

Subject: [CNS-weekly-clips] CNS Weekly Clips--March 3-March 9, 2009

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**Center for Nanotechnology in Society
University of California, Santa Barbara**

www.cns.ucsb.edu

WEEKLY CLIPS

March 3 – March 9, 2009



Posted: March 5, 2009

Nanotechnology and the public: new data for decision makers

(*Nanowerk News*) On Monday, March 9, 2009, from 2:00 p.m. to 4:00 p.m., Michael M. Crow, president of Arizona State University, and 13 recognized scholars studying societal implications of nanotechnology will brief the U.S. Congressional Nanotechnology Caucus, with a projected attendance of 40 congressional staff and other federal policymakers.

The Caucus co-chairs are Sen. Ron Wyden (D-OR), Sen. Richard Burr (R-NC), Rep. Bart Gordon (D-TN), and Rep. Ralph Hall (R-TX). The briefing has been organized by the NSF-funded [Center for Nanotechnology in Society](#) at Arizona State University (CNS-ASU), in collaboration with the Congressional Nanotechnology Caucus and the Woodrow Wilson International Center for Scholars.

Agenda

2:00 p.m. *Welcome*

Michael M. Crow, president of Arizona State University

2:05 p.m. *Public Understanding of and Attitudes toward Nanotechnology: Overview*

Julia Moore, deputy director of the Project on Emerging Nanotechnologies – a joint initiative of

the Woodrow Wilson International Center for Scholars and The Pew Charitable Trusts

Dietram A. Scheufele, professor of life sciences communication at the University of Wisconsin and senior investigator with CNS-ASU.

2:25 p.m. *Publics and Nano Risk*

Barbara Herr Harthorn, professor of feminist studies, anthropology and sociology at University of California at Santa Barbara and director of the NSF-funded Center for Nanotechnology in Society at UCSB

Dan Kahan, the Elizabeth K. Dollard Professor of Law at Yale Law School and a member of the Cultural Cognition Project

2:45 p.m. *Public Engagement: National Citizens' Technology Forum*

David H. Guston, professor of political science, co-director of the Consortium for Science, Policy and Outcomes, and director of the NSF-funded CNS-ASU

Michael D. Cobb, associate professor of political science at North Carolina State University and a senior investigator with CNS-ASU

3:00 p.m. *Public Engagement: Museums' and Science Centers' Forums*

Larry Bell, senior vice president for strategic initiatives at the Museum of Science in Boston and director of the NSF-funded Nano-scale Informal Science Education Network (NISE Net)

Christine Reich, manager of research and evaluation at the Museum of Science, Boston, and leader of the evaluation team and the diversity, equity and access team of NISE Net

Each panel will include presentations and discussion. The panels will be followed by refreshments and a 45-minute open conversation with the panelists and other related researchers, including:

Donald Braman, George Washington University School of Law

Joseph Conti, University of California, Santa Barbara

Elizabeth Corley, Arizona State University

Jason Delborne, Colorado School of Mines

Mark Philbrick, University of California, Berkeley

This Briefing before the U.S. Congressional Nanotechnology Caucus will take place at the Dirksen Senate Office Building, Room 562, Constitution Avenue & First Street, NE, in Washington, DC.

Source: *Berkeley Lab*

<http://www.nanowerk.com/news/newsid=9521.pp>



3/6/2009 7:09:55 PM

Study suggests new regulations needed to govern nanotechnology risks

In order for the potential health risks associated with nanotechnology to be properly assessed, the current regulatory system in the US must be changed. That's the conclusion of a new paper, published in the peer-reviewed journal *Environmental Science and Technology*, by researchers from the University of British Columbia and the University of Minnesota.

Nanomaterials are designed at the molecular level to have special properties, such as enhanced heat conductivity or strength, that are very different from the bulk forms of the same material. Thus, they have many promising applications, from handheld electronic devices to drug delivery techniques. However, because of the tiny size and distinctive qualities of nanomaterials, concern exists about their potential to damage the environment and the human body.

"Nanomaterials are unregulated in the United States, even though they are being manufactured and used in literally hundreds of products," says Prof. Milind Kandlikar, of UBC's Liu Institute for Global Issues and co-author of the new study. "What's more, the current regulatory system for chemicals is broken. Most chemicals present in workplace and community environments have not been subjected to health and safety risk assessments. We run the risk of repeating this situation for nanomaterials if the same processes are used."

The current regulatory system in the US places the burden for conducting risk assessments on the Occupational Safety and Health Administration (OSHA) for occupational risks, and the Environmental Protection Agency (EPA) for non-occupational risks. However, these agencies do not have the budgetary means to adequately test nanomaterials. Nor do they have sufficient toxicity or exposure information from nanotechnology firms, since industry is not required to divulge this information.

<http://nanotechwire.com/news.asp?nid=7508>



Posted March 4th

Regulating nanotechnology - how adequate is current regulation?

(Nanowerk Spotlight) A new PhD dissertation "[Regulation and Risk Assessment of Nanomaterials – Too Little, Too Late?](#)" (pdf download, 1.7 MB) by Steffen Foss Hansen from [DTU Environment](#) at the Technical University of Denmark finds that key pieces of the current European legislation are inadequate when it comes to regulating nanomaterials in the short and the long term. Hansen furthermore finds that the chemical risk assessment framework is inadequate to timely inform policy-makers about the health

and environmental risks of nanomaterials, if not in the short term, then most definitely, in the long term.

The aim of the PhD dissertation which was successfully defended last Friday (Feb. 27), was threefold:

- 1) Investigate whether existing regulation is adequate in the short and the long term,
- 2) Explore the feasibility of risk assessment for the purpose of dealing with the complex emerging risks of nanomaterials and finally;
- 3) Provide recommendations on how to govern nanotechnologies.

As the public discussion about the regulation of nanotechnology in general, and nanomaterials in particular, heats up, emerging opinions on the applicability of existing regulation differ substantially and so do views on which regulatory options best address the current lack of information about environment, health and safety risks of nanomaterials, as well as the regulatory uncertainty and concerns expressed by the politicians, members of the public and industry, and investors.

Some argue that a completely new regulatory framework is needed, whereas others go even further and argue in favor of implementing a total moratorium on nanotechnology research, development and commercialization. And then there are those who argue for a laissez-faire attitude.

<http://www.nanowerk.com/spotlight/spotid=9490.php>



Posted: March 2, 2009

Pioneering New York model for nanotechnology-enabled growth to be showcased at prestigious economic event

(Nanowerk News) The success of New York State's pioneering strategy that harnesses unique public-private partnerships to drive nanotechnology-enabled economic investment and growth will be showcased this week as part of the 2009 Washington Policy Conference, "Restoring Financial and Economic Stability," presented by the National Association for Business Economics ("NABE").

More than 300 leading economists, business analysts and government policymakers from around the world are scheduled to attend the conference, which will feature a

panel presentation on Tuesday, March 3 that focuses on New York's internationally recognized model for nanoelectronics, and highlights the groundbreaking industry-university-government collaboration centered at the College of Nanoscale Science and Engineering's ("CNSE") \$4.5 billion Albany NanoTech Complex, the most advanced research enterprise in the academic world.

Since 2001, New York has seen more than \$20 billion in nanotechnology-related investment, including public and private funding at CNSE that has resulted in creation or retention of over 10,000 high-tech jobs across the state. In addition, the 2008 Annual Global Trends Report released by IBM Global Business Services ranked New York first among all U.S. States in "in-sourcing" of new jobs from other states and nations.

<http://www.nanowerk.com/news/newsid=9472.php>

Stimulus Debate Highlights Need for Focus on Nanotech Risks

New nano reauthorization bill includes crucial safety research mandates



Washington, DC – The nearly \$800 billion stimulus package being debated in Congress contains a number of measures intended to improve information technology, infrastructure and the energy economy in the United States – all areas that will be greatly aided by

nanotechnology. However, without an increased focus by the federal government on possible risks posed by engineered nanomaterials, many of the potential societal advancements created by the emerging technology could be compromised.

The importance of understanding the possible risks posed by engineered nanomaterials is a centerpiece of legislation passed February 11 in the House of Representatives. The bill, the [National Nanotechnology Initiative Amendments Act of 2009 \(H.R. 554\)](#), which passed by a voice vote, highlights the growing need to learn more about the possible environmental, health and safety dangers posed by some nanoscale materials. The Senate is expected to take up a companion bill later this year.

Nanotechnology – which some scientists and business leaders hail as the next Industrial Revolution – is a key part of President Barack Obama’s research and development strategy, particularly in the energy sector. Nanoscale-lithium batteries will be in the next generation of electric cars, and nanoscale materials are being used in solar panels that will deliver power to countless homes, businesses and government buildings.

“Nanotechnology is going to be one of the most important drivers of innovation and economic growth in the 21st century. Passage of the National Nanotechnology Initiative Amendments Act of 2009 in the House is a significant step in the right direction,” says David Rejeski, the director of the Project on Emerging Nanotechnologies (PEN). “The bill contains a number of measures that will increase transparency and help improve science-based government oversight of nanotechnology. It also will help to ensure that the potential risks posed by nanomaterials do not pose a threat to public safety or undermine investor confidence.”

<http://www.nanotechproject.org/news/archive/7063/>

Nanotechnology: Will It Drive a New Innovation Economy for the U.S.?

Summary posted by Meridian on 3/4/2009

Source: The Project on Emerging Nanotechnologies

Author: n/a

The Project on Emerging Nanotechnologies (PEN) is hosting a conference, "Nanotechnology: Will It Drive a New Innovation Economy for the U.S.?" on March 23, 2009, in Washington, D.C. A webcast will be available at the date and time of the event. Speakers Philip Shapira and Alan Porter of the Center for Nanotechnology in Society (CNS-ASU), a consortium of universities working together to build the nation's capacity to address emerging nanotechnologies, and David Rejeski of PEN will discuss the hopes for nanotechnology and answer such questions as: "...what is actually happening on the ground in terms of nanotechnology research and commercialization? In which regions and countries is nanotechnology research clustering, and what is the U.S. position relative to other international competitors? What has been achieved by the \$10 billion federal nanotechnology R&D investment since 2001? Are U.S. companies also making long-term investments in nanotechnology, and in what sectors, technologies and locations are corporations focusing upon?" The website for the event can be viewed online at the link below.

<http://www.merid.org/NDN/more.php?id=1752>

Opinion: Nanotech deserves public and private sector support

By Michael Honda

Special to the Mercury News

Posted: 03/04/2009 08:00:00 PM PST

Nanotechnology's benefits to society may not be obvious. The concept can be convoluted and controversial. Yet it is a powerful, enabling technology, like the Internet, the internal combustion engine and electricity. It fosters new potential in almost every conceivable technological discipline, and its societal impact will be broad and often unanticipated.

Like any new invention, the potential for good is as great as the potential for harm. Excitement in the technology industry is matched by a parallel concern regarding nanotech's potentially adverse impacts. This argues for public engagement in private sector nanotech development, which involves the control of matter on a molecular scale. If we shy away from the debate, we lose the ability to shape it.

For these reasons, I recently introduced a bill in Congress called the Nanotechnology Advancement and New Opportunities (NANO) Act (HR 820) and supported a nanotech bill (HR 554) by House Science Committee Chairman Bart Gordon, D-Tenn. My bill makes use of California nanotechnology experts' recommendations from my 2005 Blue Ribbon Task Force on Nanotechnology. But before explaining my bill, it's worth mentioning the benefits of nanotechnology and its surprising possibilities.

http://www.mercurynews.com/opinion/ci_11837367

Hearts and Minds and Nanotechnology

Summary posted by Meridian on 3/6/2009

Source: Nature Nanotechnology

Author: Chris Toumey

This article compiles much of the research conducted over the last several years regarding what factors influence the public's perception of nanotechnology. The author, Chris Toumey, suggests that the results present challenges for those working to increase public acceptance of this emerging science. Specifically, Toumey believes that "...these studies alert us that reactions to nanotechnology will be shaped by a landscape of values, beliefs, concerns and other strong sentiments that were established in peoples' hearts long before most people heard or cared about nanometers, van der Waals forces or carbon nanotubes....For those who expect that people will embrace nanotechnology when they learn more about the science, the second message from these four recent reports is that the scientific knowledge in our minds is a weak companion to the strong values and concerns in our hearts." Public acceptance will require the proponents of nanotechnology to "take the the values that are important to the public as seriously as we take the science." He encourages scientists and others to explore these issues and questions now, as the science and applications of nanotechnology are unfolding on a daily basis, because the values that will shape reactions to these applications are already well-established. The article can be viewed online at the link below.

The original article may still be available at www.nature.com/nnano/journal/v4/n3/full/nnano.2009.16.html

<http://www.merid.org/NDN/more.php?id=1757>

Warnings issued on nanotechnology

Some say time's right to assess its environmental impact

By ERIC BERGER Copyright 2009 Houston Chronicle

Feb. 25, 2009, 9:40PM

One example of nanotechnology is this Kevlar-treated fabric developed for the military in Cambridge, Mass. The coating is extremely thin.

The U.S. Environmental Protection Agency may soon act to impose the first regulations specific to nanotechnology, a move that could have a significant impact in Houston.

Already, Canada has signaled its intent to require companies working with nanomaterials — designed at the molecular level to have special properties, such as enhanced strength — to report what materials they are working with and in what quantity.

And today, a congressional committee in Washington is scheduled to hold a hearing on the need to reform a decades-old environmental law that likely holds the key to new nano regulations, the Toxic Substances Control Act.

"I would expect to see something this year," said David Hobson, chief scientific officer for NanoTox, an Austin-based company that assesses the risk of nanomaterials.

Nanotechnology holds immense promise in many areas, such as curing a host of diseases and reducing dependence on foreign oil by making solar cells commercially viable. But at the same time, environmentalists and some scientists worry that because of their tiny size, some nanomaterials may wreak havoc in the environment or inside human bodies.

It's a concern that the late Nobel laureate, Rick Smalley, of Rice University, expressed a decade ago when he cited environmental impacts as "the Darth Vader side of nanotechnology."



Industry, NGOs at odds over nanotech regulation

Published: Wednesday 4 March 2009

A new study has revealed deep divisions on how nanotechnology should be regulated, with environmental lobby groups seeking a moratorium until products are proven to be safe, and industry proposing that specific guidelines be introduced to supplement existing regulations.

Background:

The unique properties and behaviour of nanoscale (10⁻⁹) matter, and its enabling characteristics, mean new technologies could profoundly transform industry and everyday life.

However, concerns have been raised over the ethical, legal and health issues associated with nanotechnologies. The European Commission produced an Action Plan aimed at promoting the safe growth of nanotechnology and, in February 2008, it published a Code of Conduct for responsible research in nanotechnologies.

Several projects are underway to elicit opinion and foster debate on the future of this emerging technology, including FramingNano, which supports stakeholder dialogue on regulation and governance of nanotechnology.

There has also been considerable disquiet over a draft report by the European Parliament's environment committee, published in January, which calls on the Commission to implement the principle of "no data, no market" for all nanomaterials until all legislation is reviewed.

This would amount to an effective moratorium on nanotechnology and would lead to some products being withdrawn.

<http://www.euractiv.com/en/science/industry-ngos-odds-nanotech-regulation/article-179936>



Posted: March 6, 2009

Minnesota Partnership announces funds for nanotechnology research

(Nanowerk News) The Minnesota Partnership for Biotechnology and Medical Genomics is awarding nearly \$5.4 million in state-funded research support to six research teams. This new round of scientific exploration will provide initial support for research on cancer, neurological diseases, heart disease, gastrointestinal conditions and nanotechnology that could impact a range of diseases.

"Once again, the scientific community at our two Minnesota institutions has developed creative and innovative plans of study, and we're excited at the potential impact of this research on behalf of improved health and an improved economy," says Mark Paller, M.D., Partnership program director at the University of Minnesota.

"These six projects reflect some of the best science and scientific minds in Minnesota. All of these projects have a strong likelihood of succeeding and advancing to the bioscience marketplace," explains Eric Wieben, Ph.D., Partnership program director at Mayo Clinic.

Applications for the projects were requested last fall from University and Mayo Clinic researchers. Each research proposal has a principal investigator from each institution and must be a project that could not be completed by either organization on its own. Funding is for two years, with the goal of developing intellectual property or attracting additional research support from federal government or private sources.

The Minnesota Partnership for Biotechnology and Medical Genomics is a collaboration among the University of Minnesota, Mayo Clinic and the State of Minnesota. To learn more about the Partnership, go to www.minnesotapartnership.info.

<http://www.nanowerk.com/news/newsid=9531.php>

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