

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.

Happy Holidays!

Dear Greenlist Subscribers,

We hope you have enjoyed reading Greenlist this year. Hard to believe the year is almost over.

Looking forward to bringing you the latest in chemical hazard, alternatives and regulatory news in 2018. Please let us know if there are topics you would like to see featured as special issues in the new year.

Wishing you a safe and healthy holiday season!

All the best,
Mary

Looking back -- and ahead -- on toxics

Source: [*Environmental Health News*, December 18, 2017](#)

Author: Brian Bienkowski

Perfluorinated chemicals are kind of the #MeToo of the chemical exposure world. Awareness is rising across the U.S. and the world but the problem isn't going away. The chemicals -- linked to hormone disruption, cancers and development problems -- are often used as stain or water repellants or in firefighting foam.

"Some of these compounds have been around for a very long time, and we've been concerned about a couple of them, but not all are even identified," said Linda Birnbaum, director of the National

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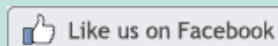
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Institute for Environmental Health Sciences.

"There may be more than 3,000," she added. "And many that we know almost nothing about."

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E.P.A. Delays Bans on Uses of Hazardous Chemicals

[Source: *The New York Times*, December 19, 2017](#)

[Author: Sheila Kaplan](#)

The Environmental Protection Agency will indefinitely postpone bans on certain uses of three toxic chemicals found in consumer products, according to an update of the Trump administration's regulatory plans.

Critics said the reversal demonstrated the agency's increasing reluctance to use enforcement powers granted to it last year by Congress under the Toxic Substances Control Act.

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Challenges in Environmental Health: Closing the Gap between Evidence and Regulations

[Source: *PLOS Biology*, December 18, 2017](#)

Over 80,000 chemicals are used in commerce in the United States, and many are produced in quantities of over 1 million pounds per year. Numerous chemicals are detected in the blood and urine of nearly every person in the U.S., as well as in people in other countries, where monitoring occurs. Over the past three decades, evidence has emerged that chemicals can produce adverse effects at low levels of exposure previously considered harmless. This Collection highlights gaps between evidence of potential harm for a range of environmental exposures and existing policies and regulations to protect public health.

[Read more...](#)

See the [Collection of articles here](#), e.g. "[Regulating toxic chemicals for public and environmental health](#)".

Norway: test finds hazardous chemicals in 40% of sports products

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

Testing by the Norwegian Environment Directorate (ED) on 44 sports and leisure products on the market has found that 40% contain environmental pollutants, and in a fifth these were above the permitted limit value.

The department says these products must be withdrawn from the market.

Items tested included sports gloves, bath sandals, yoga mats, mobile covers and wallets. The testing found DEHP and short-chain chlorinated paraffins (SCCP) -- the latter has been banned in Norway since 2002.

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Combined effects of increased temperature and endocrine disrupting pollutants on sex determination, survival, and development across generations

Source: [Scientific Reports, August 24, 2017](#)

Authors: Bethany M. DeCourten and Susanne M. Brander

Understanding the combined effects of anthropogenic impacts such as climate change and pollution on aquatic ecosystems is critical. However, little is known about how predicted temperature increases may affect the activity of endocrine disrupting compounds (EDCs), particularly in species with plasticity in sex determination. We investigated the effects of a concomitant increase in temperature and exposure to estrogenic EDCs on reproduction and development in an estuarine model organism (*Menidia beryllina*) across multiple generations. Parents (P) were exposed to environmental levels of the estrogenic insecticide bifenthrin or ethinylestradiol (EE2) at 22 deg C and 28 deg C for 14 days prior to the initiation of spawning trials. Embryos in the F1 generation were exposed to EDCs until 21 days post hatch (dph), reared to adulthood in clean water at elevated temperatures, and spawned. F1 sex ratios were significantly influenced by elevated temperature and EDCs, potentially altering adaptive development. We also observed fewer viable offspring and increased developmental deformities in the F1 and F2 generations, with a greater impact on F2 juveniles. These findings enhance our understanding of responses to EDCs in the context of climate change and may demonstrate heritable effects. Our study represents the first multigenerational assessment of elevated temperatures in combination with environmentally relevant concentrations of commonly detected endocrine disruptors in a model vertebrate species.

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Air Pollution Exposure Inequality Persists in Massachusetts

Source: [Boston University School of Public Health, November 9, 2017](#)

Author: Michelle Samuels

Despite overall reductions in ambient air pollution in Massachusetts, exposure continues to fall unequally along racial/ethnic, income, and education lines, according to a new study led by a School of Public Health researcher.

The study, published in *Environmental Research*, found concentrations of nitrogen dioxide (NO₂) and fine particulate matter (PM_{2.5}) decreased across the state between 2003 and 2010, but exposure remained higher in predominantly Hispanic and non-Hispanic black communities. Within the state's cities, the researchers found exposure inequality actually increased slightly between racial/ethnic groups during the study period.

[Read more...](#)

See original article in *Environmental Research*, "[Temporal trends in air pollution exposure inequality in Massachusetts](#)".

Alternatives to Cadmium in Aerospace

Source: [PCI Magazine, November 9, 2017](#)

Author: Derek Vanek

It is both an exciting and a difficult time for the aerospace industry. While the sector is at its most buoyant, with demand soaring in the commercial market, this is placing a strain on the manufacturing supply chain and putting the maintenance, repair and overhaul (MRO) market under pressure to keep aircraft in operation for as long as possible. In addition, original equipment manufacturers (OEMs) and MRO businesses are being forced to consider potential ever-evolving legislation, particularly regarding the use of various chemicals used in the plating process, most notably the use of cadmium. This toxic metal has long been the topic of debate in the industry, with companies facing the threat of a European ban on cadmium being extended to the global aerospace industry if studies into possible alternatives prove fruitful.

[Read more...](#)

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