Solidia Technologies

Where CO_2 Is a High-Value Commodity and Sustainability Is an Engine for Profitability and Growth℠






Solidia Technologies® is a cement and concrete technology company with patented scientific processes that make it easy and profitable to use CO_2 to create better building, construction and industrial products. We make sustainable technologies easy to adopt for any application anywhere in the world using the industry's existing infrastructure, raw materials, formulations, production methods and specifications. Our processes save manufacturers time, money, water and energy, and we deliver turnkey solutions by lining up the necessary cement, CO_2 and equipment partners.

Targeting the estimated US$1 trillion concrete and US$300 billion cement markets, the initial technology focus was on unreinforced precast applications, including pavers and blocks. We are now developing commercial processes for reinforced applications, including aerated concrete, railroad ties, architectural panels and hollow core extrusions.

Concrete is the most widely used material in the world. The production of cement, which is used to make concrete, is responsible for 5-7% of total global carbon emissions—the world's second largest CO_2 emitter. Our technology addresses an urgent business and societal need while profitably supporting an industry seeking to improve production methods that haven't changed significantly in nearly 200 years.

Our patented processes for producing sustainable cement and concrete reduce carbon emissions up to 70% and recycle 60-80% of the water used in the production of concrete products. Produced with a non-hydraulic, lower-energy and lower-emission chemistry, Solidia Cement™ is more sustainable than ordinary Portland cement (OPC). Solidia Concrete™ cures with CO_2 instead of water. It performs better, is more durable and cost-effective than traditional concretes, and typically cures in one day.

Solidia's IP portfolio includes over 200 patent applications worldwide, with 37 patents issued, including 9 in the US. For over 50 years, scientists have tried to cure concrete with CO_2 knowing the resulting product would be stronger and more durable; Solidia Concrete is the first to become commercially viable. Its strength and durability has been verified according to all market standards: ASTM, AASHTO, EN and CSA. Solidia's R&D collaborators include:

From industry—

- LafargeHolcim, a new leader in the building materials industry, with a local presence in 90 countries;
- CDS Group, the world's premier curing and drying specialists; and
- Air Liquide, a leader in industrial and specialty gases.

From government—

- U.S. Department of Transportation's Federal Highway Administration, with a Cooperative Research and Development Agreement (CRADA) for infrastructure applications at the Turner-Fairbank Highway Research Center;
- U.S. Department of Energy's National Energy Technology Laboratory (NETL), which has co-funded a four-year R&D project as part of its CO_2 Storage Program; and
- U.S. Environmental Protection Agency, which supported Solidia under Phase I of the SBIR Program.

From academia—

- Rutgers University, where the original generation of the technology was developed;
- Purdue University;
- Ohio University;
- The University of South Florida; and
- Princeton University.

The Cement Sustainability Initiative of the World Business Council for Sustainable Development set 2050 CO_2 reduction targets for the global cement industry. Solidia's technology package will enable the cement and concrete industry to meet the WBCSD 2050 goal well ahead of the target deadline.

Based in Piscataway, N.J., our team of over 60 scientists, engineers and business leaders, has wide connections in the construction and building materials industries and extensive experience in new product and market commercialization, IP, and simplified manufacturing. Investors include Kleiner Perkins Caufield & Byers, Bright Capital, BASF, BP, LafargeHolcim, Total Energy Ventures, Bill Joy and other private investors.

Honors include: 2016 Sustainia100; 2015 NJBiz Business of the Year; 2014 Global Cleantech 100; 2013 R&D Top 100; 2014 Best Place to Work in NJ; 2014 CCEMC Grand Challenge First Round finalist; 2013 Katerva Award finalist; and MIT's Climate CoLab shortlist.

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