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Center for Nanotechnology in Society University of California, Santa Barbara

www.cns.ucsb.edu

WEEKLY CLIPS

March 31 – April 6, 2009



Faculty members at ASU's Center for Nanotechnology in Society receive grant

Tempe, AZ | Posted on April 1st, 2009

Two Arizona State University faculty members - Erik Fisher, Ph.D., assistant research professor, Center for Nanotechnology in Society (CNS-ASU), and David H. Guston, Ph.D., director of CNS-ASU - have been awarded a three-year, \$540,000 grant from the National Science Foundation. The grant will support the Socio-Technical Integration Research Project (STIR), which will study the extent to which collaborations between social and natural scientists working alongside one another in research laboratories may advance responsible innovation. The STIR project coordinates 20 such studies in laboratories in North America, Western Europe and East Asia.

While policies in many nations are placing new pressures on laboratories to address broader ethical, legal and social dimensions of their work, neither the capacity of laboratories to respond to such pressures nor the role that interdisciplinary collaborations may play in enhancing responsiveness is well understood or empirically supported.

"The STIR project takes to heart

longstanding calls for collaboration between social and natural scientists," said Fisher. "By conducting and assessing a coordinated set of international laboratory engagement studies, the project ultimately will seek to inform the design and implementation of effective forms of responsible innovation."

STIR will train ten doctoral students from a number of social science and humanities perspectives to each carry out paired laboratory studies based on a research method developed by Fisher, the project's principal investigator, in his doctoral research at the University of Colorado at Boulder. These students - half in the United States and half in other countries - will spend approximately four months working intimately with scientists and engineers in two laboratories, one in their home countries and one abroad.

The paired international studies will allow them to gain comparative understanding of the capacity of laboratories to respond to policies for responsible innovation.

"The project is an immensely ambitious one, but one with a profound potential payoff," said Guston, the project's co-principal investigator. "Training a global cohort of students and gaining a detailed understanding of how interdisciplinary collaborations can assist in stimulating laboratories' responsiveness to public values will be a significant move forward."

In August, Fisher will become a tenure-track assistant professor in ASU's Department of Political Science and will retain a research appointment at the Consortium for Science, Policy and Outcomes (CSPO), which houses CNS-ASU. Guston, in addition to directing CNS-ASU, also is a professor of political science and co-director of CSPO.

The STIR project is co-funded through the NSF programs in Science, Technology & Society; Biology and Society; Mathematical and Physical Sciences and Society; Science of Science and Innovation Policy; and Office of International Science and Engineering. The project will be administered through CNS-ASU, which is one of two NSF-funded Nano-scale Science and Engineering Centers dedicated to studying the societal implications of nano-scale science and engineering research, and improving the societal outcomes of nanotechnologies through enhancing the societal capacity to understand and make informed choices.

http://www.nanotech-now.com/news.cgi?story_id=32697



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News > Nanowerk Research and General News >

Posted: April 2, 2009

OECD launches database on research into the safety of manufactured nanomaterials

(*Nanowerk News*) OECD [Database on Research into Safety of Manufactured Nanomaterials](#) is a global resource which collects research projects that address environmental, human health and safety issues of manufactured nanomaterials. This database helps identify research gaps and assists researchers in future collaborative efforts. The database also assists the projects of the OECD's Working Party on Manufactured Nanomaterials (WPMN) as a resource of research information.

Database on Research into Safety of Manufactured Nanomaterials: General Information

As part of the OECD activities to promote international co-operation in addressing human health and environmental safety aspects of manufactured nanomaterials, the OECD has developed a global resource which collects research projects that address environmental, human health and

safety issues of manufactured nanomaterials. This database holds details of completed, current and planned research projects on safety, which are to be updated (electronically) by delegations. This database is also intended to be an inventory of information on research programmes to help the other projects of the WPMN by identifying relevant research projects or storing information derived from the projects of the WPMN, including the sponsorship programme on the testing of manufactured nanomaterials.

<http://www.nanowerk.com/news/newsid=9931.php>

No data, no market' for nanotechnologies, MEPs say

Published: Thursday 2 April 2009

The European Parliament's environment committee this week adopted a report by Swedish Green MEP Carl Schlyter which calls for tighter controls on nanotechnology, including the application of the 'no data, no market' principle contained in the REACH Directive.

The own-initiative, non-binding report calls for products containing nanotechnology which are already on the market to be withdrawn until safety assessments can be made.

The [European Environmental Bureau](#)

, a network of environmental NGOs, hailed the report as a significant victory in the ongoing debate on how to legislate for fast-moving developments in nanoscience.

Schlyter said the report, which was adopted on March 31 by 21 votes to 14, had not been easy to negotiate, as political groups had been changing their position throughout the process.

"It's difficult to find a line where we can get support, because the issue is still so new," he told the committee ahead of the vote.

The committee's decision comes in the wake of last week's vote on the [Novel Food Regulation](#) , when MEPs voted for definition, labelling and specific risk assessments for nano-containing foods.

Welcoming the vote, the EEB said it was pleased that the committee had taken on board suggestions made by NGOs in relation to the definition of nanotechnology, the need for labelling of products containing nanoparticles and an immediate review of existing legislation.

"We are immensely pleased that Parliament disagreed with the European Commission's opinion that nanomaterials are in principle covered by existing legislation and better implementation alone could effectively oversee this important and complex emerging technology," said Dragomira Raeva, the EEB's nanotechnology policy officer.

"With nanotechnology use expected to mushroom in the coming years, the right framework needs to be put in place now to ensure that the use and release of these micromaterials into the environment does not adversely affect human health or ecosystems. Current safety testing methods do not address the nano-level, which makes it impossible to spot them in products, people or nature," she said.

<http://www.euractiv.com/en/science/data-market-nanotechnologies-meps/article-180893>

Nanotechnology conference aims to spur industries, create jobs

[Matt Wrye, Staff Writer](#)

Posted: 04/02/2009 08:54:18 PM PDT

The nanotechnology gods just might be smiling on Albert Maniaol and Matthew Isaac.

The two organizers behind the San Bernardino Nano Center's first Nanotechnology Conference, ending today in San Bernardino, are holding out for big returns on their intellectual investment in the community.

More than 80 people from around California showed up Thursday, the conference's first day, eager to watch and learn.

Scientists from UC Riverside, Santa Clara University and regional companies gave the audience a taste of how nanotechnology may change life as we know it.

"We want to train and prepare a work force in this emerging high-growth technology," said Maniaol, a lead researcher at the Nano Center and director of the Applied Technologies Training Center, which is under the San Bernardino Community College District. "If we have a trained work force, we can entice manufacturing industries to start businesses here."

Nanotechnology research is causing ripples in the global science community, but its projected effects on the economy could make quite a splash over the next couple of decades.

"All industrialized nations of the world have realized this to be the technology of the 21st century," said Meyya Meyyappan, a speaker at the conference and chief scientist at the Mountain View-based NASA Ames Research Center. "Obviously, (the U.S.) started it. But right now, the race is on. I can't tell you that we're ahead of everyone else."

Meyyappan said the Nano Center's recent \$2million grant from the Labor Department is garnering attention from Silicon Valley researchers.

"Every community has to take a leadership role," Meyyappan said. "These folks in San Bernardino are ahead of the rest of them."

The grant is going toward six upcoming nano courses designed to prepare students for entry-level technician and specialist jobs in manufacturing, engineering and other industries.

Businesses can send their employees to the center for nanotechnology training, with more than \$4,400 in education costs per student subsidized by the grant if an employee qualifies.

Isaac said he hopes the center will be able to train 100 people per year.

If nanotechnology proves to be a hot industry, the executives of one local company - Redlands-based Advatech Pacific Inc. - is considering hiring specialists who complete courses at the Nano Center.

Advatech's 70 employees do engineering, research and development for Air Force labs across the Southwest.

"Where nanotechnology is playing into that arena is with lighter structures and stronger structures," said Tom Kister, another speaker at the conference and vice president and general manager of Advatech. "If we can take a pound off of a space vehicle or airplane ... it's very cost-effective."

Unsurprisingly, obstacles exist - namely in "producability" and "repeatability," Kister says.

"We don't know what the (Environmental Protection Agency) requirements will be to go along with this," Kister said. "And we have to figure out how to produce materials and bring the cost down. It's in its infancy now."

http://www.sbsun.com/business/ci_12060359#end



NIOSH Issues Updated 'Approaches To Safe Nanotechnology,' Reiterating Interim Guidance On Controlling Workplace Exposures

April 3, 2009

The National Institute for Occupational Safety and Health (NIOSH) recently issued an updated and expanded edition of its document, "Approaches to Safe Nanotechnology." The updated document reiterates NIOSH's standing interim recommendation that employers take prudent measures to control occupational exposures in the manufacture and industrial use of engineered nanomaterials, as research advances for determining if such materials pose work-related health and safety risks.

The new document, which is available at www.cdc.gov/niosh/docs/2009-125/, reflects new scientific findings from ongoing research that have been published in the peer-reviewed scientific literature since the last revised draft version of "Approaches" was issued in 2006. These include findings from NIOSH's own strategic research program, as well as research by scientific partners from the U.S. and abroad.

The revised document:

- Includes an expanded section on risk management, with a detailed discussion of factors that may affect occupational exposure to engineered nanomaterials, and expanded interim recommendations for controlling work-related exposures.
- Expands the discussion of exposure assessment and characterization for engineered nanomaterials, including a new summary table of instruments and measurement methods used in the evaluation of nanomaterial exposures.
- Is issued as a NIOSH numbered document, so that it can be cited more easily as a resource in peer-reviewed scientific publications. The original draft version in 2004 and the previous revised draft edition in 2006 were web-based electronic documents that did not have a formal NIOSH publication number.

"Health and safety practitioners and business observers have agreed that robust scientific research and authoritative, science-based recommendations are vital for the responsible development and growth of nanotechnology," said NIOSH Acting Director Christine M. Branche, Ph.D. "NIOSH is pleased to issue the updated 'Approaches to Safe Nanotechnology' to provide ongoing interim guidance, reflect the astonishing advance of complex research in this area, and engage public review and comment."

More information about NIOSH's strategic research program on the occupational health and safety implications and applications of nanotechnology can be found at www.cdc.gov/niosh/topics/nanotech/. NIOSH's collaborative research addresses critical gaps in information needed for risk assessment in this emerging field. These include current gaps in information on ways in which workers may be exposed, ways for characterizing and measuring exposures, and potential effects of exposure. NIOSH's research and interim recommendations have been widely cited in the U.S. and abroad.

SOURCE: NIOSH

<http://www.safetyonline.com/article.mvc/NIOSH-Issues-Updated-Approaches-To-Safe-0001?VNETCOOKIE=NO>

News-Medical.Net

NIH Nanotechnology Task Force and the NIH Nanomedicine Roadmap initiative host NanoWeek 2009

Published: Saturday, 4-Apr-2009

Medical Science News

The NIH Nanotechnology Task Force and the NIH Nanomedicine Roadmap Initiative will host NanoWeek 2009 from Tuesday, April 7 through Friday, April 10 at the Natcher Conference Center on the NIH campus in Bethesda, Md. NIH's first-of-a-kind series of events focusing on science at the nanoscale, NanoWeek 2009 will include symposia with experts in the field, demonstrations, talks, and posters from NIH scientists.

NanoWeek 2009's first day will include seminars explaining the basic concepts of nanotechnology, followed by summaries of current research being conducted and medical applications of nanotechnology. Speakers include:

- Dr. Michael Gottesman, deputy director of Intramural Research at the National Institutes of Health
- Dr. Richard Fisher, associate director for Science Policy and Legislation at the National Eye

Institute

- Dr. Catherine Lewis, director, Division of Cell Biology and Biophysics at the National Institute of General Medical Sciences
- Dr. Piotr Grodzinski, director of the Nanotechnology in Cancer Program at the National Cancer Institute,
- Dr. Karen Peterson, senior advisor to the Director of the National Institute of Biomedical Imaging and Bioengineering will also provide remarks.

On Wednesday, NIH scientists will discuss ongoing nanotechnology research being performed at the NIH, along with more than 30 posters presenting work from NIH's labs. There will be afternoon tours of nanotechnology labs at the National Heart, Lung, and Blood Institute, the National Cancer Institute, the National Institute of Arthritis and Musculoskeletal and Skin Diseases, the National Institute of Biomedical Imaging and Bioengineering, and the National Institute of Neurological Disorders and Stroke.

In coordination with IEEE, a leading professional association for the advancement of technology, NIH will conduct a workshop on Nanomedicine on Thursday and Friday. This will provide an opportunity for engineers and physical scientists to exhibit their cutting-edge technology, as well as to learn about possible biological applications for these technologies. Regulatory and intellectual property aspects of nanoresearch will also be addressed, in combination with presentations from some of the major industry efforts in the field.

Events on Tuesday and Wednesday are open to the public and free of charge. Registration for the lab tours will open on April 1. The nanomedicine workshop on Thursday and Friday requires registration, which is located at <https://roan2.wustl.edu/>. The full week's agenda, as well as further information on NanoWeek 2009, can be found at <http://www.capconcorp.com/nanoweek2009/>. For more information on nanotechnology at the National Institutes of Health, see the Web site <http://www.nibib.nih.gov/Research/NIHNano>.

The National Institute of Biomedical Imaging and Bioengineering (NIBIB), a component of the National Institutes of Health, U.S. Department of Health and Human Services, is dedicated to improving human health through the integration of the physical and biological sciences. The research agenda of the NIBIB will dramatically advance the Nation's health by improving the detection, management, understanding, and ultimately, the prevention of disease.

<http://www.nibib.nih.gov>



Nanotechnology Crucial in Fighting Infectious Disease

Summary posted by Meridian on 4/3/2009

Source: The Lancet

Author: Kelly Morris

The article, in the April 2009 The Lancet Infectious Diseases, highlights research being conducted using nanotechnology to prevent, diagnose and treat infectious diseases. Saying that progress in this field is moving at an exponential pace, the author quotes Karin Forsberg-Nilsson, chair of the EuroNanoMed Network Steering Committee, as urging industrial players to collaborate more closely with scientists and clinicians, to shorten the delay from patents to patients. Forsberg-Nilsson says that such cross-disciplinary networks are essential and "an advantage to further the field beyond hype to implementation." The article details some of the areas where nanomedicine is having a profound impact on infectious disease, from lab-on-a-chip technology, which should reach the market within a few years, to nanotechnology-based microbicides against HIV, which are now in early clinical trials. Nanotechnology-based vaccines for hepatitis B, tuberculosis, and HIV are also in the works, as are antibacterial coatings for surfaces and materials. Blood-purification devices, also based on nanotechnology, are in the animal testing phase and will move to clinical trials soon. These devices could be used to treat patients with septic shock. Clinical trials are expected to start later this year for using nanotechnology to develop more potent immune cells that can help fight HIV. The article says safety issues are a concern when it comes to nanotechnology and medicine, but, according to Christine Peterson, vice president of the Foresight Institute, "... nanotech will be like biotech with respect to ethical or toxicity issues: the public is more tolerant regarding medical uses than for uses in less-critical applications...in the longer term, nanotechnology-based treatments are the most promising pathway for tackling infectious diseases." The article may be viewed online at the link below.

<http://www.merid.org/NDN/more.php?id=1818>

THE TIMES OF INDIA

Diploma in nanotechnology at DU's Maitreyi College

6 Apr 2009, 0130 hrs IST, Surbhi Bhatia, TNN

Maitreyi [College](#), Delhi University, will be offering a full-time postgraduate diploma in nanotechnology from this academic year. The course aims to

impart training in practical and fundamental aspects of nanomaterials/nanotechnology and instrumentation for nanotechnology. Developed under the [University Grants Commission's](#) (UGC) scheme of most innovative courses the course will try to create necessary manpower required in the field of nanotechnology. "Maitreyi College had been running a short-term add-on [course](#) in nanotechnology. But, it was only for five months. Following the increasin

popularity of the course and the increasing opportunities in the field of nanotechnology, the UGC invited us to develop this course," informed Savita Dutta, principal, Maitreyi College.

"The syllabus for this course has been approved by the UGC, and we consulted various departments and faculty of the [university](#). The UGC has sanctioned an amount of Rs 50 lakh for offering this course," she added. According to Dutta, nanotechnology is an emerging area and it is important to prepare necessary manpower that can handle superior and sophisticated scientific equipment. "The course has been prepared keeping this aspect in mind," she said. Since the focus of the programme is to develop industry-oriented skills, [students](#) will be expected to take the course in two semesters and project work with industry or a dissertation with a national laboratory. "A professional in the field of nanotechnology can easily find lucrative career opportunities in the field of nanomedicine, stem cell development, pharmaceutical companies, nanotoxicology and nanopower generating sector," added Dutta.

There is also scope for those who want to work in the R&D sector. "The Council of Scientific and Industrial Research (CSIR) has set up 38 laboratories across the country to carry out research and development work in the field. Those with a PhD in nanotechnology will have opportunities in the R&D sector. Keeping this in mind, we have introduced a diploma programme. Students after attending the programme can pursue a PhD or a MTech programme launched by Delhi University," she said.

Any student who graduated with science with 50% marks will be eligible to apply for the course. The college will be selecting 25 students for this course through an aptitude test. And the fee for the entire course will be Rs 10,000 — including the course material.

<http://timesofindia.indiatimes.com/Diploma-in-nanotechnology-at-DUs-Maitreyi-College/articleshow/4363569>

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Part 1.2	Content-Type: text/plain Content-Encoding: 7bit
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