

This is the 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 if you would like more information on any of the articles listed here, or if this email is not displaying properly.

EPA Announces Action on Methylene Chloride

[Source: U.S. Environmental Protection Agency, May 10, 2018](#)

WASHINGTON -- Today, the U.S. Environmental Protection Agency (EPA) announced upcoming actions on methylene chloride, a chemical that can be used for paint stripping. The *Lautenberg Chemical Safety for the 21st Century Act*, which amended the Toxic Substances Control Act (TSCA), requires EPA to perform risk evaluations on the uses of ten specific chemicals including methylene chloride. EPA is nearing the completion of Problem Formulations for the first ten chemicals.

A timeline of EPA's recent work on methylene chloride:

- In 2014, EPA addressed the paint stripping uses in its risk assessment.
- In January 2017, EPA proposed prohibiting the consumer and commercial paint stripping uses for methylene chloride.
- In June 2017, EPA announced that it will **not** re-evaluate the paint stripping uses of methylene chloride.

Based on this work, EPA is announcing three updates:

- EPA intends to finalize the methylene chloride rulemaking;
- EPA is not re-evaluating the paint stripping uses of methylene chloride and is relying on its previous risk assessments; and
- EPA is working to send the finalized

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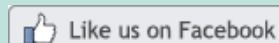
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Upcoming webinar: Safer Solutions for Methylene Chloride

**Tuesday, June 5, 2018
12:00pm-1:00pm**

TURI has been working with the U.S. EPA, the University of Massachusetts Lowell, paint stripper product manufacturers, and furniture refinishers to identify and evaluate solvent blends with equal or better paint stripping performance, comparable ingredient costs, and a safer environmental, health, and safety profile as compared to methylene chloride. This webinar will describe why

rulemaking to OMB shortly.

[Read more...](#)

Also see article in *The Washington Post*, "[EPA signals it will ban toxic chemical found in paint strippers](#)".

See article from Environmental Defense Fund, "[Critical "blanks" in EPA's methylene chloride announcement need to be filled in if it is to be health-protective](#)".

methylene chloride is a higher hazard substance as designated by TURA and findings from the research into safer formulations.

Register [here](#).

Weedkiller products more toxic than their active ingredient, tests show

[Source: *The Guardian*, May 8, 2018](#)

Author: Cary Gillam

US government researchers have uncovered evidence that some popular weedkilling products, like Monsanto's widely-used Roundup, are potentially more toxic to human cells than their active ingredient is by itself.

These "formulated" weedkillers are commonly used in agriculture, leaving residues in food and water, as well as public spaces such as golf courses, parks and children's playgrounds.

The tests are part of the US National Toxicology Program's (NTP) first-ever examination of herbicide formulations made with the active ingredient glyphosate, but that also include other chemicals. While regulators have previously required extensive testing of glyphosate in isolation, government scientists have not fully examined the toxicity of the more complex products sold to consumers, farmers and others.

[Read more...](#)

See testing results from NTP on [Glyphosate & Glyphosate Formulations](#).

See from *Environmental Leader*, "[Hawaii Bans Toxic Pesticide Chlorpyrifos in US First](#)".

US NTP requests data on identifying developmental toxicants

[Source: *Chemical Watch*, May 10, 2018](#)

Author: Julie Miller

The US National Toxicology Program (NTP) Interagency Center for the Evaluation of Alternative Toxicological Methods is requesting data on approaches for identifying potential developmental toxicants.

Niceatm provides scientific and operational support to the Interagency Coordinating Committee on the Validation of Alternative Methods (Iccvam), which is charged with implementing a strategy for new, non-animal approaches to evaluating the safety of chemicals and medical products.

The project is required under the 2016 amendments to TSCA, which set a goal to reduce and eventually replace vertebrate animal testing under the programme.

[Read more...](#)

See [Federal Register notice](#).

Also see from *Chemical Watch*, "[US body seeks nominees for flame retardant hazard assessment](#)".

What will happen to solar panels after their useful lives are over?

Source: *GreenBiz.com*, May 11, 2018

Author: Nate Berg

Solar power is having its hockey stick moment. Since the early 2000s, the amount of solar panels being installed worldwide has been growing exponentially, and it's expected to continue to do so for decades. By the end of 2015, an estimated 222 gigawatts worth of solar energy had been installed worldwide. According to a recent report from the International Renewable Energy Agency, that number could reach 4,500 GW by 2050.

But the solar panels generating that power don't last forever. The industry standard life span is about 25 to 30 years, and that means that some panels installed at the early end of the current boom aren't long from being retired. And each passing year, more will be pulled from service -- glass and metal photovoltaic modules that soon will start adding up to millions, and then tens of millions of metric tons of material. ...

Part of the problem is that solar panels are complicated to recycle. They're made of many materials, some hazardous, and assembled with adhesives and sealants that make breaking them apart challenging.

"The longevity of these panels, the way they're put together and how they make them make it inherently difficult to, to use a term, de-manufacture," said Mark Robards, director of special projects for ECS Refining, one of the largest electronics recyclers in the U.S. The panels are torn apart mechanically and broken down with acids to separate out the crystalline silicon, the semiconducting material used by most photovoltaic manufacturers. Heat systems are used to burn up the adhesives that bind them to their armatures, and acidic hydro-metallurgical systems are used to separate precious metals.

[Read more...](#)

See report from the International Renewable Energy Agency, "[End-Of-Life Management: Solar Photovoltaic Panels](#)".

Also see from the *Journal of Cleaner Production*, "[Cradle-to-cradle approach in the life cycle of silicon solar photovoltaic panels](#)".

High-Throughput Screening and Quantitative Chemical Ranking for Sodium-Iodide Symporter Inhibitors in ToxCast Phase I Chemical Library

Source: *Environmental Science & Technology*, April 3, 2018

Authors: Jun Wang, Daniel R. Hallinger, Ashley S. Murr, Angela R. Buckalew, Steven O. Simmons, Susan C. Laws, and Tammy E. Stoker

Thyroid uptake of iodide via the sodium-iodide symporter (NIS) is the first step in the biosynthesis of thyroid hormones that are critical for health and development in humans and wildlife. Despite having long been a known target of endocrine disrupting chemicals such as perchlorate, information regarding NIS inhibition activity is still unavailable for the vast majority of environmental chemicals. This study applied a previously validated high-throughput approach to screen for NIS inhibitors in the ToxCast phase I library, representing 293 important environmental chemicals. Here 310 blinded samples were screened in a tiered-approach using an initial single-concentration (100 μM) radioactive-iodide uptake (RAIU) assay, followed by 169 samples further evaluated in multi-concentration (0.001 μM - 100 μM) testing in

parallel RAIU and cell viability assays. A novel chemical ranking system that incorporates multi-concentration RAIU and cytotoxicity responses was also developed as a standardized method for chemical prioritization in current and future screenings. Representative chemical responses and thyroid effects of high-ranking chemicals are further discussed. This study significantly expands current knowledge of NIS inhibition potential in environmental chemicals and provides critical support to U.S. EPA's Endocrine Disruptor Screening Program (EDSP) initiative to expand coverage of thyroid molecular targets, as well as the development of thyroid adverse outcome pathways (AOPs).

[Read more...](#)

Also see from *ES&T*, "[Deciphering the Combined Effects of Environmental Stressors on Gene Transcription: A Conceptual Approach](#)".

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