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WEEKLY CLIPS

February 10 – February 16, 2009



Posted: February 10, 2009

For a healthy environment in a nanotechnology future

(*Nanowerk News*) [NanolImpactNet](#), The European Network on the Health and Environmental Impact of Nanomaterials, has announced a conference titled "[NanolImpactNet – for a healthy environment in a future with Nanotechnology](#)" on March 23-27, 2009 in Lausanne, Switzerland.

NanolImpactNet is the European network on the health and environmental impact of nanomaterials. It is a platform for exchange about research ideas and to bring together scientists, industry, policy makers and civil society to ensure the safe and responsible development of nanomaterials.

NanolImpactNet is part of the European Commission's commitment to define a robust European strategy on nanotechnology which includes health, safety and environmental issues. Launched in April 2008, this multidisciplinary network's objective is to create a scientific basis to support the definition of regulatory measures and the implementation of legislation across the EU.

NanolImpactNet is first and foremost a network and a platform for exchange about research

ideas. It consists of 24 partner institutes and over 300 members. By coordinating research between European scientists from over 20 countries, NanoImpactNet will help to harmonise methodologies and communicate results, initially across Europe, but later worldwide, boosting international cooperation.

<http://www.nanowerk.com/news/newsid=9220.php>



State of the Art in Medical Applications of Nanotechnology

Medical and healthcare applications are the fastest growing branch of nanotechnology. Nearly on a daily basis, new groundbreaking results from basic research are reported. Many nanomedical concepts have entered into the phase of clinical studies, and the first nanotechnology-based medical products have been approved by the regulatory authorities.

Experts from all over the world will gather for the NanoMed 2009 – 6th International Conference on Biomedical Applications of Nanotechnology in the Great Lecture Hall of Berlin's Charité Hospital in March to discuss the current state in biomedical applications of nanotechnology. The event is organized by two of the leading German nanotechnology networks, cc-NanoChem e. V. and NanoBioNet e. V.

The program consists of more than 80 lectures and poster presentations by authors from 30 nations.

The scope of the conference covers the entire range of nanomedicine, including, among others, drug delivery, drug targeting and controlled release, new concepts for cancer therapy, innovative dental materials, nanobioanalytics and diagnostic techniques, nanomaterials for implants and regenerative medicine, microbicial coatings for sterility, general hygiene and drug packaging, novel contrast agents, and miniaturization of biochips. Due attention will be paid to the commercialization of nanomedical products and to potential risks and responsible use of nanomaterials.

Detailed information and online registration form are available at <http://nm09.nanoevents.de>.

Posted February 9th, 2009

<http://www.azonano.com/news.asp?newsID=9822>



[Can nanotechnology retard desertification?](#)

Brian Wang at Next Big Future [has pointed](#) to what might be the first nanotech application "to impact a major problem"—water scarcity. The application is hydrophobic sand, which retains moisture near the roots of desert plants by virtue of a proprietary nanostructured coating on the grains of sand. The details are in "[Green dream: A world in a grain of sand](#)", written by Derek Baldwin:

On a cool winter day, Emirati engineer Fahd Mohammad Saeed Hareb peers into a bubble of water atop a tiny pile of sand

cupped in his hands.

Amazingly, the water bubble does not drain through the sand — it remains intact, jiggling like crystal clear Jello, under a high-noon sun.

This is waterproof sand — or as German scientist Helmut F. Schulze calls it — hydrophobic sand, a nanotechnology wonder seven years in the making....

By simply laying down a 10-centimetre blanket of DIME Hydrophobic Materials sand beneath typical desert topsoils, the new super sand stops water below the roots level of the plants and maintains a water table, giving greenery a constant water supply.

By comparison, when regular desert sand lies beneath, water bleeds endlessly downward leaving roots dry until the next watering.

With new hydrophobic sand in place, traditional watering of desert plants five or six times a day can be reduced to one watering, saving 75 per cent more water, a precious resource that is dwindling across the Arab Peninsula.

One of the advantages of the hydrophobic sand, Schulze said, is that while it allows aerobic activity to move upward from the soil, it prevents underground desert salinity deposits from passing through to plant roots above; salt is corrosive and kills plants.

He added that each grain of sand used in the process is coated with SP-HFS 1609, a top-secret additive, the precise nature of which he declined to disclose noting that it's proprietary.

Other forms of hydrophobic sand on the market — used for cleaning up oil spills - are coated with silicas that are water repellent.

"It's super thin," Schulze said. "Every single sand kernel gets a skin, a coating, which encloses it."

The nanotechnology coating is so thin, in fact, that it can't be seen by the naked eye and measures 12,500 to 13,500 micro millimetres.

To date, it's been approved by the Federal Environment Agency (FEA) in Germany which, according to Schulze, has issued a no-objection certificate for the product declaring it as ecologically safe.

This looks promising, and the need it addresses is certainly great, but it is annoying that the proprietary nature of the product means that we don't learn the molecular details of how this product works.

<http://www.foresight.org/nanodot/?p=2956>



Injecting a ‘Volt’ of Change

Nanotechnology can bring us clean cars like the Chevy Volt. But first we have to make sure it is safe.

By Colin Finan

Woodrow Wilson International Center for Scholars

February 13, 2009

If there is one thing the plug-in electric Chevrolet Volt shows, it’s that nanotechnology can improve our lives in ways that were almost unimaginable a few years ago.

The automobile industry is facing some of its biggest changes ever. Between bailouts, layoffs, slumping sales and potential new environmental mandates, it is clear that a retooling of the industry is inevitable. A major hope of General Motors is that the Volt will help save the company from collapsing. The car was a centerpiece when Obama administration officials recently visited the Washington Auto Show and was displayed as proof that the industry is ready for change.

But while the electric car is an exciting prospect, its long-term success will depend on determining if there are risks to public health and the environment associated with the nanotechnology that makes the Volt possible.

According to GM, the Volt’s battery lets the car travel as many as 40 miles on the power of one charge, which means most Americans can make their daily commute without having to use any gasoline. What makes this battery so special is its use of nanotechnology-enabled electrodes that significantly improve on the performance of conventional lithium-ion batteries. The same technology has been used in tools and other applications, but this is the first time it will power an automobile. GM’s partner, Massachusetts-based A123Systems, used nanophosphate electrodes to create a battery that can outperform the competition, and provide the Volt with the power it needs.

http://www.nanotech-now.com/news.cgi?story_id=32189



Journal Nanotechnology Progress International (JONPI):Request for Manuscript

Ithaca, NY | Posted on February 16th, 2009

Please I am requesting your manuscript for publication in maiden edition of Journal Nanotechnology Progress International (JONPI) that will come out soon. The sooner you submit the better because it will go through the review since it is going to be of the highest quality and impact. For more on the guideline to authors, visit the website at <http://www.fonai.org/News.html>.

The review of manuscript has already begun. Circulate this within your network. Your usual kind support is needed to enable us have a high impact and quality journal.

http://www.nanotech-now.com/news.cgi?story_id=32189

Wednesday, February 11, 2009

House Passes Nanotechnology Bill

Legislation intended to strengthen and provide transparency in federal nanotechnology research efforts passed the House on Wednesday. The [bill](#) is identical to one that was approved by the chamber in the 110th Congress. House Science and Technology Committee on Science and Technology Chairman **Bart Gordon** [lauded](#) the news, saying "there is no doubt that the potential of this technology is vast" since it is already part of cellular phones, cosmetics, paints and refrigerators and will soon help protect the lives of police officers and military servicemen.

Specifically, the bill requires that the multi-agency National Nanotechnology Initiative develop a plan for environmental and safety research components including explicit near-term and long-term goals, specifics about the funding required to attain those goals, and details about the role of each participating entity. The measure also assigns responsibility to the White House Office of Science and Technology Policy to oversee the planning and ensure the agencies allocate the resources necessary to carry it out.

The legislation also includes provisions aimed at capturing the economic benefits of nanotechnology by encouraging the creation of industry liaison groups to foster technology transfer and to help guide the NNI research agenda. The bill also authorizes large-scale, focused, multi-agency R&D initiatives in areas of national need. Additionally, the bill addresses the future workforce by supporting the development of undergraduate courses in nanotechnology fields. A companion bill has not been introduced in the Senate.

<http://techdailydose.nationaljournal.com/2009/02/house-passes-nanotechnology-bi.php>



Posted: February 16, 2009

FramingNano mapping study on regulation and governance of nanotechnology released

(*Nanowerk News*) The [Innovation Society](#) as a part of the [FramingNano](#) project consortium have announced the release of the first FramingNano milestone report. The new mapping study approaches the nano risk governance issue by presenting a range of nanotechnology

applications, summarising the current knowledge about risks and concerns and by giving a comprehensive overview on regulatory approaches, initiatives and stakeholders involved worldwide. In Switzerland, FramingNano was preceded by the stakeholder dialogue platform project "Nano-Regulation".

Download the entire report "[FramingNano Mapping Study on Regulation and Governance of Nanotechnology](#)" (pdf, 2 MB).

The level of attention directed towards safety, health and environmental effects (SHE) as well as ethical, legal and societal issues (ELSI) deriving from nanotechnology and its applications, has increased considerably in recent years. Addressing these issues properly and responsibly will be of paramount importance for the success of "nano" as a technology. The fact that nanotechnology is still at an early stage of its development makes it possible to tackle the relevant questions, comprehensively and globally, from the beginning, thereby helping to avoid some of the mistakes made in the context of other technologies in the past.

FramingNano is a 2-year FP7-funded project established with the objective of defining a governance framework aimed at supporting a responsible development of NS&T. This will be achieved by establishing an open and international multi-stakeholder dialogue amongst the scientific, institutional, industrial, non-governmental, and broader public communities, in order to foster the development of a shared frame of knowledge, objectives and actions to define constructive and practicable regulatory solutions, and facilitating a responsible development of NS&T. The final outcome of the FramingNano project will be a proposal for a Governance Plan highlighting the needs, actions and recommendations for a safe development of NS&T at EU level and beyond.

<http://www.nanowerk.com/news/newsid=9289.php>

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