resistant Coatings Mr. Chad Lewis, MW2 Defense, LLC
1730 - 1930	Exhibitor & Poster Session Technical Interchange & Reception (Hors d'oeuvres & Cash Bar) (Majestic A, B, I)		

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0700 - 0830 Atten	ovember 2015		
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0700 - 1600 Regis	Registration Open (Colonial Foyer by Escalator)		
1155 - 1330 Lunch	Lunch Break (On-Your-Own) (Cima)		
1730 - 1900 NT4D	00 NT4D Happy Hour		
	Track One (Colonial A)	Track Two (Colonial B)	
Nanostructured Materials: 1-D, 2-D, and Metamaterials Session Chairs: Dr. Wade Adams, Rice University and Dr. Paul Sheehan, Naval		Advanced Manufacturing/Nanomanufacturing Session Chairs: Dr. Khershed Cooper, National Science Foundation; Dr.	
Research Laboratory		Kathy Duncan, U.S. Army CERDEC; Dr. Joey Mead, University of Massachusetts Lowell; Dr. Jim Murday, University of Southern California; Ms. Laura Rea, Air Force Research Laboratory; and Prof. Mark Tuominen, University of Massachusetts Amherst	
0800 - 0805 Sessi	on Introduction	Session Introduction	
	rolling Graphene Growth via Substrate Engineering Travis Tumlin, U.S. Army Research Laboratory	Power Electronic NNMI Mr. Nick Justice, North Carolina State University	
Appli	hene Molecules: Synthesis, Electronic Properties and ications 1ilan Sykora, Los Alamos National Laboratory	Atoms to Product Dr. John Main, DARPA/DSO	
Synth	nomous Experimentation Applied to Carbon Nanotube hesis Benji Mayurama, Air Force Research Laboratory	America Makes – the National Additive Manufacturing Innovation Institute Dr. Benjamin Leever, Air Force Research Laboratory	
Meth	ostructured Boron Nitride Materials: Scalable Production nods //illiam Mickelson, Evolution Materials, Inc.	Hierarchical Manufacturing Dr. James Watkins, University of Massachusetts Amherst	
0945 - 1015 Break	k (Colonial Foyer)		
1015 - 1040 1015 Phase	- 1105 e Transformations in 2D Materials orris Yakobsen, Rice University	cSilk™: A Carbon Nanotube Template for Production of Conformal Nanotube Coatings, Composite Yarns and Sheets Dr. Marcio Lima, Lintec of America, Inc., NSTC	
1040 - 1105		High-Rate Manufacturing of Polymer Nanocomposites and Highly-Filled Systems Dr. Carol Barry, University of Massachusetts Lowell	
Conti Dime	eoretical Consideration of the Ballistic Response of inuous Graphene Membranes and Other Two-ensional Polymers ric Wetzel, U.S. Army Research Laboratory	Direct 3D Optical Printing of Piezoelectric Polymer Nanocomposites Dr. Donald Sirbuly, University of California - San Diego	
Than	nistic Simulation of a Two-Dimensional Polymer Tougher Graphene mil Sandoz-Rosado, U.S. Army Research Laboratory	Light-Weight Conductive Plastic for Fused Deposition Modelling (FDM) Printing Enabled By Nanomaterials Dr. Paul Kladitis, University of Dayton Research Institute	
1155 - 1330 Lunch	h Break (On-Your-Own) (Cima)		

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	Track One (Colonial A)	Track Two (Colonial B)	
Nanostructure	d Materials: 1-D, 2-D, and Metamaterials, cont.	Advanced Manufacturing/Nanomanufacturing, cont.	
1330 - 1335	Announcements	Announcements	
1335 - 1400	Ultra-Strong Ultra-Tough Biomimetic Platelet-Matrix Composites: Universal Composition-Structure-Property Maps Prof. Rouzbeh Shahsavari, Rice University	Nanocopper Based Electronic Interconnect Technology Dr. Alfred Zinn, Lockheed Martin Space Systems Company, Advanced Technology Center	
1400 - 1425	Microstructure and Phase Stability of Oxide Dispersion Strengthened Steels Dr. Brad Baker, United States Naval Academy	Development of NiZn Ferrite Nanoparticle Composite Filaments for Additively Manufactured Radio Frequency Structures Dr. Katherine Duncan, U.S. Army CERDEC	
1425 - 1450	Carbon Nanotube Based High Power Thermoacoustic Projector for Low Frequencies, < 100 Hz Dr. Ali Aliev, University of Texas at Dallas	Nanoscale Offset Printing System (NanoOPS) for Additive Printing of Devices and Structures for Electronics, Sensors, and Advanced Materials Applications Using OD, 1D and 2D Nanomaterials Prof. Ahmed Busnaina, Northeastern University	
1450 - 1515	Metamaterial Manufacturing for RF Countermeasures Mr. Kendall Mills, U.S. Army ARDEC	Bottom-Up Assembling of Rotary Micromotors with Ultrahigh Performance for Bioapplications Dr. Donglei Fan, The University of Texas at Austin	
1515 - 1545	Break (Colonial Foyer)		
1545 - 1610	Flexible Thermoelectrics Printed with Semiconductor Nanowires for Power Generation from Waste Heat Prof. Jonathan Claussen, Iowa State University		
1610 - 1635	To Be Announced		
1635 - 1700	Fabrication of Microcellular 3-D Graphene Foams with Nickel Templates Dr. Wei Li, The University of Texas at Austin		
1700 - 1725	Functionalized Nanocomposite Energetics for Explosives, Propellants and Pyrotechnics Dr. Girish Srinivas, TDA Research, Inc.		
1725	Conference Adjourns		
1730 - 1900	NT4D Happy Hour – Starter Appetizers Provided (Jazz & Blues by	the Gerry Rothschild Band starting at 6:30 pm)	
Friday, 20 I	November 2015		
0930 - 1200	Jet Propulsion Laboratory Tour (Transportation On-Your-Own)		

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