

### The NNN Newsletter



We'd like to thank all of our participants and attendees for making the first Nanomanufacturing Summit a successful event!

Overviews of the talks and sessions for each day have been posted on [InterNano](#). In addition, the [complete event program](#) (PDF), [presentation abstracts](#) and many of the [presentations](#) are available for viewing and downloading from the Summit website. The Summit student [poster session](#) (PDF) can also be viewed, along with the announcement of the Student Poster Competition [winners](#).

The Nanomanufacturing Summit 2009 held in Boston from May 27 to 29 brought together experts in the field of and nanomanufacturing and highlighted innovative academic, government and industry research, successful commercialization strategies, and challenges and approaches for bridging the gap between the laboratory and the production floor. Summit participants represented multi-disciplinary areas of expertise in physical, environmental, and health sciences, government and regulation, as well as commercial manufacturing and entrepreneurship. Throughout the 3-day event attendees heard about those areas of practice that stand out from the general nanotechnology and nanoscience themes as addressing near-term issues and having the potential to facilitate the commercial development and marketable application of nanoscale systems and devices.

[More...](#)

Regards,  
Jeff Morse, Managing Director,  
National Nanomanufacturing Network

[Learn more about the NNN...](#)

### Funding Innovations for Critical National Need



The previously announced Technology Innovation Program (TIP) by the National Institute of Standards and Technology

### Upcoming Events

June 22 - 23, 2009

[Nano Renewable Energy Summit](#)

June 24-25, 2009

[UK SPM 2009](#)

June 23 - 26, 2009

[2009 International Conference on Nanotechnology for the Forest Products Industry](#)

June 25 - 26, 2009

[Biodetection Technologies 2009](#)

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### Affiliated Centers

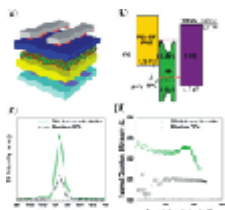
(NIST) presently provides competition for multiyear research funding in two major areas of national interest--civil infrastructure and manufacturing. With this technology focus TIP anticipates providing cost-shared funding for approximately 25 new R&D projects. [More...](#)

## Helium Ion Microscope for Precision Lithography



David C. Bell, Max C. Lemme, and colleagues at Harvard and MIT report the use of a Helium Ion Beam microscope configured for lithography to etch graphene devices with sub-20nm feature sizes. As a direct-write process, helium ion lithography bypasses the need for resists or other materials to come in contact with the graphene, allowing the devices to be fabricated cleanly and without damage. [More...](#)

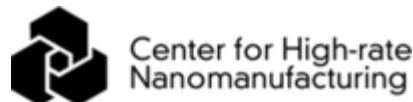
## Functional Self Assembly Incorporating Quantum Dot-Block Copolymer Hybrids



Quantum dot-block copolymer hybrids offer a means for increasing the solubility and stability of inorganic nanoparticles. More importantly, appropriate surface functionalization of the polymer hybrid enables a direct linkage between organic and semiconducting materials to the inorganic core--

meaning that custom polymer blocks can assemble the necessary hierarchy to optimize material properties for specific applications. Zorn, et.al., report their investigation of QD-BCP hybrids for improving the properties of QD light emitting diodes (QLEDs). [More...](#)

[Read more on](#) **InterNano**



### Recently Published

From Our Affiliates

Mechanochemical Delivery and Dynamic Tracking of Fluorescent Quantum Dots in the cytoplasm and Nucleus of Living Cells  
[Nano Letters 9\(5\):2193-2198](#)

First-principles theoretical analysis of pure and hydrogenated crystalline carbon phases and nanostructures  
[Chemical Physics Letters 474\(1-3\):168-174](#)

A Simple Top-Down/Bottom-Up Approach to Sectorized, Ordered Arrays of Nanoscopic Elements Using Block copolymers  
[Small 5\(9\):1064-1069](#)

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Our mailing address is:  
The National Nanomanufacturing Network  
322 Lederle Graduate Research Center  
710 N. Pleasant Street  
University of Massachusetts  
Amherst, MA 01003

Our email address is:  
[nnn@nanomanufacturing.org](mailto:nnn@nanomanufacturing.org)

Our phone number is:  
(413) 577-0570

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