

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.

## Pollution Prevention Week

[Source: U.S. Environmental Protection Agency, September 8, 2016](#)



This week we urge you to continue to spread the word: think of ways to prevent pollution in your world, innovate, do it the green way from the beginning! That's the key to saving our planet's resources and moving toward sustainability. Please join in, renew your efforts and pat yourself on the back for progress you've made. Congratulations on every step! ...

As we mark this year's annual Pollution Prevention (P2) Week -- September 19 to 25 -- we are highlighting the many efforts of EPA, its state partners, industry and citizens to prevent pollution before it begins. Eliminating the sources of pollution prevents damage from being done in the first place and it eliminates the need for costly controls and cleanup.

[Read more...](#)

*Mary's Note:* Hope you enjoyed Pollution Prevention Week! Please check out [this link featuring many](#)

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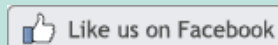
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## Potentially Harmful Chemicals Widespread in Household Dust

[Source: Milken Institute School of Public Health - The George Washington University, September 14, 2016](#)

WASHINGTON, DC (September 14, 2016) -- Household dust exposes people to a wide range of toxic chemicals from everyday products, according to a study led by researchers at Milken Institute School of Public Health (Milken Institute SPH) at the George Washington University. The multi-institutional team conducted a first-of-a-kind meta-analysis, compiling data from dust samples collected throughout the United States to identify the top ten toxic chemicals commonly found in dust. They found that DEHP, a chemical belonging to a hazardous class called phthalates, was number one on that list. In addition, the researchers found that phthalates overall were found at the highest levels in dust followed by phenols and flame retardant chemicals.

[Read more...](#)

See original article in *Environmental Science & Technology*, "[Consumer Product Chemicals in Indoor Dust: A Quantitative Meta-analysis of U.S. Studies](#)".

## Consumers' Guide to Highly Fluorinated Chemicals

[Source: Green Science Policy Institute, August 12, 2016](#)

"Stain-resistant, nonstick, waterproof and lethal" is how journalist Callie Lyons describes a highly fluorinated chemical called C8. This chemical leaked into the water supply near production facilities in West Virginia and Ohio. Hundreds of thousands of people were found to have C8 in their bodies and a wide range of health problems associated with this exposure.

But such exposure is not just a problem for people living near chemical plants. This affects all of us, because we are exposed to highly fluorinated chemicals like C8 from a variety of consumer products we commonly use, such as clothing, carpets, cosmetics, and more.

[Read more...](#)

See the May 2016 U.S. Environmental Protection Agency Fact Sheet, "[PFOA & PFOS Drinking Water Health Advisories](#)".

## ECHA recommends authorizing critical continued uses of chromium trioxide under strict conditions

[Source: European Chemicals Agency, September 23, 2016](#)

ECHA's scientific committees adopted a total of 61 positive draft or final opinions at their September meetings. These mainly concern the carcinogen chromium trioxide. The Committee's opinions evaluate the risks of continuing use, recommending strict conditions where necessary to limit exposure to workers. ...

In September ECHA's Committees for Risk Assessment (RAC) and Socio-economic Analysis (SEAC) adopted 25 final opinions which will be sent to the European Commission and a further 36 draft opinions that will now be sent to the applicants for their comments. A few of these opinions concern other substances of very high concern,

which are also carcinogenic substances.

This batch of opinions also covers the largest application for authorisation reviewed so far, submitted by a consortium of importers of chromium trioxide -- called CTAC -- selling the substance to a substantial part of the European chrome plating industry.

This application covers practically all uses of chromium trioxide as a treatment applied to the surface of products (formulation, 'functional' and 'decorative' chrome plating, surface treatment and tin plating for the food sector). It covers a broad range of industry sectors, such as car manufacturing, aerospace, aeronautics but also the manufacture of metals and construction equipment. This application is thus made on behalf of a vast number of downstream users who will ultimately need to individually notify that they are covered by this authorisation.

[Read more...](#)

## EU Considers Adding Six Substances to Restricted Chemicals List

*Source: [Environmental Leader, September 23, 2016](#)*

*Author: Jessica Lyons Hardcastle*

The primary chemical law in the European Union, the Registration, Evaluation, Authorization and Restriction of Chemicals or REACH, has proposed adding six new substances of very high concern to its restricted substances list, according to Assent Compliance, an environmental compliance software as a service provider.

The six substances are:

- 4,4'-Isopropylidenediphenol
- 4-Heptylphenol
- 4-tert-butylphenol
- Benzene-1,2,4-tricarboxylic acid 1,2-anhydride (trimellitic anhydride)
- Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts
- p-(1,1-dimethylpropyl)phenol

Although REACH applies only to products sold in the EU, US and other global businesses are affected, because REACH compliance throughout the supply chain is required to do business in Europe.

[Read more...](#)

See ECHA's page on ['Substances of very high concern identification'](#) for more information.

## The Next Phase in Green Building Is Healthier Buildings

*Source: [Environmental Leader, September 21, 2016](#)*

*Author: Jessica Lyons Hardcastle*

The financial benefits of green building have been well established. Studies have repeatedly shown green building certification such as LEED and BREEAM lead to lower operating costs, such as reduced utility bills and lower total lifecycle costs.

Another business benefit: building owners report seeing a median increase of 7 percent in the value of their green buildings compared to traditional buildings.

So it's not that surprising that green building is outpacing overall construction growth in the US.

But as green building increasingly becomes the norm, driven both by market demand and environmental regulations, some savvy developers and owners are looking to the next phase of green building: healthier buildings that improve employee wellness.

[Read more...](#)

## **Emissions of Per- and Polyfluoroalkyl Substances in a Textile Manufacturing Plant in China and Their Relevance for Workers' Exposure**

*Source: [Environmental Science & Technology, September 12, 2016](#)*

*Author(s): Franziska Heydebreck, Jianhui Tang, Zhiyong Xie, and Ralf Ebinghaus*

The manufacturing of high-performance fabrics requires numerous chemical treatment steps that involve the use of per- and polyfluoroalkyl substances (PFASs) to protect apparel against water, stain, and oil penetration. However, air and wastewater emissions of PFASs generated during this manufacturing are a potential threat to both factory workers and the environment. We investigated the occurrence and distribution of PFASs in wastewater, air, airborne particles, and settled dust in a textile manufacturing plant in China. PFOA and PFDA or their precursor compounds 8:2 FTOH and 10:2 FTOH were the dominant compounds in all environmental media tested, revealing that long-chain PFASs were preferably used for the manufacturing of functional garments. Besides, PFASs were detected along the textile manufacturing chain, indicating that they were used as durable water repellents and as surfactants in, for example, coating agents. The workers' exposure to FTOHs via air inhalation was up to 5 orders of magnitude higher than the background exposure of the general western population. To the best of our knowledge, this is the first study providing information regarding the emission of PFASs during the manufacturing of textiles via various environmental media.

[Read more...](#)

## **H&M backs restriction of CMRs in textiles**

*Source: [Chemical Watch, September 19, 2016](#)*

*Author: Tammy Lovell*

H&M, the world's second largest fashion retailer, has backed a European Commission proposal to restrict 286 carcinogenic, mutagenic and reprotoxic (CMR) substances in textiles.

A number of trade bodies have raised objections to the plans. These include EuroCommerce and the Foreign Trade Association. They fear the fast-track process would not allow time for substitutions to be found and could lead to products being withdrawn from the marketplace.

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## **Toxic Free Kids Act - August 2016 Report**

*Source: [Minnesota Department of Health, August 2016](#)*

On August 11th, 2016, the Minnesota Department of Health (MDH) completed a report detailing the second review and revision process for the Minnesota Chemicals of High Concern list. This report also briefly describes the previous update to the list in 2013 as well as some of the future work activities MDH plans for the Priority Chemical list and Toxic Free Kids program as a whole.

[Read more...](#)

See report, "[2016 Update: Minnesota Chemicals of High Concern List](#)".

## **Spent Coffee Bioelastomeric Composite Foams for the Removal of Pb<sup>2+</sup> and Hg<sup>2+</sup> from Water**

*Source: ACS Sustainable Chemistry & Engineering, September 1, 2016*

*Author(s): Asmita A. Chavan, Javier Pinto, Ioannis Liakos, Ilker S. Bayer, Simone Lauciello, Athanassia Athanassiou, and Despina Fragouli*

Herein we present an interesting approach for the reutilization of coffee waste in water remediation. This is achieved by the development of bioelastomeric foams composed of 60 wt% of spent coffee powder and 40 wt% of silicone elastomer using the sugar leaching technique. In this study, we present the necessary characteristics of the developed "green" foams for the successful removal of Pb<sup>2+</sup> and Hg<sup>2+</sup> ions from water, and we identify the involved mechanisms. The capability of the bioelastomeric foams to interact with Pb<sup>2+</sup> and Hg<sup>2+</sup> is not affected by the presence of other metal ions in water as tests in real wastewater demonstrate. The incorporation of the spent coffee powder in a solid porous support, without compromising its functionality, facilitates the handling and allows the accumulation of the pollutants into the foams enabling their safe disposal. The fabricated foams can be used for the continuous filtration and removal of metal ions from water, demonstrating their versatility, in contrast to the sole coffee powder utilized so far, opening the way for the reutilization and valorization of this particular waste.

[Read more...](#)

See article in *Chemical & Engineering News* on this research, "[Sponge made of coffee grounds scrubs lead and mercury from water](#)".

*Greenlist Bulletin is compiled by:  
Mary Butow  
Research and Reference Specialist  
Toxics Use Reduction Institute  
University of Massachusetts Lowell  
600 Suffolk Street, Wannalancit Mills Suite 501  
Lowell, MA 01854-2866  
978-934-4365  
978-934-3050 (fax)  
mary@turi.org*