

Synhelion and CEMEX make further progress toward the world's first fully solar-powered cement plant

Zurich, Switzerland, and Monterrey, Mexico, August 3, 2023

Synhelion and Cemex announced today a significant milestone in their joint effort to develop fully solar-driven cement production: the scaling of their technology to industrially-viable levels. This includes the continuous production of clinker, the most energy-intensive part of cement manufacturing, using only solar heat.

At the beginning of 2022, the companies announced the first-ever successful [production of solar clinker](#) in a small-scale batch process pilot. Advancing from that stage to production under plant-like and continuous conditions reaffirms the tremendous potential of this technology to reach industrial-scale implementation. Synhelion and Cemex will now take further steps toward building a solar-driven industrial-scale pilot cement plant.

"I am convinced we are getting closer to the technologies that will enable net-zero CO₂ cement and concrete production," said Fernando A. González, CEO of Cemex. "The solid progress I see here proves that solar cement is not just a dream; it is achievable through continued collaboration and backed up by rigorous research and testing."

Gianluca Ambrosetti, Co-CEO and Co-Founder of Synhelion, added: "This is an exciting milestone for everyone involved, achieved through the excellent collaboration between the teams of Cemex and Synhelion. Our technology can make an important contribution toward decarbonizing cement production, and we look forward to more trailblazing achievements in this field."

Clinker is produced in a rotary kiln at temperatures nearing 1'500°C. Fossil fuels are typically used to heat the kiln and are responsible for approximately 40% of direct CO₂ emissions. Synhelion's breakthrough technology provides sufficient heat to produce clinker without using fossil fuels. Replacing fossil fuels entirely with solar energy is a game-changer in Cemex's efforts to achieve carbon neutrality by 2050. Additionally, the technology creates the conditions to separate, and therefore capture, the remaining CO₂ from calcination in concentrated form without additional efforts.

The partnership between Synhelion and Cemex has received important recognition recently. The U.S. Department of Energy awarded US\$ 3.2 million to [Solar MEAD](#), a joint project between Cemex, Sandia National Laboratories, and Synhelion to study the conditions to maximize heat transfer to the raw cement mix. The collaboration also received an honorable mention in the Eco-Innovator category of the Corporate Citizenship Innovation Awards sponsored by the Boston College Center for Corporate Citizenship – an organization dedicated to advancing the work of corporate social responsibility and sustainability.



About Cemex

Cemex, S.A.B. de C.V. ("Cemex") (NYSE: CX) is a global construction materials company that is building a better future through sustainable products and solutions. Cemex is committed to achieving carbon neutrality through relentless innovation and industry-leading research and development. Cemex is at the forefront of the circular economy in the construction value chain and is pioneering ways to increase the use of waste and residues as alternative raw materials and fuels in its operations with the help of new technologies. Cemex offers cement, ready-mix concrete, aggregates, and urbanization solutions in growing markets around the world, powered by a multinational workforce focused on providing a superior customer experience enabled by digital technologies. For more information, please visit: www.cemex.com

About Synhelion

Synhelion is a global pioneer in the field of carbon-neutral solar fuels. The clean energy company evolved from the Swiss Federal Institute of Technology (ETH Zurich) in 2016 to decarbonize the transportation sector. Synhelion is currently building the world's first industrial facility for the production of solar fuel in Jülich, Germany. The first commercial production facility is planned for commissioning in Spain by 2025. Synhelion is the first company to sustainably generate process heat beyond 1'500°C with concentrated solar radiation. This makes it possible to drive industrial processes such as fuel production and cement manufacturing with solar heat for the first time. The company provides the world with cutting-edge technology to combat climate change and works with international partners such as Eni, Cemex, Lufthansa Group, Swiss International Air Lines, SMS group, Wood, AMAG Group, and Zurich Airport. For more information, please visit:

www.synhelion.com

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