

September 1, 2009

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

1. Upcoming conferences and seminars including nanoscience and nanotechnology:

- **Micro Nano Breakthrough Conference**
Oregon Nanoscience & Microtechnologies Institute and Washington Technology Center
September 21-23, 2009
Portland Oregon
<http://oregonstate.edu/conferences/MNBC/>
- **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
- **National Science Foundation Workshop: NSF Day at the University of Iowa**
October 8, 2009
Iowa Memorial Union, Iowa City, IA
There is no fee for the workshop, but preregistration is required & seating is limited.
Deadline to register: September 30.
http://www.nsf.gov/events/event_summ.jsp?cntn_id=115411&

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
- **Image-guided Drug Delivery in Cancer (R01)**
National Institutes of Health
Program Number PA-09-253
Application Due Date: October 5, 2009
<http://grants.nih.gov/grants/guide/pa-files/PA-09-253.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=L1wK3gQVwKFJNITCSMLfBYcGBpp5yF9812Y6GN1ST0f1tnTms59v!293637734?opId=41766&flag2006=false&mode=VIEW>

3. Achievements of NNI@UI researchers:

- **Dr. Mark Young awarded NSF grant for single particle mass spectrometer**
The National Science Foundation recently awarded Associate Professor of Chemistry and NNI@UI Core Faculty member, Mark Young, \$629,422 for development of a single particle mass spectrometer for field and laboratory studies of the environmental impact of atmospheric aerosols and engineered nanoparticles. Co-PI's on the grant are Paul Kleiber, Professor of Physics and Astronomy, and Vicki H. Grassian, Professor, Departments of Chemistry and Chemical and Biochemical Engineering, and Director of NNI@UI.
- **Dr. Julie Jessop receives NSF grant to research light-activated materials**
Julie Jessop, University of Iowa College of Engineering Assistant Professor of Chemical and Biochemical Engineering, and NNI@UI Core Faculty member, has received a three-year, \$238,000 National Science Foundation (NSF) grant to research new, light-activated materials.

Her work is aimed at developing new processes for such things as adhesives and coatings that can be used in dentistry and other fields.

<http://www.news-releases.uiowa.edu/2009/june/060509jessopgrant.html>

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

- **Nanoparticle-Based Gene Therapy Technique Could Fight Late-Stage Tumors**
Nanoparticle delivery of diphtheria toxin-encoding DNA that expresses selectively in ovarian cancer cells reduced the burden of ovarian tumors in mice, and researchers expect that this therapy could be tested in humans with advanced ovarian cancer within 18 to 24 months, according to a report in *Cancer Research*. If additional tests are successful, these finding could lead to a new treatment for ovarian cancer, which now causes more than 15,000 deaths each year in the United States.
http://nano.cancer.gov/news_center/2009/aug/nanotech_news_2009-08-27d.asp
- **Nanoparticles Detect and Profile Cancer Cells Rapidly**
Using a new type of paramagnetic nanoparticle and a nuclear magnetic resonance (NMR) system built into a microfluidic device, a team of investigators at the Massachusetts General Hospital and Harvard Medical School has created an assay system capable of detecting as few as two cancer cells in 1 microliter of biological fluid. In addition, the new assay requires little sample processing and produces results in less than 15 minutes.
http://nano.cancer.gov/news_center/2009/aug/nanotech_news_2009-08-27c.asp
- **Nano-bioelectronics Achieved with Nanowires, Proteins**
Researchers at Lawrence Livermore National Laboratory have created a platform that uses lipid-coated nanowires to build prototype bionanoelectronic devices. The work shows promise for enhancing biosensing and diagnostics tools, neural prosthetics (e.g., cochlear implants), and even future computers.
http://smalltimes.com/display_article/367687/109/ONART/none/RD/1/Nano-bioelectronics-achieved-with-nanowires,-proteins/

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).

If you have news for NANO @ IOWA, please send an e-mail to NNI@uiowa.edu or call Jackie Jensen at 319-384-3292.

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