

## More milestones for green products and green chemistry

Kellyn Betts

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This fall, California passed landmark green chemistry legislation; the U.S. EPA's Design for the Environment (DfE) Program recognized its 700th green product; the annual Greenbuild International Conference and Expo, showcasing environmentally sound construction technologies, drew a record 28,000 people; and a group of influential businesses and nongovernmental organizations (NGOs) announced a collaboration to develop products built around safer chemicals and sustainable materials. All of these developments attest to green chemistry's expanding influence in the U.S.

A fundamental tenet of green chemistry is to avoid toxic and hazardous chemicals to the greatest extent possible in both educational and industrial settings, and the discipline's growing acceptance is "revolutionary," says Mark Rossi, research director of the NGO Clean Production Action (CPA). CPA supports California's Green Chemistry Initiative, which Rossi says is playing an important role by requiring the collection of data on chemical toxicity, calling for restrictions on the most hazardous substances, and promoting research into safer substitutes.

Thus far, the building and construction, cleaning product, health care, pharmaceutical, electronic, and retail industries have made the most progress toward implementing green chemistry, although that success is "uneven," Rossi says. CPA spearheaded the creation of the Business-NGO Working Group for Safer Chemicals and Sustainable Materials, announced on October 29, to help these industries and others move farther down the path, he says. The 40-plus organizations that have endorsed the working group's principles have committed to identifying the chemical constituents of the materials they produce and/or use, assessing the hazards of those chemicals, and avoiding the most hazardous chemicals, Rossi explains.

A major incentive for the acceptance of green products has been the runaway success of the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environmental Design (LEED) system for rating a building's greenness, points out Howard Williams, vice president of Construction Specialties, Inc., and a working-group member. In addition to attracting steadily increasing crowds to the USGBC's annual Greenbuild conference this year's attendance was 25% above 2007's the

program is accelerating the adoption of building products designed to be as environmentally and chemically responsible as possible, Williams says. One requirement of LEED is that the chemicals off-gassing from adhesives, paints, finishes, and carpeting must be carefully scrutinized, he explains.

Williams says participating in the working group is helpful to his organization because “we’re not chemists, and having a third party look at [our building products]...really helps sort through the issues related to decisions that need to be made.” For example, he says identifying plastic products that meet fire safety codes in addition to using the safest possible flame retardants “is a bit of a challenge.”

By collaborating to increase the size of the market for innovative products, the working group also helps member organizations influence the marketplace, says Kathy Gerwig, environmental stewardship officer for the nonprofit Kaiser Permanente, the U.S.’s largest integrated health care provider. The organization is committed to avoiding products that can be hazardous to people’s health in its hospitals and facilities, but “as large as we are, and as much as we buy, we cannot alone drive the market for all of the products for which we’re looking for safer alternatives,” she says.

Rossi and Williams agree that efforts like the DfE’s Product Recognition Program, which is conducted in partnership with the nonprofit NSF International, are important for helping businesses and consumers identify green products. “There is a fair amount of ‘greenwashing’ in the marketplace” involving unsubstantiated claims of chemical safety and environmental stewardship, Williams says. The government is arguably the ideal entity to assess greenness and certify claims, adds a DfE spokesperson.