

Center for Nanotechnology in Society University of California, Santa Barbara

www.cns.ucsb.edu

WEEKLY CLIPS

Sept. 16-30, 2010

Top Deck

What the nation's (& world's) top papers, news wires and sources have been saying about nanotechnology.

[FACTBOX - Nanotechnology and food](#)

Reuters Africa
Sept. 15, 2010

"Here are some facts about nanotechnology and food.

* Nano particles are generally defined as measuring between one and 100 nanometres in diameter, although there no universally accepted regulatory definition.

* A nanometre is one thousand millionth of a metre. Around three hundred million nanoparticles, each of them 100 nanometres wide, could fit onto the head of a pin."

[Futuristic coating could repel graffiti](#)

San Francisco Examiner
Sept. 15, 2010
Kamala Kelkar

"Park officials are testing a nanotechnology coating on open-space play structures that should create a molecular surface so smooth it deflects graffiti."

[Low-fat food with full-fat flavour](#)

Reuters
Sept. 20, 2010
Kate Kelland

"In a taste of things to come, food scientists say they have cooked up a way of using nanotechnology to make low-fat or fat-free foods just as appetising and satisfying as their full-fat fellows.

The implications could be significant in combating the spread of health problems such as obesity, diabetes and heart disease."

[Make it clear what's in make-up](#)

The Advertiser (Australia)
Tony Shepherd
Sept. 21, 2010

"COSMETICS and sunscreens containing particles that potentially cause cancer or are a risk to unborn children must be labelled, independent MP Bob Such says.

He says hundreds of products that use nanoparticles are flooding the market but have not yet been proven safe."

[Japanese Professor Warns of Cancerous Material](#)

Voice of America News
Sept. 27, 2010
Akiko Fujita

"A Japanese professor says his former university is trying to suppress his research showing that carbon nanotubes, a material used in everything from skis to cables, may cause cancer."

[Call for sunscreen transparency](#)

Sydney Morning Herald
Sept. 27, 2010
Danny Rose

"A consumer group is calling for more transparency on what goes into sunscreen, after many leading brands were found to contain nanoparticles.

There is debate over whether the particles, which are smaller than 100 billionths of a metre, can penetrate the skin and have harmful side-effects, says CHOICE."

[Dealing with Nanopollution](#)

Warsaw Voice

"Researchers at the Polish Academy of Sciences' Institute of Physical Chemistry in Warsaw have

developed an innovative method to separate nanopollutants from sewage and recover some of the nanoobjects. The method can also be used to produce nanocomposites, the researchers say."

On Deck

What Local Sources are Reporting

[Study Outlines Potential Lung Danger From Nanoparticles](#)

New Haven Independent

Sept. 15, 2010

Gwenyth K. Shaw

"Scientists from the University of Singapore examine the potential for serious lung disease caused by exposure to nanoparticles in a [new study](#) published in the journal [Experimental Biology and Medicine](#). (The full study is available for free.)"

[Capital, work force issues tops for nanotechnology](#)

Maryland Community Newspapers

Sept. 17, 2010

Kevin James Shay

"Nanotechnology is a growing field, but companies in the industry face challenges raising capital and attracting talented employees, executives said this week at a forum on nanotechnology at the National Institute of Standards and Technology in Gaithersburg."

[Revolutionary Fashion: Nanotechnology Generating Smart Fabrics and Invisibility Cloaks](#)

Cornell Daily Sun

Sept. 17, 2010

Jing Jin

"On Sept. 14, the Wildfire Lounge in Ithaca Commons hosted this year's first Science Cabaret, a monthly series of informal science lectures. Prof. Juan Hinestroza, fiber science and apparel design, gave a presentation on the use of biochemistry to fashion articles of nanoparticle-treated clothing."

[Raising the high-tech bar on workout wear](#)

Los Angeles Times

Sept. 20, 2010

Jeannine Stein

"Back in the day, a runner hit the pavement wearing cotton shorts and a cotton T-shirt, and when things got hot, sweat turned those clothes into a big, wet, stinky mess."

[Stanford researchers purifying water with silver](#)

KGO-TV (San Francisco)

Sept. 19, 2010

Richard Hart

"Researchers at Stanford have developed a new kind of filter, a cheap and fast way to purify water in poor parts of the world and on camping trips.

In her Stanford laboratory, Alia Schoen purifies water using a new method thousands of times faster than anything previous. It uses nanotechnology and silver."

[RPI uses 'stealth' approach to science lesson](#)

Times Union (Albany, NY)

Sept. 23, 2010

Scott Waldman

"If you want your people to care about something, put it on a movie screen, the bigger the better.

Molecules will be on the big screen at Proctors in Schenectady for the next year."

[Cotton technology: Research in new applications may boost West Texas agriculture industry](#)

Lubbock Avalanche-Journal

Sept. 26, 2010

Alyssa Dizon

"First, it was greater yield potential for cotton.

Next, there were herbicide, pesticide and drought-resistant varieties.

Now, a Tech Texas professor said his innovative research projects will take the cotton industry in West Texas to the next level."

['Nanocanary' Could Spot Dangers](#)

New Haven Independent

Sept. 27, 2010

Gwenyth K. Shaw

"LOWELL, Mass. - When Susan Braunhut started thinking about how to detect super-small 'nanoparticles,' she turned to an old technology for inspiration: The canary in the coal mine."

[CT consortium developing nano-weapons](#)

Hartford Business Journal

Sept. 28, 2010

"The Army has hired a consortium of mostly Hartford area manufacturers and researchers to find ways to incorporate nanotechnology into the next generation of lethal projectiles."

[Grappling With The 'Gray Zone,' Feds Focus on Nano Workers' Health](#)

New Haven (CT) Independent

Sept. 29, 2010

Gwenyth K. Shaw

"LOWELL, Mass. - How do you protect someone from something they can't see? That's the trick for researchers trying to ensure that workers in the growing business of nanotechnology aren't threatened by their livelihood."

Nano Press

What nano-centered publications are reporting

[Regulation of products containing nanomaterial: Traceability, a pre-condition to acceptability](#)

Nanowerk

Sept. 16, 2010

"Within the framework of the Belgian Presidency of the EU, a conference was held on Tuesday on the development of nanomaterials management and information tools.

Paul Magnette, the Belgian Minister for Energy, Environment, Sustainable Development and Consumer Protection has opened the day. 'I took the initiative of organising this event with social ecology in mind. Social ecology aims at protecting consumer health and environment and at guaranteeing the development of a secure and sound economy based notably on innovation and acceptable industrial applications that create quality jobs. In this context it is essential to reassure consumers that all products containing

nanomaterial (or made using nanotechnology), that are on the market, have been tested by an independent body and do not constitute a health hazard.' "

[Singapore and nanotechnology: A ripe R&D landscape](#)

Small Times

Sept. 17, 2010

"The Asian growth story is not new. Already commanding almost 30% of the world's GDP in 2009, Asian growth momentum remains strong at about 4% per annum. Asia has achieved this on the back of becoming the manufacturing base of the world - from textiles to electronics to automotives."

[EPA issues significant new use rules under TSCA for carbon nanotubes](#)

Nanowerk

Sept. 19, 2010

"EPA is issuing [significant new use rules](#) (SNURs) under section 5(a)(2) of the Toxic Substances Control Act (TSCA) for two chemical substances which were the subject of Premanufacture Notices (PMNs). The two chemical substances are identified generically as multi-walled carbon nanotubes (MWCNT) (PMN P-08-177) and single-walled carbon nanotubes (SWCNT) (PMN P-08-328)."

[Nanotechnology energy generation using sound](#)

Nanowerk

Sept. 23, 2010

"Imagine cellular phones that can be charged during conversations and sound-insulating walls near highways that generate electricity from the sound of passing vehicles.

A number of approaches for self-powering systems by scavenging energy from environments using photovoltaic, thermoelectric, and piezoelectric phenomena have been intensively explored."

[Insurability of nanotechnologies - regulatory gaps identified, risk monitoring requested](#)

Nanowerk

Sept. 24, 2010

"Government officials from Germany, Austria, Switzerland and Liechtenstein met at the invitation of Liechtenstein for the 4th International Nano Authorities Dialogue. The participants discussed current developments in nanotechnologies, while the focus was on legal and technical issues about the insurability and regulation of nanotechnologies. The Authorities Dialogue series has been organised by the Innovation Society, St.Gallen since 2008."

[Plasmonic nanobubbles detect and ablate cancer cells, say Rice researchers](#)

Small Times

Sept. 27, 2010

"Rice University physicist Dmitri Lapotko has demonstrated that plasmonic nanobubbles, generated around gold nanoparticles with a laser pulse, can detect and destroy cancer cells in vivo by creating tiny, shiny vapor bubbles that reveal the cells and selectively explode them. The nanobubbles have been tested in theranostics with live human prostate cancer cells, without harming the animal host."

Other (science) issues related to nanotechnology

[Nanomaterials May Soon be in Your Sportswear and Underwear Environmental Working Group](#)

Environmental Working Group

Sept. 15, 2010

"Environmental Working Group (EWG) has sent a letter to the U.S. Environmental Protection Agency (EPA) opposing [its proposal to approve a Swiss nanosilver textile coating for sale in the U.S.](#)

EPA announced last month it was considering the application of the Swiss company HeiQ Materials Ag to market the coating, called HeiQ AGS-20, as an antimicrobial treatment to help control odor in clothing, including children's athletic wear. EPA proposed to give the Swiss company a 'conditional' approval, lasting four years, while the agency explores nanosilver's possible implications for human health and environmental harm."

[Behold the strength of carbon nanotubes](#)

CNET News.com

Sept. 16, 2010

Elizabeth Armstrong Moore

"New tests of carbon nanotubes - those tiny cylinders expected to revolutionize medicine, electronics, warfare, and more - reveal that, ounce-for-ounce, they are 117 times stronger than steel and 30 times stronger than Kevlar used in bicycle tires and bulletproof vests."

[Battery science taking quantum leap](#)

[Dallas County Environmental News Examiner](#)

Sept. 20, 2010

Colonel Mason

"In an industry that advances at a snail's pace and often seems stalled, a firm in Palo Alto, California, reports a stunning 40% increase in battery capacity using nanotechnology additives into existing manufacturing processes."

[Nano definition is a legal minefield, warn scientists](#)

FoodQualityNews.com

Sept. 20, 2010

Elaine Watson

"Agreeing on a legal definition of nanomaterials that satisfies food manufacturers, regulators, enforcement bodies and consumers will be hugely challenging, according to experts gathered at a nanotechnology workshop in Leatherhead last week."

[New MIT Nanotech Fights Cancer Naturally](#)

DailyTech.com

Sept. 20, 2010

Levi Beckerson

"Harnessing the body's own defense forces to fight cancer with nanoscale technology.

In the myriad advances in treating cancer, many a nanotech study has crossed *DailyTech's* path. This week another such study was revealed by the journal [Nature Medicine](#) (abstract). In the past, we've seen all sorts of man-made nanoparticles both acting as a force of cell destruction and as a ferry, shipping anti-tumor drugs straight to cancer cells where they can be of the most benefit. This latest method by Massachusetts Institute of Technology researchers is akin to the latter, but instead of using nanoparticles to deliver drugs, they deliver modified immune cells from the patient's own body."

[IBM Breakthrough Advances Nanotechnology Research](#)

eWeek.com

Sept. 23, 2010

Jeffrey Burt

"IBM scientists can now measure how long information can stay in an individual atom, getting one step closer to the goal of computing at the atomic level.

As the computer industry continues chasing Moore's Law and components continue to shrink, the march continues to the inevitable end point: the atom. IBM researchers say they now have made a significant breakthrough that brings the industry a step closer to that end point."

[NIOSH Announces Partnership on Nano Research](#)

OHSonline.com

Sept. 23, 2010

"NIOSH announced it is partnering with the National Science Foundation Center for High-rate Nanomanufacturing, a collaboration of the University of Massachusetts Lowell, Northeastern University, and the University of New Hampshire, to study occupational health and safety concerns in the nanotechnology industry so the findings can be shared."

[Sludging through the nano lifecycle: Caution ahead](#)

Environmental Defense Fund

Sept. 23, 2010

Richard Denison

"Researchers at Virginia Tech have identified and characterized silver nanoparticles (AgNPs) in the sewage sludge produced by an operating municipal wastewater treatment plant. The study is notable in several respects: It is the first time AgNPs have been detected in a field-scale study, one of a real-world operation representative of a real-world exposure scenario to boot. It shows that AgNPs can exist in wastewater treatment products as nanoparticles. It indicates such particles may be most likely to partition to sludge under common treatment technologies. And it suggests that silver may be chemically transformed in the course of wastewater treatment."

[Authorities Discuss Insurability of Nanotechnologies - Regulatory Gaps Identified, Risk Monitoring Requested](#)

The Innovation Society

Sept. 24, 2010

Markus Widmer

"Government officials from Germany, Austria, Switzerland and Liechtenstein met at the invitation of Liechtenstein for the 4th International Nano Authorities Dialogue. The participants discussed current developments in nanotechnologies, while the focus was on legal and technical issues about the insurability and regulation of nanotechnologies. The Authorities Dialogue series has been organised by the Innovation Society, St.Gallen since 2008."

[New technology promises better catalytic converter](#)

Washington University - St. Louis

Sept. 27, 2010

Julie Thole

"The toxic byproducts made when a car's engine burns fuel are funneled into the catalytic converter, where chemical reactions turn them into much less toxic substances like water and

carbon dioxide . . . The key development is to coat platinum nanoparticles with a porous silica layer. Because of its weak interaction with the platinum, the silica coating provides an energy barrier that holds the platinum in place even at very high temperatures, preventing aggregation and maintaining catalytic activity."

[Nanoparticles: Friend or Foe?](#)

Laboratory Equipment.com

Sept. 27, 2010

Eveline van der Aa

"Whether you're a researcher or not, there is no doubt the word 'nano' has entered your vocabulary more times in the past year than ever before. Used in everything from sunscreens to golf drivers, nanotechnology has exploded on both scientific and consumer radars."

[Nanoparticles: A Poisoned Chalice or A Pot of Gold?](#)

Materials Views

Sept. 27, 2010

Lisa Wylie

"An ever-increasing number of commercial products appearing on the market are in possession of a tiny fraction (by size, anyway) of 'nanotechnology', and with this growth in use there has been a concurrent rise in concern about the risks all these nano-things might pose to health and the environment. Which is, of course, not to trivialize the issue; as with all new technologies, a great deal of care needs to be taken and rigorous analysis of toxicology, exposure pathways, and environmental release (among many other parameters), are crucially important."

[Nokia - actual bendy phones and actual nanotechnology in the works](#)

Mobile Shop.com

Sept. 28, 2010

"Ages and ages ago, a video went round of a Nokia concept, called Morph, that seemed to be set wayyyyyy in the future, 'cos it was a bendy, wearable phone. But, as we all know, science marches ever onwards, and according to the latest video from the [Nokia Conversations blog](#), they're actually trying to develop the tech to make bendy phones a reality."

[Sneaking spies into a cell's nucleus](#)

EurekAlert

Sept. 28, 2010

"DURHAM, N.C. - Duke University bioengineers have not only figured out a way to sneak molecular spies through the walls of individual cells, they can now slip them into the command center - or nucleus - of those cells, where they can report back important information or drop off payloads."

[Researcher advances imaging technology for breast cancer patients](#)

Del Mar (CA) Times

Sept. 30, 2010

Arthur Lightbourn

"Dr. Sarah Blair definitely has a questioning mind and gets some of her best questions while operating on patients at UCSD's Rebecca and John Moores Cancer Center.

The 43-year-old surgical oncologist is an associate clinical professor of surgery at UCSD and the lead investigator in a study that eventually may save thousands of breast cancer patients from requiring second surgeries to clean up any remaining tumor cells that were undetected in the original operations."

[More research needed to fill nanotech knowledge gaps](#)

FoodProductionDialy.com

Rory Harrington

" A lack of plausible scientific evidence means that no general conclusions can currently be drawn on the safety of food and packaging derived from nanomaterials, said Hong Kong's Centre for Food Safety (CFS).

The food safety body also called for the development of a comprehensive code of guidance to evaluate the safety of the technology in food. It added that more general research into the field was vital to boost industry accountability as it was not currently possible to verify claims made by companies about the presence of NMs in foods."

The Humorous, Fascinating & Unique

[Making music on a microscopic scale](#)

Nanowerk

Sept. 28, 2010

"Strings a fraction of the thickness of a human hair, with microscopic weights to pluck them: researchers and students from the MESA+ Institute for Nanotechnology of the University of Twente in The Netherlands have succeeded in constructing the first musical instrument with dimensions measured in mere micrometres - a 'micronium' - that produces audible tones. A composition has been specially written for the instrument."