

# Greenlist Bulletin

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at the University of Massachusetts Lowell

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## In This Issue

Chemical Exposures of Women  
Workers in the Plastics Industry with  
Particular Reference to Breast  
Cancer and Reproductive Hazards

A better way to make chemicals?

Researchers Craft Tool to Minimize  
Threat of Endocrine Disruptors in  
New Chemicals

Marine mercury fate: From sources  
to seafood consumers

Ames Laboratory scientists develop  
indium-free organic light-emitting  
diodes

Declining Air Pollution Levels  
Continue to Improve Life Expectancy  
in U.S.

Community-Based Nonprofits  
Receive EPA Grants to Help Reduce  
Environmental Risks in Manchester,  
N.H.; Lawrence, Springfield, and  
Worcester, Mass.


Third International E-Waste Design  
Competition

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[TURI Website](#)

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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](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.



## Chemical Exposures of Women Workers in the Plastics Industry with Particular Reference to Breast Cancer and Reproductive Hazards

[Source: New Solutions - A Journal of Environmental and Occupational Health Policy, 2012](#)

Authors: Robert DeMatteo, Margaret M. Keith, James T. Brophy, Anne Wordsworth, Andrew E. Watterson, Matthias Beck, Anne Rochon Ford, Michael Gilbertson, Jyoti Pharityal, Magali Rootham, Dayna Nadine Scott

Despite concern about the harmful effects of substances contained in various plastic consumer products, little attention has focused on the more heavily exposed women working in the plastics industry. Through a review of the toxicology, industrial hygiene, and epidemiology literatures in conjunction with qualitative research, this article explores occupational exposures in producing plastics and health risks to workers, particularly women, who make up a large part of the workforce. The review demonstrates that workers are exposed to chemicals that have been identified as mammary carcinogens and endocrine disrupting chemicals, and that the work environment is heavily contaminated with dust and fumes. Consequently, plastics workers have a body burden that far exceeds that found in the general public. The nature of these exposures in the plastics industry places women at disproportionate risk, underlining the importance of gender. Measures for eliminating these exposures and the need for regulatory action are discussed.

[Read more...](#)

Read a press release on this research from the Canadian Women's Health Network [here.](#)

**A better way to make chemicals?**

[Source: McGill University, December 3, 2012](#)

Bulk solvents, widely used in the chemical industry, pose a serious threat to human health and the environment. As a result, there is growing interest in avoiding their use by relying on "mechanochemistry" - an energy-efficient alternative that uses high-frequency milling to drive reactions. Because milling involves the intense impact of steel balls in rapidly moving jars, however, the underlying chemistry is difficult to observe.

Now, for the first time, scientists have studied a milling reaction in real time, using highly penetrating X-rays to observe the surprisingly rapid transformations as the mill mixed, ground, and transformed simple ingredients into a complex product. This research, reported Dec. 2 in *Nature Chemistry*, promises to advance scientists' understanding of processes central to the pharmaceutical, metallurgical, cement and mineral industries - and could open new opportunities in "green chemistry" and environmentally friendly chemical synthesis.

[Read more...](#)

Read original article in *Nature Chemistry*, "[Real-time and in situ monitoring of mechanochemical milling reactions.](#)"

### Researchers Craft Tool to Minimize Threat of Endocrine Disruptors in New Chemicals

[Source: North Carolina State University, December 6, 2012](#)

Researchers from North Carolina State University, the National Institute of Environmental Health Sciences and a host of other institutions have developed a safety testing system to help chemists design inherently safer chemicals and processes.

The innovative "TiPED" testing system (Tiered Protocol for Endocrine Disruption) stems from a cross-disciplinary collaboration among scientists, and can be applied at different phases of the chemical design process. The goal of the system is to help steer companies away from inadvertently creating harmful products, and thus avoid adding another BPA or DDT to the marketplace.

[Read more...](#)

Read original article from *Green Chemistry*, "[Designing endocrine disruption out of the next generation of chemicals.](#)"

### Marine mercury fate: From sources to seafood consumers

[Source: Environmental Research, November 2012](#)

Authors: Celia Y. Chen, Charles T. Driscoll, Kathleen F. Lambert, Robert P. Mason, Laurie R. Rardin, Nancy Serrell, Elsie M. Sunderland

Mercury in the biosphere has markedly increased over the past century leading governments around the world to consider policies that would reduce sources to limit human exposure to this global contaminant. The nine articles in this issue provide a synthesis of the science on the sources, fate, and human exposure to mercury (Hg) in marine systems. These papers along with two papers recently published in *Environmental Health Perspectives* are the products of two workshops convened by the Coastal and Marine Mercury Ecosystem Research Collaborative (C-MERC) sponsored by the Dartmouth Superfund Research Program. In September 2010 and July 2011 we brought together scientists and policy stakeholders to compile and distill information on the inputs, cycling and uptake of Hg in marine ecosystems and the links to fish, wildlife and human exposure to methylmercury (MeHg), the most bioaccumulative form of this global contaminant. The goal of this C-MERC effort was to provide a summary of the current science relevant to public policies being considered at the regional, national and global levels, such as the effort of the United Nations Environment Program to establish the first International Mercury Treaty.

[Read more...](#)

Read the companion report, "[Sources to Seafood: Mercury Pollution in the Marine Environment.](#)"

### Ames Laboratory scientists develop indium-free organic light-emitting diodes

[Source: The Ames Laboratory, November 29, 2012](#)

Scientists at the U.S. Department of Energy's (DOE) Ames Laboratory have discovered new ways of using a well-known polymer in organic light emitting diodes (OLEDs), which could eliminate the need for an increasingly problematic and breakable metal-oxide used in screen displays in computers, televisions, and cell phones.

The metal-oxide, indium tin oxide (ITO), is a transparent conductor used as the anode for flat screen displays, and has been the standard for decades. Due to indium's limited supply, increasing cost and the increasing demand for its use in screen and lighting technologies, the U.S. Department of Energy has designated indium as "near-critical" in its assessment of materials vital to clean energy technology. Scientists have been working to find an energy efficient, cost effective substitute.

[Read more...](#)

**Declining Air Pollution Levels Continue to Improve Life Expectancy in U.S.**

[Source: Harvard School of Public Health, December 3, 2012](#)

Boston, MA – A new study led by researchers at Harvard School of Public Health (HSPH) has found an association between reductions in fine particulate matter and improved life expectancy in 545 counties in the U.S. from 2000 to 2007. It is the largest study to date to find beneficial effects to public health of continuing to reduce air pollution levels in the U.S.

"Despite the fact that the U.S. population as a whole is exposed to much lower levels of air pollution than 30 years ago—because of great strides made to reduce people's exposure—it appears that further reductions in air pollution levels would continue to benefit public health," said lead author Andrew Correia, a PhD candidate in the Department of Biostatistics at HSPH.

[Read more...](#)

Please contact TURI for the original article from *Epidemiology*, "Effect of Air Pollution Control on Life Expectancy in the United States: An Analysis of 545 U.S. Counties for the Period from 2000-2007."

**Community-Based Nonprofits Receive EPA Grants to Help Reduce Environmental Risks in Manchester, N.H.; Lawrence, Springfield and Worcester, Mass.**

[Source: U.S. Environmental Protection Agency, December 6, 2012](#)

Boston, MA – Five New England nonprofit groups have been selected to receive an EPA Environmental Justice (EJ) Small Grant award. All five award recipients will carry out a project that forms collaborative partnerships, educates the community, develops a comprehensive understanding of the local environmental and/or public health issues and identifies ways to address these issues at the local level. Each grant is worth up to \$25,000. . . .

**Groundwork Lawrence**

**Project: Safe Soil: Gardening in Lawrence, Mass.**

Groundwork Lawrence seeks to educate low-income Lawrence residents about the dangers of gardening in contaminated soil as well as steps to take to reduce their exposure to toxic chemicals. The project will educate low-income Lawrence residents about the dangers of gardening in contaminated soil, steps they can take to reduce their exposure, composting and practices they can follow to grow produce organically. The grant recipient will work with their partner organizations to amend the contaminated soil in one of the vacant lots currently being used for gardening by those living nearby who grow food in an effort to feed their families. . . .

Other award recipients include:

- **The Way Home, Inc.** -- Project: Integrating Tenant Services in Pest Management in Manchester, N.H.
- **JSI Research and Training Institute** -- Project: Latino Youth Lead Environmental Awareness and Action in Lawrence, Mass.

- **Partners for a Healthier Community** -- Project: Community Air Mobilization Project in Springfield, Mass.
- **Regional Environmental Council** -- Project: Weather Worcester: Community Mobilization for Weatherization and Energy Efficiency in Worcester, Mass.

[Read more...](#)

*TURI's Note:* Read more about the project Groundwork Lawrence was able to complete with community grant funding from TURI: "[Healthy Living: Reducing the Use of Toxics.](#)"


### Third International E-Waste Design Competition

[Source: University of Illinois, December 2012](#)

Electronic waste, or "e-waste," generated by computers, TVs, cameras, printers, and cell phones, is a growing global issue. Through the *Third International E-Waste Design Competition*, participants are asked to explore solutions to both remediate the existing e-waste problem and prevent e-waste generation in the future.

[Read more...](#)

Read the 2012 Winner's Press Release [here](#).



Please send a message to [mary@turi.org](mailto: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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