

No Small Feat

In partnership with the American Chemical Society (ACS), the U.S. EPA recently presented [SiGNa Chemistry](#) [1] with a Presidential Green Chemistry Challenge Award for innovations in green chemistry materials based on the company's proprietary technology for nanoscale encapsulation of reactive metal materials. Announced at the 12th Annual Green Chemistry & Engineering Conference in Washington, D.C., and chosen from more than 30 nominees, SiGNa more specifically won the 2008 Small Business Award for New Stabilized Alkali Metals for Safer, Sustainable Syntheses. The awards program promotes innovative developments in green chemistry for pollution prevention, providing national recognition of outstanding chemical technologies incorporating the principles of green chemistry into chemical design, manufacture and use. SiGNa Chemistry has commercialized a suite of green chemistry materials based on its core technology for transforming reactive alkali metals and their derivatives (which have historically been dangerous to use and store) into safe free-flowing powders. According to the company, the resulting materials drive improvements in safety, efficiency and environmental sustainability across chemical processes in the pharmaceutical, petrochemical and general synthesis industries. Additionally, the company says that the powders enable entirely new beneficial technologies and processes, consisting of safe removal of pollutants from the environment and the rapid production of pure hydrogen fuel for clean energy applications. "SiGNa Chemistry was founded with the express mission of transforming reactive metals from a lab hazard into a safe part of global industry's clean chemistry toolkit," says Michael Lefenfeld, SiGNa Chemistry President and CEO. "The needs that our materials address are global in scale: energy, the environment and human health." Technologies that meet all award requirements are judged by an independent panel of technical experts convened by the ACS looking at science and innovation, human health and environmental benefit, and applicability. Typically, five awards are given every year to industry and government sponsors, an academic investigator and a small business. In order to qualify, Presidential Green Chemistry Challenge Award-nominated technology must:

- Reach a significant milestone over the past five years, such as being researched, demonstrated, implemented, applied or patented.
- Fit into one of the provided categories-such as small business.
- Participate in one of three focus areas-the use of greener synthetic pathways, the use of greener reaction conditions or the design of greener chemicals.

Since 1996, moreover, Presidential Green Chemistry Challenge Award-winning technologies have collectively:

- Eliminated more than 940 million pounds of hazardous chemicals and solvents.
- Saved more than 600 million gallons of water.

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Published on Chem.Info (<http://www.chem.info>)

- Vanquished more than 340 million pounds of carbon dioxide released into the air.

Source URL (retrieved on 01/31/2015 - 2:43am):

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Links:

[1] <http://www.signachem.com/>