

This is the bi-weekly bulletin of the TURI Library at the University of Massachusetts Lowell. Greenlist Bulletin provides previews of recent publications and websites relevant to reducing the use of toxic chemicals by industries, businesses, communities, individuals and government. You are welcome to send a message to [mary@turi.org](mailto:mary@turi.org) if you would like more information on any of the articles listed here, or if this email is not displaying properly.

## State Agencies Warn Parents: Avoid Children's Furniture and Other Products Containing Flame Retardant Chemicals

[Source: Connecticut Department of Energy and Environmental Protection, June 14, 2017](#)

The Connecticut Departments of Consumer Protection (DCP), Public Health (DPH) and Energy and Environmental Protection (DEEP) today warned parents and others purchasing children's products to avoid any product containing one of three flame retardant chemicals that the Environmental Protection Agency (EPA) and the state agencies have identified as highly toxic. Today's warning is part of an increased effort on the part of the three state agencies to educate the public on toxic chemicals found in children's products.

One prioritized chemical, Tris-(1,3-dichloro-2-propyl)phosphate (TDCPP), was previously removed from children's sleepwear in the 1970s because of cancer concerns. Despite continued cancer concerns, it is still widely used in products designed for young children, including crib bumpers, changing table pads, and children's foam padded sleep mats. Tris-(2-chloroethyl)phosphate (TCEP), a related Tris flame retardant, and hexabromocyclododecane (HBCD), a flame retardant that can build up in a child's body over time and potentially affect the endocrine system and brain development, are the other two flame retardants that have been identified as being of high concern for continued wide use in children's products. TCEP is found in many of the same

### In This Issue

**[State Agencies Warn Parents: Avoid Children's Furniture and Other Products Containing Flame Retardant Chemicals](#)**

**[Alternatives Analysis Guide, version 1.0 Downloads](#)**

**[Toxic Nonstick Chemicals Contaminate Drinking Water for 15 Million Americans](#)**

**[Poly- and Perfluoroalkyl Substances](#)**

**[The air you breathe -- Do nanoparticles pose a health risk?](#)**

**[How CVS is cutting back on chemicals in cosmetics](#)**

**[Court reverses U.S. approval of nanosilver pesticide](#)**

**[The cost of clean: Disinfectants cause birth defects in baby mice](#)**

**[EU Commission adds 12 substances to REACH authorization list](#)**

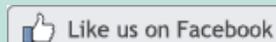
**[A more sustainable way to refine metals](#)**

**[Join Our Mailing List](#)**

### Quick Links

[Greenlist Bulletin Archives](#)

[TURI Website](#)



products as TDCPP. HBCD can be found in some children's car seats and soft furniture. When shopping for these children's products, consumers should ask retailers any questions they have, check product labels, and consult manufacturers if need be.

[Read more...](#)

See additional information on these chemicals from the [CT Department of Consumer Protection](#).

*TURI's Note:* The new TRI Chemical Category, Hexabromocyclododecane (HBCD) Category, will be reportable under TURA for the 2018 reporting year, for reports due July 1, 2019.

## **Alternatives Analysis Guide, version 1.0 Downloads**

[Source: California Department of Toxic Substances Control, June 2017](#)

The California Department of Toxic Substances Control's Safer Consumer Products (SCP) program is releasing version 1.0 of the Alternatives Analysis (AA) Guide. The initial draft version, released in December 2016, has been updated based on feedback that was received through February 3, 2017.

The AA Guide is designed to help responsible entities understand and complete an AA that fulfills SCP regulatory requirements. It provides useful approaches, methods, resources, tools, and brief examples.

[Read more...](#)

See information on the [OECD QSAR Toolbox](#) and the [IOMC Toolbox for Decision Making in Chemicals Management](#).

*TURI's Note:* See a new report from the Natural Resources Defense Council, co-authored by UML researcher Sally Edwards with the Lowell Center for Sustainable Production, "[Selecting Safer Alternatives to Toxic Chemicals and Ensuring the Protection of the Most Vulnerable](#)".

## **Toxic Nonstick Chemicals Contaminate Drinking Water for 15 Million Americans**

[Source: Environmental Working Group, June 8, 2017](#)

Author: Monica Amarelo

WASHINGTON -- New research from EWG and Northeastern University in Boston uncovered highly fluorinated toxic chemicals, known as PFCs or PFASs, in the drinking water of 15 million Americans in 27 states, and from more than four dozen industrial and military sources nationwide.

EWG and the Social Science Environmental Health Research Institute at Northeastern collaborated to produce an interactive map that combines drinking water data from the Environmental Protection Agency and information on all publicly documented cases of PFC pollution from manufacturing plants, military air bases, civilian airports and fire fighter training sites.

"This is a one stop shop to track how pervasive the PFC contamination problem is in the

U.S.," said Bill Walker, co-author of the report and managing editor of EWG. "For the first time we're reporting the full results of the EPA water testing, as well as known industrial spills and sites with military contamination, to provide a complete picture of where these PFCs are detected."

Of the 47 locations where the source of the contamination is known or suspected, 21 sources are military bases, 20 are industrial facilities and seven are from civilian firefighting sites. Some locations have multiple sources of contamination.

[Read more...](#)

See interactive map [here](#).

*TURI's Note:* See our special issue of *Greenlist Bulletin* on [Perfluorinated Chemicals](#).

## Poly- and Perfluoroalkyl Substances

*Source: Environmental Science & Technology, 2017*

Guest Editors: Christopher Higgins and Jennifer Field

In May, 2016 the United States Environmental Protection Agency released drinking water health advisory levels for two perfluoroalkyl substances -- perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS). These two chemicals are representatives of the much broader class of poly- and perfluoroalkyl substances (PFASs) that has been in production since the late 1940s for a myriad of applications, including fire-fighting foams (aqueous film forming foams), stain-resistant coatings for textiles and other surfaces, and as polymerization aids. PFASs are differentiated primarily by their chain length, and the properties (e.g., oil and water repellency, chemical and thermal stability) that make these compounds desirable for industrial application also render PFASs persistent in the environment. PFASs have now been documented in human blood, in biota and in environmental matrices, and in remote locations around the world. The inherent recalcitrance of PFASs thus raises important questions for the future of these chemicals.

[Read more...](#)

See the special issues by Category:

[Category 1: Analytical Advances](#)

[Category 2: Occurrence and Fate of PFASs](#)

[Category 3: Bioaccumulation and Human Exposure](#)

[Category 4: Remediation and Policy Related to PFAS Control](#)

Also see from *Chemical Watch*, "[California advances PFAS measure to Senate](#)".

## The air you breathe -- Do nanoparticles pose a health risk?

*Source: Safenano, June 16, 2017*

*Particle and Fibre Toxicology* have presented a brand new video abstract summarising new research in *Particle and Fibre Toxicology*: "Slow lung clearance and limited translocation of four sizes of inhaled iridium nanoparticles".

The article discusses the concerns around inhaled nanoparticles behaving differently to larger particles in terms of lung clearance and translocation, with potential implications for their toxicity. Studies undertaken to investigate this have typically involved limited post-exposure periods. There is a shortage of information on longer-term clearance and translocation patterns and their dependence on particle size, which this study aimed to address.

[Read more...](#)

See original article in *Particle and Fibre Toxicology*, "[Slow lung clearance and limited translocation of four sizes of inhaled iridium nanoparticles](#)".

Also see from the European Commission, "[New catalogue of nanomaterials used in cosmetics is now online](#)".

## How CVS is cutting back on chemicals in cosmetics

Source: [GreenBiz.com, June 9, 2017](#)

Authors: Cia Tucci

Last month [CVS] announced a major step forward with respect to "free-from" products: [They] will remove parabens, phthalates and the most prevalent formaldehyde donors (preservative ingredients that can release formaldehyde over time) across nearly 600 of [their] beauty and personal care products from [their] CVS Health, Beauty 360, Essence of Beauty and Blade store brands.

[CVS] will begin rolling out products that do not contain these ingredients to [their] stores in the coming months, and [they] plan to stop shipping products that don't meet these standards to [their] distribution centers by the end of 2019.

[Read more...](#)

See CVS Store Brand [Restricted Substances List](#). Also see the [CVS Health grade from Who's Minding the Store?](#).

## Court reverses U.S. approval of nanosilver pesticide

Source: [Chemical & Engineering News, June 5, 2017](#)

In a win for environmental and public health groups, a federal appeals court revoked EPA's approval of an antimicrobial product containing nanosilver. The U.S. Court of Appeals for the Ninth Circuit ruled on May 30 that EPA failed to show that its approval of the product, called NSPW-L30SS or Nanosilva, was in the public's interest.

[Read more...](#)

See the U.S. Court of Appeals for the Ninth Circuit's [opinion](#).

Also see from *Law360*, "[9th Circ. Revokes EPA Approval For Nanosilver Product](#)".

## The cost of clean: Disinfectants cause birth defects in baby mice

Source: [Environmental Health News, June 15, 2017](#)

Author: Brian Bienkowski

Common cleaners used in homes, hotels and hospitals cause birth defects in fetuses, according to a new study of mice.

In some cases just being in the same room with the chemicals was enough to increase birth defects in the mice. The scientists involved say they can't draw any conclusions for exposed humans but "animal studies are the gold standard for predicting human health effects," said Terry Hrubec, professor and researcher at Virginia Tech University and lead

author of the study published today in the journal *Birth Defects Research*.

People are exposed "every day to these chemicals," she added.

The chemicals, called quaternary ammonium compounds, or "quats", are often found in cleaning products and disinfectants used in people's homes as well as at hotels and hospitals because they're efficient at cleaning bacteria and viruses.

Quats are also found in some laundry detergents, treatments for swimming pools, food preservatives in packed produce, and personal care products such as shampoos and conditioners.

[Read more...](#)

See original study in *Birth Defects Research*, "[Ambient and dosed exposure to quaternary ammonium disinfectants causes neural tube defects in rodents](#)".

*TURI's Note:* See our [CleanerSolutions Database](#) from the TURI Surface Solutions Laboratory to find cleaning alternatives.

## EU Commission adds 12 substances to REACH authorization list

[Source: Chemical Watch, June 15, 2017](#)

The European Commission has added 12 SVHCs to REACH Annex XIV -- the authorisation list.

They are the first substances to be included in Annex XIV, which now contains 43 substances, since the Commission adopted a moratorium on such additions in August 2014.

Of the 12, eight are category 1B substances toxic for reproduction with a sunset date of 4 July 2020:

- 1-bromopropane (n-propyl bromide) (used in washing and cleaning products, and in the manufacture of electrical and electronic equipment);
- diisopentylphthalate (found in cosmetics);
- 1,2-benzenedicarboxylic acid di-C6-8-branched alkyl esters C7-rich (used in the manufacture of dyes, medicine and perfume);
- 1,2-benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters;
- 1,2-benzenedicarboxylic acid, dipentylester, branched and linear;
- bis(2-methoxyethyl) phthalate (found in cosmetics);
- dipentylphthalate; and
- n-pentyl-isopentylphthalate.

[Read more...](#)

See Official Journal [here](#).

## A more sustainable way to refine metals

[Source: McGill University, June 7, 2017](#)

A team of chemists in Canada has developed a way to process metals without using toxic solvents and reagents. The system, which also consumes far less energy than conventional techniques, could greatly shrink the environmental impact of producing metals from raw materials or from post-consumer electronics.

"At a time when natural deposits of metals are on the decline, there is a great deal of interest in improving the efficiency of metal refinement and recycling, but few disruptive technologies are being put forth," says Jean-Philip Lumb, an associate professor in McGill University's Department of Chemistry. "That's what makes our advance so important."

The discovery stems from a collaboration between Lumb and Tomislav Friscic at McGill in Montreal, and Kim Baines of Western University in London, Ont. In an article published recently in *Science Advances*, the researchers outline an approach that uses organic molecules, instead of chlorine and hydrochloric acid, to help purify germanium, a metal used widely in electronic devices. Laboratory experiments by the researchers have shown that the same technique can be used with other metals, including zinc, copper, manganese and cobalt.

[Read more...](#)

See original article in *Science Advances*, "[A chlorine-free protocol for processing germanium](#)".

Also see from the American Chemical Society, "[Endangered Elements](#)".

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