

# Greenlist Bulletin

From the Toxics Use Reduction Institute  
at the University of Massachusetts Lowell

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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.



**ChemSec launch: The easy and free way for companies to get rid of toxic chemicals in clothes and textiles**

[Source: IPEN, June 17, 2015](#)

Up until now brand owners and other companies in the textile sector had to invest a lot of money in chemical expertise in order to produce toxic free products, an investment that can be hard to motivate, especially for SMEs and start-ups. Now non-profit ChemSec has created the Textile Guide -- an online chemical management tool completely free of charge, tailored exclusively for the textile sector. ...

In short, the Textile Guide is an easy one-two-three step guide to show companies how they can identify problematic chemicals in their production and finished garments, and how to get rid of them. No registration is needed, there are no hidden fees and all Textile Guide users will remain anonymous if they wish.

At the core of the Guide is a searchable database, a "Google for chemicals", containing information on more than 6,500 chemicals. One simple search of the chemical of interest will tell you if it is toxic. All chemical information is scientifically well founded and based on regional legislation (US & EU) as well as several Restricted Substances Lists (RSLs) of multinational brands and textile trade organizations.

[Read more...](#)

Access the [Textile Guide](#).

Also see report from Greenpeace, "[Hazardous chemicals in branded luxury textile products on sale during 2013](#)".

[Source: Green Chemistry & Commerce Council, March 2015](#)

Authors: T. Fennelly & Associates, Inc.

There continues to be a growing interest and awareness in green chemistry. There are successful cases of adoption of safer alternatives, and scaling of supply, in response to demands from regulators and customers. However, overall progress is slow, measured in decades.

Despite efforts from many stakeholders to accelerate green chemistry use, ..., adoption rates remain low.

These multiple stakeholder efforts to drive the growth of green chemistry have been slow. So, when there are green chemistry alternatives available

- Why aren't more green chemicals in use?
- What are the barriers?
- What is the means to accelerate adoption?

In the course of undertaking this project and answering these questions, T. Fennelly & Associates, Inc. (TFA) spoke with roughly fifty industry representatives and has considered the entire supply chain from chemicals to processors to fabricators and through to industrial and consumer finished products. TFA identified major drivers and deterrents to growth. The complexity of supply chains is enormous, consisting of thousands of chemicals formulated into literally millions of products. This complexity inherently creates barriers.

Access report [here](#).

## Design for Environment Label Now "Safer Choice"

[Source: Environmental Building News, June 1, 2015](#)

Author: Alana Fichman

Green cleaning products with ingredients approved by the Design for the Environment (DfE) program will now bear a new label that reads "Safer Choice" rather than "Design for the Environment, U.S. EPA." The move is designed to make the products as well as the program's purpose easier for purchasers to identify.

Several standards have shifted as well -- including the addition of a "Fragrance-Free" label -- based on public comments solicited by the U.S. Environmental Protection Agency (EPA) about its assessment and labeling program. Fragrance chemicals are typically closely guarded trade secrets, and some fragrances have been found to be respiratory sensitizers. Products must be eligible for the Safer Choice label in order to participate and must contain no chemicals intended to scent the product or mask chemical scents in the product.

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See the U.S. Environmental Protection Agency (USEPA) web page for "[Safer Choice](#)".

Also see from the USEPA, "[Safer Choice Partner of the Year Awards](#)".

## Canadian retailer removes phthalates, triclosan and microbeads

[Source: ChemicalWatch, June 24, 2015](#)

Major Canadian grocery chain, Loblaw Companies, will stop using microbeads, triclosan and phthalates in its household, beauty and cosmetic products that come under the company's Life Brand and President's Choice labels by 2018.

"Emerging science and public opinion suggest a measured move away from some specific ingredients is prudent," said Galen G. Weston, Loblaw executive chairman and president. ...

"Microbeads create a lifecycle issue for our organisation," says Mr. Weston. "We sell skin care with microbeads. We sell fish. And, in an odd twist, our beauty products may ultimately impact our commitment to sustainable seafood."

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## Alternative solvents can make preparative liquid chromatography greener

Source: [Green Chemistry, June 2, 2015](#)

Authors: Yao Shen, Bo Chen and Teris A. van Beek

To make preparative Reversed-Phase High Performance Liquid Chromatography (RP-pHPLC) greener, alternative solvents were considered among others in terms of toxicity, cost, safety, workability, chromatographic selectivity and elution strength. The less toxic solvents ethanol, acetone and ethyl acetate were proposed as possible greener replacements for methanol, acetonitrile and tetrahydrofuran (THF). For testing their feasibility, five ginkgo terpene trilactones were used as model analytes. The best "traditional" eluent, i.e., methanol-THF-water (2:1:7) was used as the benchmark. A generic two-step chromatographic optimization procedure by UHPLC consisting of (1) a simplex design using the Snyder solvent triangle and (2) HPLC modelling software was used. In the first step, two ternary mixtures were found (acetone-ethyl acetate-water (20.25:3.75:76) and ethanol-ethyl acetate-water (9.5:7.5:83)), which already gave better results than the benchmark. The second step in which the influence of the gradient time, temperature and ratio of the two best ternary isocratic solvents was studied, led to an optimal 10.5 min gradient and a minimum resolution of 5.76. In the final step, scale-up from 2.1 to 22 mm i.d. pHPLC columns proceeded successfully. When 0.5 g of the sample was injected, baseline separation was maintained. Chromatographic and absolute purities for products exceeded 99.5% and 95% respectively. This example shows that using less toxic and cheaper solvents for pHPLC can go hand in hand with higher productivity and less waste.

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## Chemicals without Harm

Source: [The MIT Press, June 2015](#)

Author: Ken Geiser

Today, there are thousands of synthetic chemicals used to make our clothing, cosmetics, household products, electronic devices, even our children's toys. Many of these chemicals help us live longer and more comfortable lives, but some of these highly useful chemicals are also persistent, toxic, and dangerous to our health and the environment. For fifty years, the conventional approach to hazardous chemicals has focused on regulation, barriers, and protection. In *Chemicals without Harm*, Ken Geiser proposes a different strategy, based on developing and adopting safer alternatives to hazardous chemicals rather than focusing exclusively on controlling them.

Geiser reviews past government policies focused on controlling chemicals, describes government initiatives outside the United States that have begun to implement a more sustainable chemical policy, and offers an overview of the chemicals industry and market. He develops a safer chemicals policy framework that includes processes for characterizing, classifying, and prioritizing chemicals; generating and using new chemical information; and promoting transitions to safer chemicals.

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*TURI's Note:* The TURI Library has obtained a copy of this new book and also has one of Dr. Geiser's other books, *Materials Matter: Toward a Sustainable Materials Policy*.

## Lego to Spend \$105.5M on Sustainable Materials R&D

Source: [Environmental Leader, June 17, 2015](#)

The Lego Group says it will invest 1 billion Danish Krone (\$150.5 million) to research, develop and implement new, sustainable, raw materials to manufacture Lego toys and packaging materials.

The investment will be used to build the Lego Sustainable Materials Centre at the group's headquarters in Billund, Denmark, and will include all current functions and employees working to find alternative materials.

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Also see, "[Lego to spend \\$185.4M finding alternative to wasteful plastic for its bricks](#)".

## Screening Chemicals for Estrogen Receptor Bioactivity Using a Computational Model

Source: [Environmental Science & Technology, June 12, 2015](#)

The U.S. Environmental Protection Agency (EPA) is considering high-throughput and computational methods to evaluate the endocrine bioactivity of environmental chemicals. Here we describe a multistep, performance-based validation of new methods and demonstrate that these new tools are sufficiently robust to be used in the Endocrine Disruptor Screening Program (EDSP). Results from 18 estrogen receptor (ER) ToxCast high-throughput screening assays were integrated into a computational model that can discriminate bioactivity from assay-specific interference and cytotoxicity. Model scores range from 0 (no activity) to 1 (bioactivity of 17 $\beta$ -estradiol). ToxCast ER model performance was evaluated for reference chemicals, as well as results of EDSP Tier 1 screening assays in current practice. The ToxCast ER model accuracy was 86% to 93% when compared to reference chemicals and predicted results of EDSP Tier 1 guideline and other uterotrophic studies with 84% to 100% accuracy. The performance of high-throughput assays and ToxCast ER model predictions demonstrates that these methods correctly identify active and inactive reference chemicals, provide a measure of relative ER bioactivity, and rapidly identify chemicals with potential endocrine bioactivities for additional screening and testing. EPA is accepting ToxCast ER model data for 1,812 chemicals as alternatives for EDSP Tier 1 ER binding, ER transactivation, and uterotrophic assays.

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### Mount Sinai Names Environmental Health Laboratory to Honor the Late Senator Frank R. Lautenberg

[Source: Newswise, June 24, 2015](#)

*Newswise* - (NEW YORK CITY - June 24, 2015) Leaders from the Mount Sinai Health System formally dedicated the Senator Frank R. Lautenberg Environmental Health Sciences Laboratory, named in recognition of the late Senator's tireless efforts to address children's environmental health concerns during almost 30 years in Congress. Located on the campus of The Mount Sinai Hospital, the Lautenberg Laboratory brings together a team of physicians and researchers to analyze threats to pediatric health from air pollution and household chemicals, as well as social stressors and nutrition. ...

There are more than 80,000 chemicals registered for industrial use in the United States, found in household cleaning products, pesticides, artificial turf fields and other items. At the Senator Frank R. Lautenberg Environmental Health Sciences Laboratory, Mount Sinai researchers endeavor to better understand the health impact of these chemicals using the latest technologies. The work done at the Lautenberg Laboratory will include:

- \* Developing groundbreaking analytical methods to assess chemical exposures and the timing of past chemical exposures
- \* Expanding the scope of research to include areas such as air pollution, metals, organics, chemical mixtures, epigenetics, and the fetal origins of adult diseases
- \* Bringing together scientists with different backgrounds and approaches to environmental health and complex diseases

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### Sustainability in the Coatings Industry

[Source: Paint & Coatings Industry, April 1, 2015](#)


Author: Tony Mash

The coatings industry worldwide has been addressing the three pillars of sustainability for some years, and considerable progress has been made. Some of this improvement has been driven by legislation and some designed to address specific customer needs. There have also been examples of voluntary initiatives by companies with a strong environmental ethos.

Over the last two years, companies supplying the industry and coatings companies themselves have been recognized by independent third parties. AkzoNobel has been ranked as the leader in the Dow Jones Sustainability Index for the Superchemical sector in 2012, 2013 and 2014. Dow Chemical has received the U.S. Presidential Green Chemistry Challenge award for the development of precomposition polymer technologies that can partially replace TiO<sub>2</sub>, and Becker Industries

received the Sustainable Innovation Award from the British Coatings Federation for its work on high solar reflectivity and emissivity coatings for use in the construction industry.

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Greenlist Bulletin is compiled by:

Mary Butow  
Research and Reference Specialist  
Toxics Use Reduction Institute  
University of Massachusetts Lowell  
600 Suffolk St., Woburn Millis  
Lowell MA 01854-2866  
978-934-4365  
978-934-3050 (fax)  
[mary@turi.org](mailto:mary@turi.org)