

# A Workshop of the National Science and Technology Council (NSTC) Interagency Working Group (IWG) on Manufacturing Research and Development (R&D)

Holiday Inn, Gaithersburg

October 17-19, 2006

If you have any questions or problems registering, please contact workshop organizers:  
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#### Sponsored by:

The National Institute of Standards and Technology (NIST), the National Science Foundation (NSF), and the Office of Naval Research (ONR)

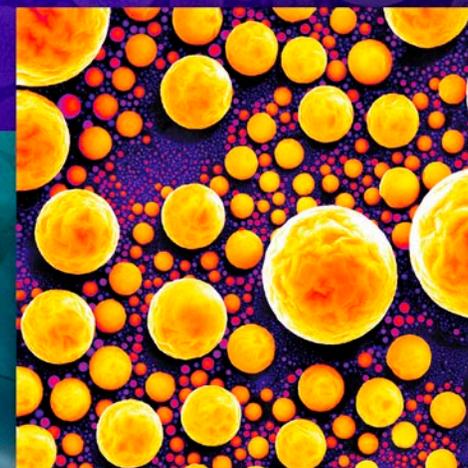
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#### In Collaboration with:

The NSTC Subcommittee on Nanoscale Science, Engineering, and Technology (NSET), Maryland Department of Business and Economic Development, Ben Franklin Technology Partners (Pennsylvania), and the Northern Virginia Technology Council

**N**anomanufacturing is the essential bridge between the discoveries of nanoscience and real world nanotech products – it is the vehicle by which the Nation will realize the promise of major technological innovation across a spectrum of products that will affect virtually every industrial sector. For nanotech products to achieve the broad impacts envisioned, they must be manufactured in market-appropriate quantities in a reliable, repeatable, and commercially viable manner. In addition, they must be manufactured so that environmental and human health concerns are met, worker safety issues are appropriately assessed and handled, and liability issues are addressed. Critical to this realization of robust nanomanufacturing is the development of the necessary instrumentation, metrology, and standards. This will allow the physical dimensions, properties, functionality, and purity of the materials, processes, tools, systems, products, and emissions that will constitute nanomanufacturing to be measured and characterized. This will in turn enable production to be scalable, controllable, predictable, and repeatable to meet market needs. **If a product cannot be measured it cannot be manufactured.**

## Instrumentation, Metrology, and Standards for Nanomanufacturing

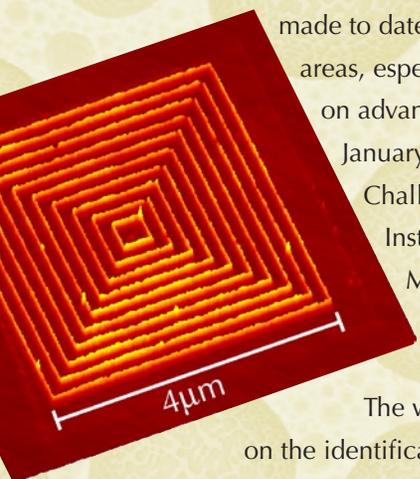


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Gaithersburg, MD

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**NIST**  
National Institute of  
Standards and Technology  
Technology Administration  
U.S. Department of Commerce

This workshop will bring together experts in instrumentation, metrology, computational methods, and manufacturing processes, as well as those who depend on accurate measurements, to discuss and document progress made to date in these various areas, especially focusing on advancements since the January 2004 NNI Grand Challenge workshop on Instrumentation and Metrology (report now available at: [www.nano.gov](http://www.nano.gov)).



The workshop will focus on the identification of technical challenges that need to be undertaken as well as the directions the community feels it needs to take going forward. A set of research recommendations will be identified will be compiled from discussions at the workshop.

The workshop is scheduled for two and one-half days. The first day and a half is devoted to plenary talks from representatives of various industrial nanomanufacturers. The remainder of the time is devoted to facilitated break-out sessions for practical technical discussions and documentation of current and emerging needs and solutions. **It is expected that all registrants will actively participate in the breakout sessions.**

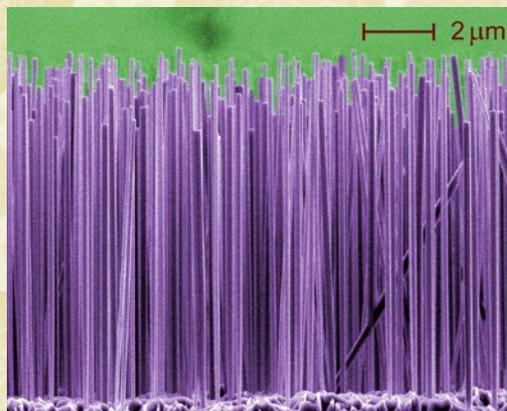
The Workshop will meet at the Gaithersburg Holiday Inn on October 17-19, 2006. Outside of invited plenary presentations by industrial representatives, most of the time will be dedicated to group discussion, providing the attendees the opportunity to share thoughts with each other.

### The Registration Deadline is: October 1, 2006

There is no registration fee for the Workshop. However, attendance will be capped at 200 people maximum. Pre-registration is required by NIST Security for entry onto the NIST campus for the reception. This rule is strictly enforced. A web form has been implemented to streamline the process. This form is accessible through the Nanomanufacturing Workshop web page at: [www.mel.nist.gov/nano.htm](http://www.mel.nist.gov/nano.htm)

### By registering you are agreeing to actively participate in the breakout sessions.

After submitting the form, you will receive an e-mail confirming your reservation.



A block of rooms has been set aside for attendees at the NIST rate of \$104/day single or double.

Holiday Inn  
Gaithersburg  
Two Montgomery Village Avenue  
Gaithersburg, Maryland 20879  
Phone: (301) 948-8900  
Fax: (301) 258-1940  
Toll Free: 1-800-HOLIDAY  
[www.higaitersburg.com](http://www.higaitersburg.com)

NIST is located approximately 1 mile west of the Gaithersburg Holiday Inn just off Interstate Route 270, about 25 miles (40 kilometers) from the center of Washington, D.C. If you wish to use an Internet map service to locate the NIST campus, you might need the street address of NIST:  
National Institute of  
Standards and Technology  
100 Bureau Drive  
Gaithersburg, MD 20899

