

Investigator	Prime Institution	State	MURI Topic	Project Title	Agency
Russell, Thomas	University of Massachusetts at Amherst	MA	(1) Hybrid Synthetic Biopolymers for Multifunctional Materials	Bio-directed Hierarchical Assembly of Multifunctional Materials	Army
Mrksich, Milan	The University of Chicago	IL	(2) Hybrid Bio-Mechanical Systems	Bio-Mechanical Interfaces for Cell-Based Microsystems	Army
Zeidler, James	University of California at San Diego	CA	(3) Space-Time Processing for Enhanced Mobile Ad-Hoc Wireless Networking	Space-Time Processing for Tactical Mobile Ad-Hoc Networks	Army
Whitesides, George M.	Harvard University	MA	(4) Design and Processing of Electret Structures	Design and Processing of Electret Structures	Army
Celinski, Zbigniew	University of Colorado at Colorado Springs	CO	(5) Giga-Hertz Electromagnetic Wave Science and Devices for Advanced Battlefield Communications	Giga-Hertz Electromagnetic Wave Science and Devices for Advanced Battlefield Communications	Army
Chopra, Inderjit	University of Maryland	MD	(6) Micro Hovering Aerial Vehicles with an Invertebrate Vision Inspired Navigation System	Micro Hovering Air Vehicles: Revolutionary Concepts and Navigation Advancements	Army
Yetter, Richard	Pennsylvania State University	PA	(7) Nano-Engineered Energetic Materials	Unified Multiscale Approach for Nano-Engineered Energetic Materials	Army
Rhodes, William T.	Georgia Institute of Technology	GA	(8) Human Signatures for Personnel Detection	Human Signature for Personnel Detection	Army
Doolittle, William A.	Georgia Institute of Technology	GA	(9) Epitaxial Multifunction Materials and Applications (EMMA)	Revolutionary Epitaxial Solutions Creating a Platform for a New Generation of Military Applications	Navy
Leonard, Naomi E.	Princeton University	NJ	(10) Coupled Observation, Adaptive Sampling, and Forecast in the Real Environment	Optimal Asset Distribution for Environmental Assessment and Forecasting Based on Observations, Adaptive Sampling, and Numerical Predictions	Navy

Danyluk, Steven	Georgia Institute of Technology	GA	(11) Friction and Wear under Very High Electromagnetic Stress (Electromagnetic Launchers)	Friction and Wear Under Very High Electromagnetic Stress	Navy
Persad, Chadee	University of Texas at Austin	TX	(11) Friction and Wear under Very High Electromagnetic Stress (Electromagnetic Launchers)	Friction and Wear for a Highly Durable Railgun Weapon	Navy
Kuo, Kenneth	Pennsylvania State University	PA	(12) Fundamental Understanding of Propellant/Nozzle Interaction to Mitigate Erosion for Very High Pressure Missile Propellant Applications	Fundamental Understanding of Propellant/Nozzle Interaction to Mitigate Erosion for Very High Pressure Missile Propellant Applications	Navy
Vanden Hoek, Terry L	The University of Chicago	IL	(13) Fatal Circulatory Collapse in Late-Phase Hemorrhagic Shock	Proteomic Development of Molecular Vital Signs: Mapping a Mitochondrial Injury Severity Score to Triage and Guide Resuscitation of Hemorrhagic Shock	Navy
Volakis, John L.	Ohio State University	OH	(14) Electromagnetics of Antennas and Arrays Designed Using Novel Electronic Materials and Conformal to Large Complex Bodies	Conformal Antenna Analysis and Design using Novel Electronic Materials	Air Force
Jin, Jianming	University of Illinois at Urbana Champaign	IL	(14) Electromagnetics of Antennas and Arrays Designed Using Novel Electronic Materials and Conformal to Large Complex Bodies	Electromagnetic Simulation of Antennas and Arrays using Novel Electronic Materials and Conformal to Large Complex Bodies	Air Force
Oberdörster, Günter	University of Rochester	NY	(15) Nanoscale Design of Structures for Prediction and Control of Cellular Response	Relationship Between Physicochemical Characteristics and Toxicological Properties of Nanomaterials	Air Force

Booske, John H.	University of Wisconsin - Madison	WI	(16) The NanoPhysics of Electron Dynamics Near Surfaces: Key to Tomorrow's HPM Weapons	The Nanophysics of Electron Emission and Breakdown for High Power Microwave Sources	Air Force
Luhmann Jr., Neville	University of California at Davis	CA	(16) The NanoPhysics of Electron Dynamics Near Surfaces: Key to Tomorrow's HPM Weapons	Consortium on the Nanophysics of Electron Dynamics near Surfaces in High Power Microwave Devices and Systems	Air Force
Krim, Jacqueline	North Carolina State University	NC	(17) Nanostructured Multi-Functional Surfaces Enabling Air and Space Vehicle Tribology	Multi-functional Extreme Environment Surfaces: Nanotribology for Air and Space	Air Force
Sawyer, Wallace G.	University of Florida	FL	(17) Nanostructured Multi-Functional Surfaces Enabling Air and Space Vehicle Tribology	Multifunctional Nanocomposites for Air and Space Tribology	Air Force
Sheik-Bahae, Mansoor	University of New Mexico	NM	(18) Laser Cooling for Solid-State Cryogenic Refrigeration	Consortium for Laser Cooling in Solids	Air Force
Zhang, Yong-Hang	Arizona State University	AZ	(18) Laser Cooling for Solid-State Cryogenic Refrigeration	Semiconductor Optical Upconversion Refrigeration	Air Force
Girimaji, Sharath S.	Texas A&M University	TX	(19) Characterization and Prediction of Turbulent Transport Properties in Nonequilibrium Flows	Hypersonic Transition and Turbulence with Non-Equilibrium Thermo-Chemistry	Air Force
Dimotakis, Paul E.	California Institute of Technology	CA	(20) Combined Cycle Propulsion for Efficient Hypersonic Cruise and Economic Access to Space	Design, Performance, and Operation of Efficient Ramjet/Scramjet Combined-Cycle Hypersonic Propulsion	Air Force
Dolling, David S.	University of Texas at Austin	TX	(20) Combined Cycle Propulsion for Efficient Hypersonic Cruise and Economic Access to Space	Experimental/Computational Studies of Combined-Cycle Propulsion: Physics and Transient Phenomena in Inlets and Scramjet Combustors	Air Force
Atwater, Harry A.	California Institute of Technology	CA	(21) Nanophotonics and Plasmon Optics for Optical Networks, Sources and Sensors	Novel Devices for Plasmonic and Nanophotonic Networks: Exploring X-ray Wavelengths at Optical Frequencies	Air Force

Brongersma, Mark L.	Stanford University	CA	(21) Nanophotonics and Plasmon Optics for Optical Networks, Sources and Sensors	Plasmon Enabled Nanophotonic Circuits	Air Force
Halas, Naomi	William Marsh Rice University	TX	(22) Laboratory Instrumentation Design Research	A Multimodality Ultramicrospectroscopy (MUMS): Nanoscale Optical Imaging with Integrated Spectroscopies for Chemical and Biomolecular Identification	Army
Miu, Karen N.	Drexel University	PA	(22) Laboratory Instrumentation Design Research	Device Development for Remote, Nondestructive Testing and Measurement of Power Systems	Navy
Leone, Stephen R.	University of California at Berkeley	CA	(22) Laboratory Instrumentation Design Research	Laser Instrumentation for Attosecond Experimentation	Air Force