Greenlist BULLETIN

TURI TOXICS USE REDUCTION INSTITUTE UMASS LOWELL

Toxics Use Reduction Institute | September 21, 2018

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.

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Chemicals linked to endocrine disorder in older pet cats

Source: *Phys.org*, September 19, 2018

New research suggests that there may be a link between higher levels of per- and polyfluoroalkyl substances (PFAS) in the environment and higher levels of hyperthyroidism in pet cats as they age. The findings are published in *Environmental Toxicology and Chemistry*.

PFAS are a family of more than 3,000 structures of highly fluorinated chemicals used in industrial processes and consumer products, such as protective coatings for carpets, furniture and apparel, paper coatings, insecticide formulations, and other items.

The study involved analyses of blood samples from older cats in Northern California. Investigators examined the animals' exposures to PFAS and compared PFAS levels between cats with and without hyperthyroidism, a very common endocrine disorder in senior cats.

Read more...

See article in *Environmental Toxicology and Chemistry*, "Per- and polyfluoroalkyl substances in Northern California cats: Temporal comparison and a possible link to cat hyperthyroidism".

ECHA identifies risks to terrestrial environment from lead ammunition

Source: European Chemicals Agency, September 12, 2018

The European Chemicals Agency (ECHA) recommends that measures are needed to regulate the use of lead ammunition in terrestrial environments in addition to those proposed for wetlands. ...

ECHA's new report on non-wetland uses of lead in ammunition (gunshot and bullets) and in fishing weights has found sufficient evidence of risk to justify additional measures. The report concludes that measures are needed because they would:

- limit additional pollution with lead and improve the quality of the environment. While about 5,000 tonnes of lead are currently dispersed into wetlands due to hunting, other shooting activities such as lead gunshot used in non-wetland areas spreads a further 14,000 tonnes of lead into the environment, and the use of lead bullets and fishing weights adds to this quantity. In addition, between 10,000 to 20,000 tonnes of lead are used in sports shooting activities;
- reduce the mortality of an estimated 1 to 2 million birds, such as pheasants and partridges, that may inadvertently swallow the lead shot, or scavenge or prey on lead poisoned birds in the terrestrial environment; and
- reduce health risks to a significant population of hunters and their families who frequently eat game meat killed with lead shot or bullets.

Read more...

See from the American Industrial Hygiene Association (AIHA), "NIOSH Evaluates Lead Exposures at Bullet Manufacturer".

Also see from the Centers for Disease Control and Prevention, "Evaluation of Lead Exposures at a Bullet Manufacturer".

Rite Aid Expanding List of Restricted Chemicals to Address Consumer Concern

Source: *EHS Today*, September 14, 2018

As part of Rite Aid's ongoing efforts to meet customer expectations for chemical management and product safety, the company announced on Sept. 13 that it has established its Chemical Policy and expanded [its] Restricted Substances List.

"As a company, we remain committed to working closely with our supplier partners to provide our customers with the effective products they need while avoiding the use of chemicals of concern," said William Renz, Rite Aid senior vice president of category management.

Rite Aid has been working closely with supplier partners to eliminate eight high-priority chemicals from formulated private brand items since 2016. These chemicals include triclosan, formaldehyde, toluene, butylparaben, propylparaben, dibutyl phthalate, diethyl phthalate and nonylphenol ethoxylates.

Read more...

NIOSH Develops Draft REL for Silver Nanomaterials

Source: American Industrial Hygiene Association, September 19, 2018

NIOSH has revised its draft Current Intelligence Bulletin on the health effects of occupational exposure to silver nanomaterials, which are used in the manufacture of electronics and textiles and have been used as pigments, catalysts, and antimicrobials. The revised draft document updates the previous version that was published in 2016. The revision contains an updated scientific literature review of information related to occupational exposure to silver nanomaterials and proposes a new draft recommended exposure limit that would apply to processes that produce

or use silver nanomaterials. NIOSH now recommends that worker exposures to silver nanomaterials not exceed 0.9 µg/m^3 measured as an airborne respirable 8-hour time-weighted average concentration. The agency continues to recommend its existing REL for total silver of 10 µg/m^3 as an 8-hour time-weighted average concentration (total mass sample) of silver metal dust, fumes, and soluble compounds. NIOSH's existing REL is the same as OSHA's permissible exposure limit for silver.

Read more...

Also see from Regulations.gov, "Revised External Review Draft - Current Intelligence Bulletin: Health Effects of Occupational Exposure to Silver Nanomaterials".

Green Space Near Home During Childhood is Linked to Fewer Lung Problems in Adulthood

Source: European Lung Foundation, September 18, 2018

Paris, France: Children who have access to green spaces close to their homes have fewer respiratory problems, such as asthma and wheezing, in adulthood, according to new research presented today (Wednesday) at the European Respiratory Society International Congress. In contrast, children who are exposed to air pollution are more likely to experience respiratory problems as young adults.

Until now, little has been known about the association between exposure to air pollution as a child and long-term respiratory problems in adulthood. RHINESSA is a large international study that has been investigating lung health in children and adults in seven European countries, and that has information on residential "greenness" and air pollution exposures from birth onwards from several study centres. In a new analysis, Dr Ingrid Nordeide Kuiper (MD), from the Department of Occupational Medicine at Haukeland University Hospital, Norway, and colleagues analysed greenness data from 5,415 participants aged between 18 and 52 years, contributed by RHINESSA centres in Tartu (Estonia), Reykjavik (Iceland), Uppsala, Gothenburg, Umea (Sweden) and Bergen (Norway); they also analysed air pollution data from 4,414 participants, contributed from centres in Uppsala, Gothenburg, Umea and Bergen.

Read more...

We are bombarded by thousands of diverse species and chemicals, study finds

Source: *Phys.org*, September 20, 2018

We are all exposed to a vast and dynamic cloud of microbes, chemicals and particulates that, if visible, might make us look something like Pig-Pen from Peanuts.

Using a re-engineered air-monitoring device, scientists from the Stanford University School of Medicine have peered into that plume and discovered a smorgasbord of biological and chemical minutia that swirl in, on and around us. Their findings show, in unprecedented detail, the variety of bacteria, viruses, chemicals, plant particulates, fungi, and even tiny microscopic animals that enter our personal space -- a bombardment known as the human "exposome."

"Human health is influenced by two things: your DNA and the environment," said Michael Snyder, Ph.D., professor and chair of genetics at Stanford. "People have measured things like air pollution on a broad scale, but no one has really measured biological and chemical exposures at a personal level. No one really knows how vast the human exposome is or what kinds of things are in there."

Read more...

The bio-based material that's stronger than spider silk

Source: *Greenbiz.com*, September 19, 2018

Author: Heather Clancy

Companies seeking viable, scalable alternatives to the composites or metals used as the backbone of automotive and aviation parts should keep their eyes on a biomaterials project being spearheaded by Sweden's oldest technical university, KTH Royal Institute of Technology.

Early this year, researchers there revealed that they had engineered a cellulose nanofiber -- aka the building block of trees and plants -- described as eight times stiffer and 20 percent stronger than spider silk, commonly considered the world's strongest biologically derived substance. For those who like data: It has a tensile strength of 1.57 gigapascals; spider silk ranges from 0.6 to 1.3 GPa.

The lightweight material could have applications in a variety of sectors from automotive to aviation parts to furniture to medical devices such as artificial joints (although the latter uses will take longer to emerge), according to Daniel Soderberg, one of the KTH researchers. It could be used to replace some metal, alloys or ceramics, helping manufacturing address and reduce the carbon emissions typically associated with the production of those materials.

Read more...

Greenlist Bulletin is compiled by:
Mary Butow
Research and Reference Specialist
Toxics Use Reduction Institute
University of Massachusetts Lowell
126 John Street, Suite 14, Second Floor
Lowell, MA 01852
978-934-4365
978-934-3050 (fax)
mary@turi.org