

1. Upcoming conferences and seminars including nanoscience and nanotechnology:

- **Routes to Functional Nanomaterials: Chemical Vapor Synthesis, Colloidal Processing and Structural Characterization of Complex Nanocrystalline Oxides**
Dr. Markus Winterer
Nanoparticle Process Technology, Department of Engineering Sciences
University Duisburg-Essen, Duisburg, Germany
October 30, 2009 1:30pm
104 IATL
University of Iowa, Iowa City, IA
- **Symposium: *Nanoscience and Nanotechnology: Environmental and Health Aspects***
44th Annual Midwest Regional Meeting of the American Chemical Society (ACS)
October 23, 2009
Sheraton Hotel & Conference Center, Iowa City, IA
www.mwrm2009.org
- **SC09, International Conference for High Performance Computing, Networking, Storage and Analysis**
November 14-20, 2009
Oregon Convention Center
Portland, Oregon
<http://sc09.supercomputing.org/>
 - **Fifth International Workshop on High Performance Computing for Nano-science and Technology (in conjunction with SC09)**
November 15, 2009
<http://www.hpcnano.org/HPCNano09/index.html>
- **Workshop: Nanomaterials and Human Health & Instrumentation, Metrology, and Analytical Methods**
National Nanotechnology Initiative
November 17-18, 2009
Arlington, VA
<http://www.nano.gov/html/meetings/humanhealth/>

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

- **Metallic Materials and Nanostructures (MMN)**
National Science Foundation
Program Number PD 03-1771
Full Proposal Window: September 1 – October 31, 2009
http://nsf.gov/funding/pgm_summ.jsp?pims_id=5351
- **Macromolecular, Supramolecular and Nanochemistry (MSN)**
National Science Foundation
Program Number PD 09-6885
Full Proposal Window: November 1- November 30, 2009
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503422

- **International Collaboration in Chemistry between U.S. Investigators and their Counterparts Abroad (ICC)**

National Science Foundation

Program Solicitation: NSF 09-608

Preliminary Proposal Due: November 3, 2009

Full Proposal Deadline: January 29, 2010

http://www.nsf.gov/pubs/2009/nsf09608/nsf09608.htm?WT.mc_id=USNSF_179

- **NIH: Cancer Nanotechnology Training Centers (CNTCs)(R25)**

National Institutes of Health

Request for Applications (RFA) Number: RFA-CA-09-14

Internal Review (WINS) Due Date: November 9, 2009 (by 5p.m.)

Internal Selection Process:

<http://research.uiowa.edu/grantTrack/preselection.php?view=yes&GrantID=17325&Type=2>

Letters of Intent Receipt Date: November 17, 2009

Application Due Date: December 17, 2009

Sponsor URL: <http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-09-014.html>

- **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=L1wK3gQVwKFJNITCSMLfBYcGBpp5yF9812Y6GN1STOf1tnTms59v!293637734?oppld=41766&flag2006=false&mode=VIEW>

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

- **Golden Nanotubes Detect Tumor Cells, Map Sentinel Lymph Nodes**

Biomedical researchers at the University of Arkansas in Fayetteville and the University of Arkansas for Medical Sciences (UAMS) in Little Rock have developed a special contrast-imaging agent made of gold-coated carbon nanotubes that is capable of molecular mapping of lymphatic endothelial cells and detecting cancer metastasis in sentinel lymph nodes.

http://nano.cancer.gov/action/news/2009/sep/nanotech_news_2009-09-23c.asp

- **Prostate Cancer Recurrence Detected Early in Nanosphere Test**

Nanosphere Inc.'s novel technology using gold nanoparticles may predict the recurrence of prostate cancer earlier than current blood tests, a pilot study found. In an 18-patient study, the new method detected a protein specific to prostate cancer in 86 percent of blood samples compared with 25 percent for conventional tests, according to research published online today in the Proceedings of the National Academy of Sciences. The company attaches antibodies to the gold, producing what Nanosphere calls probes for "ultrasensitive" detection of proteins that may otherwise go undiscovered.

About 70,000 men a year undergo surgery to remove diseased prostates and 40 percent will have their cancer return, according to C. Shad Thaxton, the lead author. If the test works in larger studies, doctors may be able to diagnose recurrence of the disease several years earlier than what now is the norm, the researchers said.

<http://www.bloomberg.com/apps/news?pid=20601124&sid=am.R2fzVTkyU>

- **How Carbon Nanoparticles Would Affect Fruit Flies**

Carbon nanoparticles are widely used in medicine, electronics, optics, materials science and architecture, but their health and environmental impact is not fully understood. In a series of experiments, researchers at [Brown University](#) sought to determine how carbon nanoparticles would affect fruit flies - from the very young to adults. The scientists found that larval *Drosophila melanogaster* showed no physical or reproductive effects from consuming carbon nanoparticles in their food. Yet adult *Drosophila* experienced a different fate. Tests showed adults immersed in tiny pits containing two varieties of carbon nanoparticles died within hours. Analyses of the dead flies revealed the carbon nanoparticles stuck to their bodies, covered their breathing holes, and coated their compound eyes. Scientists are unsure whether any of these afflictions led directly to the flies' death.

<http://www.azonano.com/news.asp?newsID=13046>

About NANO @ IOWA

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