

## **NANO @ IOWA**

News from The Nanoscience and Nanotechnology Institute at UI

November 3, 2009

Items in **red** are new this issue.  
(Others are carried forward from previous issues.)

---

### **1. Upcoming conferences and seminars including nanoscience and nanotechnology:**

- **Atomic Force Microscopy: Versatile Tool in Nanoscience**  
Physical and Environmental Seminar  
Dr. Alexei Tivanski, Department of Chemistry, The University of Iowa  
November 9, 2009            12:30-1:30pm            W323 Chemistry Building
  
- **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/>
  
- **Nano-Optics, Plasmonics, and Advanced Materials Workshop**  
NIST  
April 19-22, 2010  
Gaithersburg, MD  
[http://www.nist.gov/cnst/nrg/nopam\\_conf.cfm](http://www.nist.gov/cnst/nrg/nopam_conf.cfm)

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

- **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](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503422)
  
- **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>

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

- **Magnetism Turns Drug Release On and Off**

Many medical conditions, such as cancer, diabetes and chronic pain, require medications that cannot be taken orally, but must be dosed intermittently, on an as-needed basis, over a long period of time. A few delivery techniques have been developed, using an implanted heat source, an implanted electronic chip or other stimuli as an "on-off" switch to release the drugs into the body. But thus far, none of these methods can reliably do all that's needed: repeatedly turn dosing on and off, deliver consistent doses and adjust doses according to the patient's need. But now, a research team led by Daniel Kohane of Children's Hospital Boston has devised a solution that combines magnetism with nanotechnology.

[http://nano.cancer.gov/action/news/2009/oct/nanotech\\_news\\_2009-10-29b.asp](http://nano.cancer.gov/action/news/2009/oct/nanotech_news_2009-10-29b.asp)

- **Nanoparticles Detect and Purge Metastases in Lymph Nodes**

Colonoscopy represents one of the great weapons against cancer. In one step, a physician can find precancerous lesions in the colon and then cut them out, an on-the-spot intervention that prevents cancer from developing. Now, researchers at the Winthrop Rockefeller Cancer Institute and the University of Arkansas for Medical Sciences have developed another fiber optic technique that can detect lymph node metastases and destroy them on the spot, an action that could prevent the further spread of breast cancer, melanoma, or gastrointestinal cancer, all of which spread through the lymphatic system.

[http://nano.cancer.gov/action/news/2009/oct/nanotech\\_news\\_2009-10-29c.asp](http://nano.cancer.gov/action/news/2009/oct/nanotech_news_2009-10-29c.asp)

- **Nanomaterials Under Study by the E.P.A.**

The Environmental Protection Agency detailed its plans on Tuesday for research into the possible health and environmental risks of nanomaterials, tiny substances that are finding growing use in products like sunscreens and industrial adhesives.

The document, issued in draft form in June, calls for work to identify sources of nanomaterials, which can measure as little as perhaps one-10,000th the width of a human hair. Research will also center on how they move in the environment, the problems they might cause for people, animals and plants, and how these problems could be avoided or mitigated.

[http://www.nytimes.com/2009/09/30/science/earth/30nano.html?\\_r=1](http://www.nytimes.com/2009/09/30/science/earth/30nano.html?_r=1)

---

#### About NANO @ IOWA

NANO @ IOWA is a bi-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). To subscribe to NANO @ IOWA, please send an e-mail to [NNI@uiowa.edu](mailto:NNI@uiowa.edu) with subject line: Subscribe NANO @ IOWA. In the body of the message, type: (your first name), (your last name). To unsubscribe, send an E-mail message to: [NNI@uiowa.edu](mailto:NNI@uiowa.edu) with subject line: Unsubscribe NANO @ IOWA. In the body of the message, type: (your first name) (your last name).

If you have news for NANO @ IOWA, please e-mail [NNI@uiowa.edu](mailto:NNI@uiowa.edu) or call Jackie Jensen at 319-384-3292.

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