

April 13, 2009

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

1. Upcoming conferences and seminars including nanoscience and nanotechnology:

- **55th Midwest Solid State Conference**
The University of Iowa
April 18-19, 2009
<http://nano.physics.uiowa.edu/~mwss/index.html>
- **6th Annual Conference Foundations of Nanoscience (FNANO09)
Self-Assembled Architectures and Devices**
Snowbird, UT
April 20-24, 2009
<http://www.cs.duke.edu/~reif/FNANO/>
- **Clean Technology Conference & Expo 2009**
Houston, TX
May 3-7, 2009
<http://www.csievents.org/Cleantech2009/>
- **Argonne National Laboratory Users Week 2009**
Advanced Photon Source - Center for Nanoscale Materials - Electron Microscopy Center.
Argonne, IL
May 4-6, 2009
<http://www.aps.anl.gov/Users/Meeting/2009/>

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

- **The American Recovery and Reinvestment Act of 2009 (ARRA)**
www.recovery.gov
There are many funding opportunities for scientific research available as federal funding agencies implement plans for the spending and oversight of their portions of scientific research funding included in the American Reinvestment and Recovery Act (ARRA). Please use the links below for details for these funding agencies:
 - NIH <http://grants.nih.gov/recovery/>
 - NSF <http://nsf.gov/recovery/>
 - DOE <http://www.energy.gov/recovery/>
 - NIST <http://www.nist.gov/recovery/>
 - NASA <http://www.nasa.gov/recovery/>
 - EPA <http://www.epa.gov/recovery/>
- **Cutting-Edge Basic Research Awards (CEBRA) (R21)**
Department of Health and Human Services
National Institutes of Health (NIH)
Program Announcement Number: PAR-06-209
Closing Date: 5/2/2009
<http://grants.nih.gov/grants/guide/pa-files/PAR-06-209.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>
- **Joint US – UK Research Program: Environmental Behavior, Bioavailability and Effects of Manufactured Nanomaterials**
U.S. Environmental Protection Agency
Office of Research and Development
National Center for Environmental Research
Science to Achieve Results (STAR) Program
U.K. Environmental Nanoscience Initiative:
UK Natural Environment Research Council
UK Engineering and Physical Sciences Research Council
UK Department of Environment, Food and Rural Affairs
Environment Agency of England and Wales
Funding Opportunity Number: EPA-G2008-STAR-R1
Closing Date: 8/5/2009
http://es.epa.gov/ncer/rfa/2009/2009_uk_nano.html
- **Image-Guided Cancer Interventions (STTR [R41/R42])**
Department of Health and Human Services
National Institutes of Health (NIH)
Program Announcement Number: PA-07-041
Closing Date: 9/2/2009
<http://grants.nih.gov/grants/guide/pa-files/PA-07-041.html>

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

- **Safer Nanoparticles Spotlight Tumors, Deliver Drugs**
Small is promising when it comes to illuminating tiny tumors or precisely delivering drugs, but many worry about the safety of nanoscale materials. Now a team of scientists has created miniscule flakes of silicon that glow brightly, last long enough to slowly release cancer drugs, then break down into harmless byproducts. “It is the first luminescent nanoparticle that was purposely designed to minimize toxic side effects,” said Michael Sailor, Ph.D., University of California, San Diego
http://nano.cancer.gov/news_center/2009/march/nanotech_news_2009-03-25g.asp
- **Biosensors: Viruses for ultrasensitive assays**
A three-dimensional assay based on genetically engineered viral nanoparticles and nickel nanohairs can detect much lower levels of protein markers associated with heart attacks than conventional assays.
<http://www.nature.com/nnano/journal/v4/n4/full/nnano.2009.64.html>
- **Nanopore Sequencing Could Slash DNA Analysis Costs**
Over the past 5 years, researchers have been exploring the use of nanoscale pores as nucleic acid sequencing tools. In theory, such pores should generate a unique response characteristic of each of the four nucleotide bases as a piece of DNA moves through the pore. Now, investigators at Oxford Nanopore Technologies in the United Kingdom have successfully tested a system that can identify a piece of DNA’s bases directly as it moves through a modified protein nanopore. With further development, this system could greatly reduce the expensive equipment, chemicals, and lab time needed for current scanning methods, said Gordon Sanghera, Ph.D., Oxford’s chief executive.
http://nano.cancer.gov/news_center/2009/march/nanotech_news_2009-03-25g.asp

About NANO @ IOWA

NANO @ IOWA Weekly 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).

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