Center for Nanotechnology in Society

University of California, Santa Barbara

www.cns.ucsb.edu

WEEKLY CLIPS

Sept. 1-15, 2010

Top Deck

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

Nanotechnology: Small wonders

Nature

Sept. 1, 2010

Corie Lok

"Richard Smalley's cheeks were gaunt and his hair was nearly gone when he testified before the US House of Representatives in June 1999. The Nobel laureate chemist had been diagnosed with non-Hodgkin's lymphoma a few months earlier, chemotherapy was taking its toll, and the journey from Rice University in Houston, Texas, had been exhausting. But none of that dimmed his obvious passion for a subject that his listeners found both mystifying and enthralling: nanotechnology."

Get ready for a world of nanotechnology

Guardian (U.K.)

September 2, 2010

Thomas Barfield

"The prefix 'nano' is gaining an increasing presence in public consciousness, from invocations of the nanometre (nm) as a unit of measurement for our burgeoning silicon technology's tininess (as in Intel's latest 32nm processors), to the hubristically named iPod nano, which is a bit smaller than the others. The prominence of this word in our culture is set to rocket over the coming decades as more tightly defined 'nanotechnology' becomes available - for example, Nokia is hoping to release a nanotech phone that it calls the Morph in 2015."

Kirkland microscopes can examine matter one atom at a time

Seattle Times

Sept. 5, 2010

Sandi Doughton

"X-ray vision was state-of-the-art when Superman launched his career in the 1930s.

But if the superhero wants to keep pace with the modern world of nanotechnology, he should upgrade to electron vision, Ondrej Krivanek says."

Safety fear over $150 face cream ingredient

Sydney Morning Herald

Sept. 6, 2010

Melissa Singer

"Department stores are selling a $150 face cream that promises to reduce fine lines despite the fact the chemical regulator has not approved a key ingredient."

Nano technology could cool the heat from server farms

CNN.com

Sept. 7, 2010

"The internet may soon be a greener place thanks to new research that looks set to slash the carbon footprint of our surfing by introducing nanotechnology to computer servers."

Egypt seeks to bridge the nanotechnology divide

The Daily News (Egypt)

Sept. 8, 2010

Christopher Le Coq

"As the technology sector continues expanding in Egypt, a concerted effort has been made to forge ahead in the field of nanotechnology. As well as capitalizing on the potential benefits of nanotechnology, Egypt is hoping to avoid falling through the crack of what scientists have termed the 'nanodivide.' "

Nano-skin may let amputees feel again

ABC News (Australia)

Sept. 13, 2010

Michael Edwards

"Scientists from the University of California have used nanotechnology to develop an artificial skin that could eventually give the sense of touch back to people who have lost their limbs."

For a similar story, see New Touch-Sensitive e-Skin: Robots May Feel More Real To Us (LA News Monitor.com)

Czech nano research key to breakthrough in tissue production

Radio Prague

Sept. 14, 2010

Christian Falvey

"A breakthrough in nanotechnology is on the horizon and it is being led by Czech scientists. A project called Nanoprogres is bringing together 16 companies and research institutions to create a commercial device that could put nanofibres to a range of medical uses: creating and renewing cell tissue and healing wounds such as burns or damaged ligaments. Earlier today I spoke with the head of the department of tissue engineering at the Institute of Experimental Medicine, Evzen Amler, to find out more."

Tiny traits cause big headaches

Nature

Sept. 14, 2010

Daniel Cressey

"Nanotechnology has invaded the world of biomedicine over the past decade, with scientists increasingly using nanoparticles as potential vehicles for delivering drugs to specific tissues.

Yet the particles are often so poorly understood that their chances of making it off the laboratory bench and into the clinic are being damaged, experts warned at the first international workshop on nanotech medicines held by the European Medicines Agency (EMA) in London earlier this month."

On Deck

What Local Sources are Reporting

Study: Light May Break Down Super-Strong "Nanotubes"

New Haven (CT) *Independent*

Sept. 7, 2010

David Funkhouser

"A new study has found sunlight may help break down carbon nanotubes-but also suggests the products of the photochemical reaction could be toxic to aquatic organisms.

'This study is one of the first to address whether [carbon nanotubes] undergo reactions in the environment,' said environmental engineer Chad Jafvert of Purdue University, one of the researchers."

Nanochip technology marks breakthrough Rice Thresher (Rich University student newspaper)

Sept. 10, 2010

Josh Rutenberg

"Rice researchers have developed a new kind of memory chip from silicon oxide using nanotechnology that could increase maximum storage space on chips and open the way for 3-D memory storage.

Flash memory, the current standard, uses an applied voltage to allow electrons to flow from a source through a gate and into a drain. The transistor begins conducting when electrons leave the gate. Two-terminal silicon chips, which contain a source and drain, stand out from standard three-terminal flash memory, Chemistry Professor Jim Tour said. Without the need for a third terminal, these silicon nanocrystal devices can be built

into three-dimensions, which allows for increased density and memory space, Tour said."

Carbon-fiber products seem magical

Alva (OK) *Review-Courier*

Sept. 10, 2010

Arden Chaffee

"Carbon-fiber composites are another spin-off of the space industry that has made inroads into affordable products.

From auto parts to rifle stocks to bike frames, carbon composites have found their way into consumer goods after a 25-year incubation as exotics."

NanoSonic: Nanotech on the move

Roanoke (VA) *Times*

Sept. 11, 2010

Duncan Adams

"The first visitor waited for the right moment and then politely inquired.

The second, arriving about 10 minutes later, wasted no time.

Both asked about the broad vertical striping emblazoned upon some exterior sections of NanoSonic's new, leased home in Giles County.

Their unexpressed question was, 'What were you thinking?' "

High schools push nanotech, a potential job machine

Minnesota Public Radio

Sept. 13, 2010

Dan Gunderson

"Grand Forks, N.D. - Scientists are using nanotechology in everything from improved cancer treatments, to more effective sunscreen, but surveys show high school students don't know much about nanotechnology.

The National Science Foundation is funding a pilot project to teach high school students the basics of nanotechnology. A teacher in Grand Forks, N.D. is among 21 teachers nationwide who are spending extra time on nanotech."

"Green" Nanobiotech Could Help Fight Cancer

New Haven (CT) *Independent*

Sept. 14, 2010

Gwenyth K. Shaw

"Researchers at UC Santa Barbara are working on using nanobiotechnology to fight cancer and other illnesses, as outlined in two recently published scientific papers.

Both studies outline the creation and use of nanosize RNA 'scaffolds' that assemble themselves into different shapes. Once these 'nanocubes' are created, they could then be used to deliver medical therapies."

Nano Press

What nano-centered publications are reporting

German Federal Institute for Risk Assessment publishes three new reports on nanotechnology

Nanowerk

Sept. 3, 2010

"The German Federal Institute for Risk Assessment (BfR) has recently published three new reports on nanotechnology: . . .

BfR Delphi Study on Nanotechnology (pdf) - *An Expert Survey of the Use of Nanomaterials in Food and Consumer Products . . .*

Perception of Nanotechnology in Internet-based Discussions (pdf) - *The risks and opportunities of nanotechnology and nanoproducts: results of an online discourse analysis . . .*

Risk Perception of Nanotechnology - Analysis of Media Coverage (pdf) . . ."

Study looks at silver nanoparticle release from antibacterial fabrics into sweat

Nanowerk

Sept. 7, 2010

"A recent study by researchers at National Nanotechnology Center (NANOTEC) in Thailand has provided the data on detecting silver released from antibacterial fabric products using artificial sweat as a model to represent the human skin environment."

We Should Have Seen It Coming: States Regulating Nanotechnology

Nanotechology Now

Sept. 8, 2010

John DiLoreto

"Regulatory change at the federal level frequently takes a very long time. The sluggish wheels of the federal government have evolved to be more reactive than proactive and that's why important issues often have to reach a critical stage before any action is taken. When the federal government fails to take action states are often willing and sometimes better able to implement regulatory changes. This is true for most issues and when it comes to chemicals, and now nanomaterials, that change is already happening."

Response:

State-level nano regulation: Yes, indeed, the industry "should have seen it coming" - it caused it!

Environmental Defense Fund

Sept. 10, 2010

Richard Denison

"I just read an interesting column by John DiLoreto, CEO of NanoReg, that appears online at Nanotechnology Now. It's titled 'We Should Have Seen It Coming: States Regulating Nanotechnology.' It nicely describes the important role states play in advancing environmental policy and regulation - especially when the feds are asleep at the wheel. And it also gives a neat rundown of the various state actions aimed at nanomaterials that are underway.

But, search as I might, I couldn't find a single acknowledgment in Mr. DiLoreto's latest

column - or in his earlier related column titled 'What Drives the Regulation of Nanomaterials?' - of the role the nanotechnology industry itself played in bringing all of this on itself."

New Poll Shows Nanotechnology Awareness Increased Among Adults

Azonano

Sept. 9, 2010

"Synthetic biology-defined as the design and construction of new biological parts, devices, and systems or re-design of existing natural biological systems for useful purposes-holds enormous potential to improve everything from energy production to medicine, with the global market projected to reach $4.5 billion by 2015."

Also noted by MSNBC

Other (science) issues related to nanotechnology

FDA Regulation of Nanotechnology: A Near Term Necessity

Gerson Lehrman Group

September 1, 2010

"Nanotechnology on a far reaching scale is a near term reality; the FDA has publicly proposed regulation since 2007. Addressing the constraints of our biology on the molecular level should not be a proposition that causes fear, so long as there is appropriate regulation. A brave new world? Yes. But not one that we should fear with appropriate oversight."

Novel nanotechnology collaboration leads to breakthrough in cancer research

Health Canal.com

Sept. 1, 2010

Mike Rodewald

"One of the most difficult aspects of working at the nanoscale is actually seeing the object being worked on. Biological structures like viruses, which are smaller than the wavelength of light, are invisible to standard optical microscopes and difficult to capture in their native form with other imaging techniques."

Silver nanoparticles stop sperm stem cell growth
Environmental Health News
Sept. 1, 2010
Jennifer F. Nylund

"A new study has identified exactly how silver nanoparticles cause male reproductive cells to stop growing.

Minute materials used in a number of consumer products such as antimicrobial agents can interrupt important cell signaling within male reproductive sperm cells, causing them to stop growing, according to a new study that builds on previous work by the same research group."

Do Science Journalists Need to Focus More Upstream in Their Coverage?

BigThink.com

Sept. 8, 2010

Matthew C. Nisbet

"The most interesting and important things about science often go uncovered in the news media. Journalists and editors-especially in today's world of cutbacks-have always tended to define what's newsworthy in science around the release of a scientific study, in the process rarely covering scientific knowledge as it happens, ignoring the uncertainties, ideologies, personalities, and politics that define laboratories, universities, fields, and funding agencies. There's a strong economy to this tendency among journalists: The news releases provided by universities and journals literally 'subsidize' the newsmaking process, making it easier for journalists to decide what's newsworthy

and reducing the time and expertise needed to file a story quickly and in 600 words."

New American Chemical Society podcast: Big building blocks from nanoparticles

EurekAlert

Sept. 14

"Anew genre of construction materials, made with particles barely 1/50,000th the width of a human hair, is about to play a big role in the building of homes, offices, bridges, and other structures, according to the latest episode in the American Chemical Society's (ACS) award-winning podcast series, 'Global Challenges/ Chemistry Solutions.'

A new Global Challenges podcast and website is highlighting both the potential benefits of these nanomaterials in improving construction materials and the need for guidelines to regulate their use and disposal. It is based on a report in the monthly journal ACS Nano."