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European Commission Denies 2014 Petition Seeking EU-Wide Ban on Nanoparticles

Source: [The National Law Review, July 13, 2016](#)

Authors: Lynn L. Bergeson and Carla N. Hutton

On June 29, 2016, the European Commission (EC) provided a notice to the European Parliament regarding its response to a 2014 petition calling for a European Union (EU)-wide ban on microplastics and nanoparticles. The petition summary states: "Nanoparticles are so small that they penetrate cells effortlessly and can damage them, causing cancer. Because the precautionary principle applies in the EU, the petitioner urges a ban on these small particles as soon as possible." In its response, the EC states that nanoparticles "are ubiquitous in the environment," and while some manufactured nanomaterials may potentially be carcinogenic, others are not. The EC states that the general regulatory framework on chemicals, along with the sectoral legislation, "are appropriate to assess and manage the risks from nanomaterials, provided that a case-by-case assessment is performed." The EC notes that the need to modify the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulation to include more specific requirements for nanomaterials was identified.

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See the Joint Research Centre [Web Platform on Nanomaterials](#).

TURI's Note: See recent article from TURI's

In This Issue

[European Commission Denies 2014 Petition Seeking EU-Wide Ban on Nanoparticles](#)

[Swedish Proposal for New Regulation on Nanomaterials in Chemical Products](#)

[The Race to Build the World's First Totally Green High-Performance Gear](#)

[Researchers use sound to destroy toxic firefighting chemical](#)

[West Virginia Chemical Spill: Collective NTP Findings and Supporting Files](#)

[Chemical Companies Face Brexit REACH Compliance Questions](#)

['Green' Electronic Materials Produced with Synthetic Biology](#)

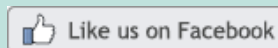
[Project TENDR: Targeting Environmental Neuro-Developmental Risks. The TENDR Consensus Statement](#)

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Quick Links

[Greenlist Bulletin Archives](#)

[TURI Website](#)



Director, Dr. Michael Ellenbecker, with colleagues from the Lowell Center for Sustainable Production, and others, "[The applicability of chemical alternatives assessment for engineered nanomaterials](#)".

Swedish Proposal for New Regulation on Nanomaterials in Chemical Products

Source: [JDSupra Business Advisor, June 30, 2016](#)

Author: Sandra Tiah

The Swedish Chemicals Agency (KEMI) is currently developing a proposal for new legislation on notification requirements for nanomaterials in chemical products, with a consultation scheduled for late 2016. Swedish companies are presently obligated to report the content of chemical products in the Chemicals Inspectorate's register, but there is no requirement to distinguish nanomaterials. This new proposal would require reporting on whether chemical products contain nanomaterials, and if so, additional information would be required on said nanomaterial.

It is anticipated that the new regulation would become effective on January 1, 2018, with the initial submission of data on nanomaterials in February 2019.

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Also see from SAFENANO, "[Draft REACH guidance for nanomaterials published by ECHA for consultation](#)".

The Race to Build the World's First Totally Green High-Performance Gear

Source: [Outside, July 8, 2016](#)

Author: Mary Catherine O'Connor

...The new TSCA could accelerate the regulation of two main groups of compounds that the EPA has been eyeing for a while: perfluorinated chemicals (PFCs) and flame retardants. PFCs play a central role in durable water repellent (DWR) coatings, which are applied to outerwear and footwear. (It's worth noting that these represent a drop in the PFC bucket -- the chemicals are also used in carpets, food packaging, upholstery and other products we use daily.)

Perfluorooctanoic acid (PFOA), also known as C8 in reference to the eight strongly-bonded carbon atoms in its molecular structure, is a byproduct of PFC production and numerous studies have concluded it is toxic to animals and a likely human carcinogen. Flame retardants are applied to tents in compliance with fire safety requirements.

The Outdoor Industry Association (OIA) has special working groups studying both PFCs and flame retardants. "We need to design products that meet specific performance requirements and protect users from the elements and from harm," says Beth Jensen, OIA's director of corporate responsibility.

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Also from *Outside*, "[Columbia Creates an Environmentally Friendly Rain Shell with the Outdry Extreme Eco](#)".

Also see article from Greenpeace International, "[Which fashion brands are going toxic-free?](#)"

Researchers use sound to destroy toxic firefighting chemical

[Source: U.S. Air Force, July 12, 2016](#)

Author: Jennifer Schneider

JOINT BASE SAN ANTONIO-LACKLAND, Texas (AFNS) -- The Air Force Civil Engineer Center, in partnership with researchers from the University of Arizona, is exploring an innovative way to dispose of the Air Force's toxic firefighting foam stockpiles -- using only sound waves.

The project, funded by the AFCEC Broad Agency Announcement program, demonstrates a potentially safe and cost-effective disposal method for more than 619,000 gallons of the foam, which has been found to contain toxic perfluorinated compounds (PFCs).

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West Virginia Chemical Spill: Collective NTP Findings and Supporting Files

[Source: National Toxicology Program, July 8, 2016](#)

All NTP updates, data, and supporting files are now available for the NTP research program on chemicals spilled into the Elk River in West Virginia. Throughout a year of conducting these toxicity tests, NTP released updates to inform the public and other federal agencies on study findings. NTP also released supporting data and reports that served as the basis for the updates. The Final Update serves as NTP's overall interpretation of its studies on the spilled chemicals.

[Read more...](#)

See [NTP Research Program on Chemicals Spilled into the Elk River in West Virginia: Final Update](#).

Also see from the Environmental Defense Fund, ["We appear to have gotten lucky in the January 2014 West Virginia chemical spill"](#).

Chemical Companies Face Brexit REACH Compliance Questions

[Source: Bloomberg BNA, July 7, 2016](#)

Author: Stephen Gardner

July 7 -- British chemicals companies and companies that use the U.K. as their point of entry into the European single market could face years of uncertainty over their compliance obligations under the European Union's REACH regulation, in the wake of the U.K.'s Brexit referendum.

Legal and industry experts contacted by *Bloomberg BNA* emphasized that until the day the U.K. departs the European Union, REACH and other EU laws on substances will continue to apply. But beyond that, there are few certainties.

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'Green' Electronic Materials Produced with Synthetic Biology

[Source: UMass Amherst, July 14, 2016](#)

AMHERST, Mass. -- Scientists at the University of Massachusetts Amherst report in the current issue of *Small* that they have genetically designed a new strain of bacteria that spins out extremely thin and highly conductive wires made up solely of non-toxic, natural amino acids.

Researchers led by microbiologist Derek Lovley say the wires, which rival the thinnest wires known to man, are produced from renewable, inexpensive feedstocks and avoid the harsh chemical processes typically used to produce nanoelectronic materials.

Lovley says, "New sources of electronic materials are needed to meet the increasing demand for making smaller, more powerful electronic devices in a sustainable way." The ability to mass-produce such thin conductive wires with this sustainable technology has many potential applications in electronic devices, functioning not only as wires, but also transistors and capacitors. Proposed applications include biocompatible sensors, computing devices, and as components of solar panels.

This advance began a decade ago, when Lovley and colleagues discovered that *Geobacter*, a common soil microorganism, could produce "microbial nanowires," electrically conductive protein filaments that help the microbe grow on the iron minerals abundant in soil. These microbial nanowires were conductive enough to meet the bacterium's needs, but their conductivity was well below the conductivities of organic wires that chemists could synthesize.

[Read more...](#)

See original article in *Small*, "[Synthetic Biological Protein Nanowires with High Conductivity](#)".

Project TENDR: Targeting Environmental Neuro-Developmental Risks. The TENDR Consensus Statement

Source: Environmental Health Perspectives, July 2016

SUMMARY: Children in America today are at an unacceptably high risk of developing neurodevelopmental disorders that affect the brain and nervous system including autism, attention deficit hyperactivity disorder, intellectual disabilities, and other learning and behavioral disabilities. These are complex disorders with multiple causes -- genetic, social, and environmental. The contribution of toxic chemicals to these disorders can be prevented.

APPROACH: Leading scientific and medical experts, along with children's health advocates, came together in 2015 under the auspices of Project TENDR: Targeting Environmental Neuro-Developmental Risks to issue a call to action to reduce widespread exposures to chemicals that interfere with fetal and children's brain development. Based on the available scientific evidence, the TENDR authors have identified prime examples of toxic chemicals and pollutants that increase children's risks for neurodevelopmental disorders. These include chemicals that are used extensively in consumer products and that have become widespread in the environment. Some are chemicals to which children and pregnant women are regularly exposed, and they are detected in the bodies of virtually all Americans in national surveys conducted by the U.S. Centers for Disease Control and Prevention. The vast majority of chemicals in industrial and consumer products undergo almost no testing for developmental neurotoxicity or other health effects.

CONCLUSION: Based on these findings, we assert that the current system in the United States for evaluating scientific evidence and making health-based decisions about environmental chemicals is fundamentally broken. To help reduce the unacceptably high

prevalence of neurodevelopmental disorders in our children, we must eliminate or significantly reduce exposures to chemicals that contribute to these conditions. We must adopt a new framework for assessing chemicals that have the potential to disrupt brain development and prevent the use of those that may pose a risk. This consensus statement lays the foundation for developing recommendations to monitor, assess, and reduce exposures to neurotoxic chemicals. These measures are urgently needed if we are to protect healthy brain development so that current and future generations can reach their fullest potential.

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See article from Healthy Babies Bright Futures, "[Declaring \(the need for\) Independence \(from toxic chemicals\)](#)" and from *The New York Times*, "[A Call for Action on Toxic Chemicals](#)".

Also see the home page for [Project TENDR](#).

ISO-Free Urethane Technology Lengthens Pot Life, Shortens Cure Time

Source: [Paint and Coatings Industry, August 1, 2015](#)

Authors: John Argyropoulos, Nahrain Kamber, Paul Popa and David Pierce

Industrial coatings that offer faster finishes are in demand as end users seek to improve productivity and/or accelerate return-to-service time. When formulating two-component (2K) polyurethanes, however, speed has been stymied by an ongoing trade-off between pot life and drying time. Slowing the reaction between the base resin (Part A) and the isocyanate crosslinker (Part B) provides a much-needed extension of pot life; it also results in longer drying times. PARALOID™ Edge ISO-free* technology (*manufactured without isocyanate) developed by Dow Coating Materials, a business unit of The Dow Chemical Company, utilizes an alternate urethane crosslinking system that decouples pot life from ambient cure time, allowing formulators to optimize both properties. ...

PARALOID Edge technology eliminates the cure speed/pot life trade-off that is standard practice when formulating with isocyanate-based crosslinkers for ambient-cure applications. [As illustrated in Figure 1], this novel technology employs a carbamate-based functional group, a dialdehyde crosslinker and an acid catalyst. In addition to fast ambient dry speed and long pot life, this technology addresses formulator and applicator interest in isocyanate-free crosslinking systems to help improve the environmental, health and safety profile of the formulated coating.

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