Greenlist Bulletin

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

February 1, 2013

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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.

Minnesota Puts Spotlight on Green Chemistry and Design

Source: The GLRPPR Blog, January 23, 2013
Author: Phyllis Strong

Over the past four years, the Minnesota Pollution Control Agency has worked on specific projects to promote green chemistry and design practices. These projects build on green design work [they] had done in the past. Green chemistry and design involves formulating or designing new products (or reformulating or redesigning existing ones) to reduce environmental, workplace, human health, and energy use impacts over the product's entire life-cycle. [Their] goal is to promote its practice in the state and beyond.

[They] recently completed the following projects:
Demonstration projects. . . .
Curriculum projects. . . .
Composites project. . . .
BPA in Thermal Paper project. . . .
Formaldehyde in Building Products project. . . .
NP and NPE in Detergents project. . . .

Read more...

The humble 'virtual chimney' fences that could reduce the impact of airport pollution

Source: Engineering and Physical Sciences Research Council, January 31, 2013

Simple 'blast' fences called baffles could deliver improvements in air quality for people living near airports, new research has found.

Placed behind a runway, the baffles could serve as a 'virtual chimney,' funnelling emissions from aircraft engines upwards where they can disperse more effectively, thereby reducing the environmental impact on people living nearby.

Read more...

Maglev tissues could speed toxicity tests

Source: Rice University, January 24, 2013

HOUSTON -- In a development that could lead to faster and more effective toxicity tests for airborne chemicals, scientists from Rice University and the Rice spinoff company Nano3D Biosciences have used magnetic levitation to grow some of the most realistic lung tissue ever produced in a laboratory.

The research is part of an international trend in biomedical engineering to create laboratory techniques for growing tissues that are virtually identical to those found in people's bodies. In the new study, researchers combined four types of cells to replicate tissue from the wall of the bronchiole deep inside the lung.

Read more...

See associated article in *Tissue Engineering Part C: Methods*, "Assembly of a three-dimensional multitype bronchiole co-culture model using magnetic levitation."

To Tackle Runoff, Cities Turn to Green Initiatives

Source: *Yale Environment 360*, January 24, 2013
Author: Dave Levitan

Urban stormwater runoff is a serious problem, overloading sewage treatment plants and polluting waterways. Now, various U.S. cities are creating innovative green infrastructure -- such as rain gardens and roadside plantings -- that mimics the way nature collects and cleanses water.

Read more...

Heavy Metals in Toys and Low-Cost Jewelry: Critical Review of U.S. and Canadian Legislations and Recommendations for Testing

Source: *Environmental Science and Technology*, March 23, 2012
Authors: Mert Guney and Gerald J. Zagury

High metal contamination in toys and low-cost jewelry is a widespread problem, and metals can become bioavailable, especially via oral pathway due to common child-specific behaviors of mouthing and pica. In this review, the U.S., Canadian, and European Union (EU) legislations on metals in toys and jewelry are evaluated. A literature review on content, bioavailability, children's exposure, and testing of metals in toys and low-cost jewelry is provided. A list of priority metals is presented, and research needs and legislative recommendations are addressed. While the U.S. and Canadian legislations put emphasis on lead exposure prevention, other toxic elements like arsenic and cadmium in toy materials are not regulated except in paint and coatings. The EU legislation is more comprehensive in terms of contaminants and scientific approach. Current toy testing procedures do not fully consider metal bioavailability. *In vitro* bioaccessibility tests developed and validated for toys and corresponding metal bioaccessibility data in different toy matrices are lacking. The U.S. and Canadian legislations should put more emphasis on metal bioavailability and on other metals in addition to lead. A two-step management approach with mandatory testing of toys for total metal concentrations followed by voluntary bioaccessibility testing could be implemented.

Read more...

BPA ban approved for Maine food packages

Source: *Portland Press Herald*, January 24, 2013
Author: North Cairn

AUGUSTA -- The state's Board of Environmental Protection voted unanimously Thursday to approve a ban on bisphenol-A in packaging for baby food and infant formula.

The measure, which the board endorsed in a preliminary vote last week, now goes to the Legislature for final approval. . . .

Thursday's measure expands legislation from 2011 that banned the chemical from reusable food and beverage containers and lids.

Read more...

Bio-based chemicals: When green is toxic

Source: GreenBiz.com, February 1, 2013
Author: Mike Belliveau

Compostable cups. The PlantBottle. Polyethylene plastic from sugar cane. Bioplastics and other biobased chemicals -- made from plants rather than petroleum -- can slash a product's carbon footprint.

Brand owners are driving demand for bioproducts to help meet corporate sustainability goals. And biobased makes economic sense as a hedge against the high price of crude and volatile fossil fuel markets.

But is bio-based enough? Consumers want safer products too. Simply replacing the carbon from oil with carbon from plants won't necessarily make a product safer, if the chemical in question is hazardous to health. If toxic petrochemicals are made with renewable biomass, will customers revolt? Let's explore the challenge.

Read more...

Traces of melamine from dinnerware can seep into food, study says

Source: *Los Angeles Times*, January 21, 2013
Author: Joseph Serna

Serving hot food on melamine tableware could increase your exposure to melamine, a study released Monday in the journal *JAMA Internal Medicine* suggests.

Melamine, an industrial chemical used in everyday items such as cooking utensils, plates, paperboard and industrial coatings can apparently seep into food when it's heated, the study said.
. . .

It was unclear if the amount of melamine measured during the study was significant, researchers said, but they cautioned that long-term exposure to the chemical could pose health risks.

Read more...

Read study in the *JAMA Internal Medicine*: "A Crossover Study of Noodle Soup Consumption in Melamine Bowls and Total Melamine Excretion in Urine."

Also, an invited commentary on the study in the *JAMA Internal Medicine*: "New Studies About Everyday Types of Chemical Exposures: What Readers Should Consider -- Comment on 'A Crossover Study of Noodle Soup Consumption in Melamine Bowls and Total Melamine Excretion in Urine.'"

Please send a message to mary@turi.org if you would like more information on any of these resources. Also, please tell us what topics you are particularly interested in monitoring, and who else should see Greenlist. An online search of the TURI Library catalog can be done at http://library.turi.org for greater topic coverage.

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