

March 3, 2009

1. Upcoming conferences and seminars in nanoscience and nanotechnology:

- **Bacterial Interactions with Engineered Nanomaterials**
*Continuing Spring 2009 Symposium Series,
"Bridging the River through Nanoscience and Nanotechnology"*

Patricia Holden, Professor of Environmental Microbiology
Bren School of Environmental Science & Management, University of California Santa Barbara
March 5, 2009

Seminar Reception	3:30-4:00pm	3501 SC
Seminar	4:00-5:00pm	3321 SC

- **An Integrated Approach Toward Understanding the Toxicity and Occupational and Environmental Health Hazards of Commercially Manufactured Metal and Metal Oxide Nanoparticles**

Vicki H. Grassian, Professor, Departments of Chemistry, Chemical & Biochemical Engineering,
and Occupational & Environmental Health, University of Iowa

March 6, 2009 10:30am 2117 MERF

Sponsored by The Environmental Health Sciences Research Center, The Human Toxicology Program, and The Iowa Superfund Basic Research Program.

- **Advances in Translational Science**

March 11-13, 2009

Tucson, AZ

<http://www.tms.org/meetings/annual-09/AM09home.aspx>

2. Upcoming grant opportunities and funding requests in nanoscience and nanotechnology:

- **Technology Innovation Program (TIP)**

Call for White Papers

TIP is seeking white papers to help shape the Programs' collaborative outreach and competitions in the future.

Deadlines: March 9, May 11, July 13, 2009

http://www.nist.gov/tip/frn_seeking_whitepapers.pdf

- **NanoThermal Interfaces (NTI)**

Department of Defense

Funding Opportunity Number: DARPA-BAA-08-42

Closing Date for Applications: May 21, 2009

<http://www07.grants.gov/search/search.do;jsessionid=L1wK3qQVwKFJNITCSMLfBYcGBpp5yF9812Y6GN1ST0f1tnTms59v!293637734?opId=41766&flag2006=false&mode=VIEW>

4. Highlights of some new interesting nanoscience and nanotechnology research and articles:

- **Targeted Nanospheres Find, Penetrate, Then Fuel Burning of Melanoma**

Hollow gold nanospheres equipped with a targeting peptide find melanoma cells, penetrate them deeply, and then cook the tumor when bathed with near-infrared light. When heated with lasers, the actively targeted hollow gold nanospheres did eight times more damage to melanoma tumors in mice than did the same nanospheres that gathered less directly in the tumors.

http://nano.cancer.gov/news_center/2009/feb/nanotech_news_2009-02-23b.asp

- **Potential On-off Switch For Nanoelectronics**

As electronic circuits shrink from finely etched lines in silicon wafers to nearly elusive proportions, researchers at the U.S. Department of Energy's Lawrence Berkeley National Laboratory (Berkeley Lab) and Columbia University are studying how electrons flow through a

molecular junction-a nanometer scale circuit element that contacts gold atoms with a single molecule. Their findings reveal the electrical resistance through this junction can be turned 'on' and 'off' simply by pushing and pulling the junction-a feature that could be used as a switch in nanoscale electronic devices

<http://www.sciencedaily.com/releases/2009/03/090303161429.htm>

- **New Imaging Methods Let Scientists "See" Biomolecules More Clearly**

Scientists have always wanted to take a closer look at biological systems and materials. From the magnifying glass to the electron microscope, they have developed increasingly sophisticated imaging devices. Now, Niels de Jonge, Ph.D., and colleagues at Vanderbilt University have added a new tool to the cell biologist's toolbox. In the *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, they describe a technique for imaging whole cells in liquid with a scanning transmission electron microscope (STEM).

http://nano.cancer.gov/news_center/2009/feb/nanotech_news_2009-02-23f.asp

About NANO @ IOWA Weekly

NANO @ IOWA Weekly is a weekly electronic newsletter to inform faculty, staff, and students about important news and events in nanoscience & nanotechnology. This newsletter is provided as a service of The Nanoscience and Nanotechnology Institute at UI (NNI@UI).

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<http://research.uiowa.edu/nniui/>