

FY 2011 NNI Signature Initiative: Sustainable Nanomanufacturing

Nine awards: Nanoscale Interdisciplinary Research Teams (NIRT)

NSF Award number	Title	PI Name	Institution	Themes	Award \$	Collaborations- Industrial	Collaborations - Govt & Academic
1 1120187	SNM: Continuous and large scale nanomanufacturing of graphene and carbon nanotube materials	Guo, Lingjie J	University of Michigan Ann Arbor	1,3,4	1,300,000	Pall Corp, Lambda Solutions	Mt Holyoke College, NNIN, MRS
2 1120329	SNM: Designing and Integrating LCA Methods for Nanomanufacturing Scale-up	Isaacs, Jacqueline A	Northeastern University	4	1,209,758	NanoComp Technologies, NanoTechLabs, Raytheon	U of Mass Lowell, Yale U, UCLA, Duke U, OECD, NIOSH, DHHS
3 1120382	SNM: Carbon Nanotube Superfiber to Revolutionize Engineering Designs	Schulz, Mark J	University of Cincinnati Main Campus	1	1,100,000	General Nano, Atkins & Pearce, General Cable, Parker Hannifin	Banaras Hindu U (India), WPAFB,
4 1120399	SNM: Technologies for Nanoparticle Monolayer Self-Organization and Deposition	Gilchrist, James F	Lehigh University	1,2	1,100,000	Versatilis, PAower Optics	
5 1120577	SNM: Scalable nanomanufacturing machine based on parallel optical antenna array	Xu, Xianfan	Purdue University	3,1	1,300,000	LumArray,	MIT, NanoHUB, LSAMP
6 1120724	SNM: Digital Optofluidic Self Assembly of Heterogeneous Metamaterials	Fang, Nicholas	Massachusetts Institute of Technology	2	1,490,240	HP Labs, Boeing, Ball Aerospace Systems, Lincoln Labs	Harvard U, UC Berkeley, LNL, nanoHUB, Sandia
7 1120795	SNM: Continuous and Scalable Nanomanufacturing For 3-Dimensional Functional Biomedical Devices	Chen, Shaochen	University of California-San Diego	3,1	1,300,000	3D Systems, NextWave Venture Partners (VC)	UIUC
8 1120823	SNM: Development of ink-jet based low cost roll-to-roll nanopatterning (i-R2R Nano) with demonstration in thin film photovoltaics	Sreenivasan, S. V	University of Texas at Austin	1	1,300,000	Boeing, Molecular Imprints, Tokyo Electron America, MV Systems	NIST
9 1120890	SNM: Electronically Controlled Surface Assembly of DNA Nanostructures	Goddard, William A	California Institute of Technology	2,3	1,250,000	IBM Almaden	UC Riverside, NY U, CSU

11,349,998

Themes:

Theme 1: Novel Processes and Techniques for Continuous and Scalable Nonmanufacturing

Theme 2: Directed Self-Assembly Processes for High-Rate Production of Heterogeneous Nanostructures

Theme 3: Principles and Design Methods for Machines and Processes to Manufacture Nanoscale Structures, Devices and Systems

Theme 4: Long-Term Societal and Educational Implications of the Large-Scale Production and Use of Nanomaterials, Devices and Systems