

Center for Nanotechnology in Society
University of California, Santa Barbara

www.cns.ucsb.edu

WEEKLY CLIPS

June 8 - 21, 2010

10 YEARS AGO IN NANO NEWS . . .

[Study says biology key to computer of the future](#)

The Hour (Norwalk, CT)

June 9, 2000

Chris Williams, Associated Press

"AUSTIN, Texas - The biological processes that make seashells and teeth might be the keys to developing microscopic parts for supercomputers of the future."

[Will Tiny Robots Build Diamonds One Atom At A Time?](#)

Time

June 19, 2010

Michael D. Lemonick

"On its face, the notion seems utterly preposterous: a single technology so incredibly versatile that it can fight disease, stave off aging, clean up toxic waste, boost the world's food supply and build roads, automobiles and skyscrapers - and that's only to start with. Yet that's just what the proponents of nanotechnology claim is going to be possible, maybe even before the century is half over.

Crazy though it sounds, the idea of nanotechnology is very much in the scientific mainstream, with research labs all over the world trying to make it work. Last January President Clinton even declared a National Nanotechnology Initiative, promising \$500 million for the effort."

Top Deck

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

[Turning Body Heat Into Electricity](#)

Forbes

June 8, 2010

Osman Can Ozcanli

"The idea of converting the human body's energy into electricity has tantalized scientists for years. A resting male can put out between 100 and 120 watts of energy, in theory enough to power many of the electronics you use, such as your Nintendo Wii (14 watts), your cellphone (about 1 watt) and your laptop (45 watts). Eighty percent of body power is given off as excess heat. But only in sci-fi fantasies such as the Matrix film series do you see complete capture of this reliable power source."

[Swiss solar innovator wins Millennium Technology prize](#)

BBC News

June 9, 2010

"The inventor of a low-cost solar cell that could be used to build electricity generating windows has been awarded this year's Millennium Technology Prize . . .

Gratzel cells rely on nanotechnology to produce power from sunlight. 'We are using nanocrystal films in which the particles are so small, they don't scatter light,' said Professor [Michael] Gratzel."

[Amazing 'pulse of darkness' ray tech birthed in US gov labs](#)

Register (U.K.)

June 10, 2010

Lewis Page

"US government boffins say they have invented a fiendishly cunning new kind of laser running on quantum dots which, rather than producing pulses of light, actually emits pulses of intense darkness. Unsurprisingly but mildly sinisterly, the new invention has been dubbed the 'dark pulse laser'. It works using extremely clever quantum dots which unlike regular boring quantum dots are made out of 'nanostructured semiconductor materials' grown in special US government labs."

[U.S. scientists design smart underpants that could save lives](#)

Reuters

June 10, 2010

"Printed on the waistband and in constant contact with the skin is an electronic biosensor, designed to measure blood pressure, heart rate and other vital signs. The technology, developed by nano-engineering professor Joseph Wang of University of

California San Diego and his team, breaks new ground in the field of intelligent textiles and is part of shift in focus in healthcare from hospital-based treatment to home-based management. The method is similar to conventional screen-printing although the ink contains carbon electrodes."

[Nano paints to give smarter look to railway coaches](#)

Times of India

June 13, 2010

Ashraf Jamal

"ALLAHABAD: To extend the life of railway coaches and give them a fresh look, the Research Design and Standards Organisation (RDSO) plans to use paints based on nanotechnology in the coaches. Such paints are considered superior to the conventional paints and would greatly prevent corrosion and impart a smarter look to the railway coaches."

[Are Nanoparticles a Health Hazard?](#)

Forbes India

June 14, 2010

Rohin Dharmakumar

"There is a new industrial revolution taking place all around us. The only problem is we can't see it. The building blocks, being developed at the cost of billions of dollars by scientists, governments and multinational corporations, are just a few atoms or molecules thick - nanoparticles. Many are less than 100 nanometres (nm) - one-billionth of a metre - thick. A single human red blood cell in comparison is around 500 nm in diameter. It's a pity though that our eyesight isn't good enough at nanometre level, for if it were, we would see that nanoparticles of precious metals like gold, silver and titanium have already made the jump from research labs to our homes. Manufactured nanoparticles are today present in thousands of consumer products around the world - silver in washing machines and water purifiers to kill bacteria, zinc in cosmetics to protect against ultraviolet rays, carbon nano-tubes in tennis rackets to make them stronger and lighter, titanium in household paints to decompose dust and grime without human intervention."

[Europe's Approach to Nanotechnology Comes Under Fire](#)

IEEE Spectrum - Inside Technology blog

June 15, 2010

Dexter Johnson

"I have worked for the last six years at a European-based company where much of its work has been in consulting on nanotechnology. As an American in these circumstances I have come into contact with what at times has seemed to be the bewildering sensibilities of the European bureaucrat.

I am not altogether sure what the difference is between US bureaucrats and their European brethren, but one can sense something is amiss when comparing the two."

[New type of nanoparticles are created](#)

June 15, 2010

"ARGONNE, Ill., June 15 (**UPI**) - A U.S. government scientist says he has created nanowires with a new set of properties that are significantly different from traditional nanowires.

Yugang Sun of the Argonne National Laboratory's Center for Nanoscale Materials created visible-light catalysis, using silver chloride nanowires decorated with gold nanoparticles that can decompose organic molecules in polluted water."

On Deck

What Local Sources are Reporting

[Gulf Spill Solution? Or New Hazard?](#)

New Haven (CT) Independent

June 8, 2010

David Funkhauser

"A Connecticut company that makes a line of what it labels 'green' products for auto and marine use says it has just the thing for cleaning up the Gulf oil spill: A nanotech-based, biodegradable oil dispersant.

But a number of scientists and environmental groups are warning that the firm's marine oil dispersant relies on nanoparticles in an untested formulation that could cause more harm than good."

[Chemists going green in world of nanotech](#)

Charlotte (NC) Observer

June 14, 2010

Sabine Vollmer

" 'Green' is a ubiquitous label that is even creeping into nanotechnology. But to engineer designs so small they can only be seen through the most powerful microscopes - plus use renewable materials and no harmful processing chemicals - is no easy feat, Renzo Shamey and Khaled El-Tahlawy discovered. The two chemists at N.C. State University's College of Textiles set out to spin cornstarch into nanofibers that are porous and could, for example, carry medicines."

[Investigating the microscopic world of food nanotechnology](#)

Sun-Sentinel (Ft. Lauderdale, FL)

June 15, 2010

Christine M. Palumbo

"Imagine 'smart' food packaging that changes color to alert you when a food spoils, or 'interactive' foods that are personalized to fit your needs. It may sound like the stuff of science fiction, but this kind of technology is real thanks to nanotechnology (or, nanotech), which has quietly moved to the forefront of innovation, poised to revolutionize the food industry. In a nutshell, nanotechnology involves manipulating matter at the nanoscale level - much too small for the human eye to see. A nanometer is one-billionth of a meter (a single human hair measures 100,000 nanometers wide.)"

[USC's Nanotechnology money struck from budget](#)

The State (S.C.) - S.C. Politica Today blog

June 16, 2010

"House members have upheld Gov. Mark Sanford's veto of \$558,000 that would go to nanotechnology research at the University of South Carolina."

Nano Press

What nano-centered publications are reporting

[New method for quick functionalization of carbon nanotubes](#)

Nanowerk

June 8, 2010

"A group of Iranian researchers at University of Tehran succeeded in finding a new method to functionalize carbon nanotubes in a short period ('Fast and clean functionalization of carbon nanotubes by dielectric barrier discharge plasma in air compared to acid treatment').

'Raw nanotubes can not be used directly,' Maso'ud Vesali Naseh, one of the researchers of the project, told the news service of Iran Nanotechnology Initiative Council about the purpose of the activity."

[Nano-Imaging Techniques, Quantum Dots Help in Early Detection of Diseases](#)

Azonano

June 8, 2010

"During SNM's 57th Annual Meeting, investigators presented the results of a multidisciplinary study involving the capture of radiation luminescence and radioactive-excited nanoparticles to help detect subtle signs of disease.

Currently, nuclear medicine agents and imaging technology image the behavior of particles at the cellular, molecular and atomic levels, but radioactive materials also emit barely visible light that can be detected with highly sensitive optical imaging technology. This discovery could lead to new, state-of-the-art imaging techniques."

[Plastic nanoparticulate antibody works in first tests in living animals](#)

Nanowerk.com

June 9, 2010

"Scientists are reporting the first evidence that a plastic antibody - an artificial version of the proteins produced by the body's immune system to recognize and fight infections and foreign substances - works in the bloodstream of a living animal.

The discovery, they suggest in a report in the *Journal of the American Chemical Society* ('Recognition, Neutralization, and Clearance of Target Peptides in the Bloodstream of Living Mice by Molecularly Imprinted Polymer Nanoparticles: A Plastic Antibody'), is an advance toward medical use of simple plastic particles custom tailored to fight an array of troublesome 'antigens.' "

[Nano-Porous Material Halts Body Odour via Teabag-Sized Clothing Tag](#)

Nanowerk

June 11, 2010

"New iron-on tags made from controlled carbon material eliminate under arm smells; military-grade nano-porous fibre is breath of fresh air for clothing manufacturers and image-conscious consumers.

A new underarm clothing tag which uses nanotechnology to harness and store the molecules responsible for body odour is to be launched as an alternative to deodorants to the industrial work wear and international clothing markets."

[Submarines Could Use Nanotechnology to Scan the Depths and Elude Detection](#)

Azonano

June 14, 2010

"UT Dallas researchers have found that carbon nanotube sheets excel as underwater sound generators and noise-canceling speakers, two highly desirable traits for submarine sonar and stealth capabilities.

Researchers had previously shown that sheets of carbon nanotubes can produce a wall of sound in air, without moving back and forth like traditional speakers. The latest study from the UT Dallas Alan G. MacDiarmid NanoTech Institute, reveals that nanoscience speakers perform as well underwater as they do on land, and that one day they could replace traditional submarine sonar arrays.

The study was published in the American Chemical Society's journal Nano Letters."

[Tracking the 'evolution' of nanoparticles as they decontaminate groundwater](#)

PhysOrg

June 18, 2010

"Engineers use advanced imaging techniques to examine bimetallic materials that have remediated more than 50 toxic waste sites.

Iron nanoparticles 1,000 times thinner than a human hair have demonstrated an unprecedented ability to clean contaminated groundwater since they were invented 10 years ago at Lehigh."

[The White House wants to hear your ideas about nanotechnology](#)

Nanowerk

June 19, 2010

"New technologies are changing our world fast, as is obvious to anyone using the latest smart phone, wearing the latest nano-fiber fabric, or filling a prescription for the latest biotech-derived medicine. Now the President's Council of Advisors on Science and Technology (PCAST) wants to hear from you about how the Federal government can best use its resources so three of the newest and most promising technologies provide the greatest economic benefits to society."

Other (science) issues related to nanotechnology

[New Possible Treatment Therapies For Lymphoma And Other Related Cancers By B Cell Targeting](#)

St. Louis Alternatice Medicine Examiner
June 8, 2010
Debbie Nicholson

"The June 10, issue this month of the journal Blood, prints study that reveals new technique victorious in dramatically shrinking B cell lymphoma.

Scientists from Scripps Research Institute have detected a new way to target and destroy certain cancerous cells. This evidence could possibly point to new therapies to treat [l]ymphoma and other related cancers."

[Nanotechnology in Dentistry Could Save Us . . . Or Could Kill Us](#)

The Wealthy Dentist
June 9, 2010
Jim Du Molin

"We've been talking recently about silver nanoparticles and if nanosilver will be the new amalgam. This week, we'll try to piece together some of the scientific evidence about nanotechnology.

Nanomaterials have been defined by the EPA as 'particles that have been intentionally produced to have at least one dimension that measures between approximately 1 and 100 nanometers.' That's pretty tiny, given that there are one billion nanometers in one meter."

[World's most powerful microscope starts work](#)

TGDaily.com
June 10, 2010

Emma Woollacott

"The world's most powerful microscope is now peering away at tiny things at the University of Texas at San Antonio.

You may be proud of the zoom on your camera, but the JEOL transmission electron microscope, JEM-ARM200F, can magnify by 20 million times."

[Taking the NanoPulse -- Toxic Substance Meets Poison Thinking](#)

IndustryWeek
June 16, 2010

"In April, the Safe Chemicals bills were introduced into the U.S. Senate and House of Representatives, designed to overhaul the 1976 Toxic Substances Control Act, or TSCA. This is probably old news to most of you. Since your business has probably been laboring under the regulations of the Environmental Protection Agency for decades when it comes to formulations of your products, you're already anticipating what's to come - the good, the bad and the ugly. But for those of us in the nanotechnology field, there's an additional wrinkle beyond the chemical formula of our products. Both the House and Senate version of the bill now include size, size distribution, shape and surface structure in the definition of a chemical's 'substance characteristic.' That means that over and above concerns about the chemical formula a nanotechnology company may be using, it may become suspect simply because of its nanoscale characteristics."

The Humorous, Fascinating & Unique

[Banana Nano-Smoothies Coming Soon](#)

Discovery News
Eric Bland
June 10, 2010

"Food enriched with nano-sized minerals could soon make billions of people in developing countries healthier.

Scientists from Switzerland have designed new iron and zinc nanoparticles that solve a longstanding conundrum in food fortification: how to make food more nutritious without changing its taste. The research could help eliminate anemia and zinc deficiency across the globe."

[Nanotechnology Researchers Develop iPhone Game Called Waterfall](#)

Azonano.com

June 17, 2010

"A team of researchers from the London Centre for Nanotechnology and the Thomas Young Centre have developed an iPhone application; a game called 'Waterfall'. It's available for free from iTunes or via: www.koolistov.net."

[Bye Bye B.O.](#)

Tonic.com

June 18, 2010

Gabriella Viteri

"Underarm smell is the pits, but thanks to nanotechnology feel free to raise your hands in the air and wave them like you just don't care. Promising underarm confidence, British company Odegon has devised iron-on odor-removing tags that are just as simple to apply as they are discrete to wear."

[Treatment of the week: Frizz-free hair without the effects of chemical straightening](#)

Daily Mail (U.K.)

June 21, 2010

Barbara McMillan

"If you want frizz-free hair but are worried about the effects of chemical straightening, there is an alternative.

I have spent years straightening and using frizz-easing treatments on my unruly hair, so when I heard of a new blow-dry offering to leave hair smooth while replacing lost nutrients, I booked an appointment."