

Greenlist Bulletin

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

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Neighbors Helped This Immigrant-Owned Dry Cleaner in Boston Go Nontoxic -- and Stay in Business

[Source: Yes!, December 19, 2014](#)

Authors: Chuck Collins and Polly Hoppin

In 1996, Guatemalan immigrant Myra Vargas and her Venezuelan husband Ernesto bought J&P Cleaners, a neighborhood dry cleaner in Boston. But something always smelled funny.

"The chemicals we used -- we knew they were not healthy," Myra said. She stayed away from the shop when she was pregnant with her second child. ...

California is phasing out the use of PERC in dry cleaning, requiring all businesses to discontinue its use by 2023. But regulations in most states, including Massachusetts, focus on limiting air emissions and promoting safer ways to dispose of chemicals, while continuing to allow the chemical's use.

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Sacramento Judge Rejects ACC's Bid to Overturn BPA Listing

[Source: Prop65News, December 23, 2014](#)

A Sacramento Superior Court Judge has rejected a lawsuit brought by a chemical trade association to reverse the listing of Bisphenol A (BPA) as a Proposition 65 reproductive toxicant.

Sacramento Superior Court Judge Timothy M. Frawley ruled that California's Office of Environmental Health Hazard Assessment (OEHHA) did not abuse its discretion when it listed BPA in 2013. The Court dismissed arguments made by the American Chemistry Council (ACC) that the agency's listing of BPA under Proposition 65's authoritative bodies' listing mechanism was an abuse of the agency's discretion.

OEHHA listed BPA in April 2013 based on its identification as a

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[Styrene Reasonably Anticipated to Be a Human Carcinogen, New Report Confirms](#)

reproductive toxicant by the National Toxicology Program in a 2008 monograph published by the agency. However, the state's Developmental and Reproductive Toxicant Identification Committee (DART-IC) unanimously declined to list BPA in July 2009 after reviewing relevant scientific literature including the NTP monograph.

In his statement of decision, Judge Frawley explained that the conclusions of the DART-IC had no bearing on OEHHA's listing decision because the National Toxicology Program's 2008 monograph identified BPA as a reproductive toxicant.

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See article from Center for Environmental Health, "[Court Upholds BPA Health Warning](#)".

Also see case studies from the Minnesota Pollution Control Agency's [BPA in Thermal Paper Project](#).

The Swedish Chemicals Agency response to EU proposal of criteria for endocrine disrupting chemicals

[Source: KEMI - Swedish Chemicals Agency, December 18, 2014](#)

The European Commission has launched a public consultation to gather views on their proposal of criteria to identify endocrine disrupting chemicals (EDCs). Here is the Swedish Chemicals Agency's response to the Commission's proposal.

The Swedish Chemicals Agency supports the alternative which uses the definition for EDCs defined by the World Health Organisation (WHO). The definition has been developed through the WHO's International Programme on Chemical Safety (IPCS).

[Read more...](#)

Also see additional information on [Endocrine Disruptors](#) from the European Commission.

Revlon Removes Some Dangerous Chemicals From Its Products

[Source: Time, December 18, 2014](#)

Author: Charlotte Alter

Cosmetics giant Revlon announced Thursday that two long-chain parabens and a formaldehyde-

releasing chemical would no longer be used as ingredients in its products, in a move that was applauded by environmental and health advocates.

Long-chain parabens have been linked to endocrine disruption, while formaldehyde may cause cancer.

Revlon was responding to a petition demanding the change signed by more than 100,000 people. The petition was organized by the non-partisan nonprofit Environmental Working Group.

[Read more...](#)

See [ingredient information](#) from Revlon.

Electrochemical characterization of chromate free conversion coatings on electrogalvanized steel

[Source: *Materials Research*, November 5, 2013](#)

Authors: C.R. Tomachuk; C.I. Elsner; A.R. Di Sarli

The chromate conversion treatment is widely used, but it requires highly toxic chromic acid solutions with the consequent effluent disposal and ecological problems. The removal of these toxic chemicals is considered a priority within European Union. The corrosion resistance of three alternative treatments applied on electrogalvanized steel, and immersed in aerated 0.3 M Na₂SO₄ solution, pH 10, at 25 °C, was investigated using electrochemical techniques. Their performance was compared with the obtained using the traditional Cr⁶⁺-based treatment in the same conditions. The achieved results show that the alternative coatings exhibited discrete protective properties in the sulphate solution. The nitro-cobalt chemical conversion treatment showed similar protective properties than the traditional Cr⁶⁺-based treatment, while with the Cr³⁺-based treatment those were very poor. The phosphate treatment initially performed acceptably but as the time elapsed, its protective properties decreased.

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EPA Takes Action to Protect Consumers from Harmful Chemicals that can Cause Reproductive and Developmental Harm

[Source: U.S. Environmental Protection Agency, December 10, 2014](#)

WASHINGTON -- The U.S. Environmental Protection Agency (EPA) is taking action to protect the public from seven ethylene glycol ethers or glymes, chemicals that can cause health effects including birth defects and blood toxicity.

"[Today's] action is part of our continuing efforts to help ensure that chemicals in products we use every day are safe for the American public," said Jim Jones, assistant administrator for chemical safety and pollution prevention. "Finalizing this action could prevent an increase in the use of these chemicals and reduce human exposure through ingestion and inhalation."

Some of these chemicals are currently used in consumer products, including paints, inks, and glues. The final rule will allow EPA to review any proposed new uses of these chemicals to ensure that human health and the environment are protected. EPA believes that new uses of these chemicals should not be allowed without an opportunity for review and, if necessary, place restrictions on these chemicals, as warranted.

EPA has also added one of the more toxic of these ethylene glycol ethers, ethylene glycol dimethyl ether (monoglyme), to the Work Plan for Chemical Assessments. Monoglyme met the criteria for priority assessment because of its toxicity and use in some commercial and consumer products. EPA will conduct a risk assessment for this chemical and determine if further risk reduction action should be taken.

[Read more...](#)

EDCs and Estrogen Receptor Activity: A Pathway to Safer Chemical Design?

[Source: *Environmental Health Perspectives*, December 2014](#)

Author: Julia R. Barrett

Estrogen receptors are some of the primary targets of endocrine-disrupting chemicals (EDCs). In a new report in this issue of *EHP*, biochemical, structural, biophysical, and cell-based experiments reveal critical information about the activity of 12 EDCs at the molecular and atomic levels. The EDCs tested, including the plasticizer bisphenol A and the flame retardant tetrachlorobisphenol A, are suspected to have a role in the development of various cancers and developmental, reproductive, and metabolic disorders via interactions with estrogen receptors.

"A better understanding of the many ways by which environmental pollutants interfere with nuclear receptor signaling will help in predicting the residual hormonal activity of an existing industrial compound and rationalizing the development of new analogues devoid of nuclear receptor activities," says study coauthor William Bourguet, team leader at the Center for Structural Biochemistry, Montpellier University, France. EDCs can undermine the endocrine system by either mimicking or blocking (antagonizing) endogenous hormones, or by interfering with their synthesis, metabolism, or transport.

[Read more...](#)

See study in *Environmental Health Perspectives*, "[Structural and Functional Profiling of Environmental Ligands for Estrogen Receptors](#)".

Synthesis and characterization of polyesters derived from glycerol, azelaic acid, and succinic acid

[Source: Green Chemistry Letters and Reviews, Volume 8, Issue 1, 2015](#)

Authors: Mohd Najib Baharu, Abdul Amir H. Kadhum, Ahmed A. Al-Amierya & Abu Bakar Mohamad

[R]esearch was conducted to synthesize new elastic polymers via polyesterification of glycerol (GE) with azelaic (AZ) and succinic acids (SU) as an added value to the surplus of GE from palm oil industry in Malaysia. This paper reports the successful, simple synthesis of unique elastic polyesters via the catalyst-free polyesterification of multifunctional monomers derived from GE, AZ, and SU. The ratio of the diacid to the alcohol used in this experiment was 1:1. The resulting polyesters, specifically, poly(GE/azelate/succinate), p(GAS), were characterized using nuclear magnetic resonance spectroscopy (NMR), Fourier-transform infrared spectroscopy (FTIR), gel permeation chromatography (GPC), thermal gravimetric analysis (TGA), and differential scanning calorimetry (DSC). The thermal stability increases with an increasing number of azelate units in the polyesters. The desired final product can be achieved by tuning the monomer ratio and the water removal efficiency.

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Properties of concrete prepared with waste tyre rubber particles of uniform and varying sizes

[Source: Journal of Cleaner Production, December 13, 2014](#)

Authors: Hadin Su, Jian Yang, Tung-Chai Ling, Gurmel S. Ghataora, Samir Dirar

Investigations and research into the recent use of rubber particles in concrete has been well documented. However, information on the rubber particle sizes or their distributions within concrete which may also influence the concrete properties is still limited. In this study, three groups of singly-sized rubber particle samples (3 mm, 0.5 mm and 0.3 mm) and one sample of continuous size grading (prepared by blending the three singly-sized samples to form the same particle distribution curve of sand) were used to replace 20% of the natural fine aggregate by volume. The reference concrete containing 100% sand was also prepared to compare its properties with those of the samples in terms of workability, fresh density, compressive strength, tensile splitting strength, flexural strength and water permeability. The experimental results demonstrated that the rubber particle size affects the concrete's workability and water permeability to a greater extent than the fresh density and strength. Concrete with rubber particles of larger size tends to have a higher workability and fresh density than that with smaller particle sizes. However, the rubber aggregates with smaller or continuously graded particle sizes are shown to have higher strengths and lower water permeability.

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Danish EPA publish report on nanomaterials in waste

[Source: SafeNano, December 12, 2014](#)

The Danish Environmental Protection Agency (EPA) have published a new report on "Nanomaterials in waste - issues and new knowledge", prepared by researchers at COWI A/S in cooperation with the Swiss Federal Laboratories for Materials Science and Technology (Empa) and the Technical Research Centre of Finland (VTT).

The report is the final outcome of a project funded under the Danish government and Red-Green Alliance's "Better Control of Nanomaterials" initiative. The aim of the project was to provide:

- * An overview of the present knowledge and knowledge gaps in relation to nanomaterials and waste (identifying general safety and technical issues), and
- * Recommendations of issues relevant for further studies in relation to the presence of nanomaterials in the waste and recycling cycles.

[Read more...](#)

Access Danish Ministry of the Environment report, "[Nanomaterials in waste: Issues and new knowledge](#)".

Novozymes Technology Converts Waste Oils to Biodiesel

[Source: Environmental Leader, December 22, 2014](#)

Novozymes has launched what it says is the first commercially available enzymatic solution to make biodiesel from waste oils.

The Novozymes Eversa enzymatic process converts used cooking oil or other lower grade oils into biodiesel. This allows biodiesel producers to reduce their raw material costs. The resulting biodiesel is sold to the same trade specification as biodiesel created through traditional chemical processing.

Growing demand for vegetable oil in the food industry has resulted in increased prices, causing biodiesel producers to search for alternative -- and more sustainable -- feedstocks. Most of the oils currently used are sourced from soybeans, palm or rapeseed, and typically contain less than 0.5 percent free fatty acids (FFA). Existing biodiesel process designs have difficulty handling oils containing more than 0.5 percent FFA, meaning that waste oils with high FFAs have not been a viable feedstock option until now, Novozymes says.

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CW centennial: Pondering the past, peering into the future

[Source: IHS Chemical Week, September 26, 2014](#)

Author: Robert Westervelt

With this, our 100th anniversary issue, we look back at a century of the chemical industry's progress and invite leaders to address the forces set to transform the industry over the next generation.

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