

# Earthquake-resistant solar-powered container for cement plants





## Overview

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This work describes the implementation of concentrated solar energy for the calcination process in cement production. Approach used for providing solar energy includes the utilisation of a solar tower sy.

Can solar clinker be used for cement production?

For the first time ever, CEMEX and Synhelion successfully connected the clinker production process with the Synhelion solar receiver, producing solar clinker. This revolutionary innovation is an initial step to develop fully solar-driven cement plants.

What is a solar clinker?

This revolutionary innovation is an initial step to develop fully solar-driven cement plants. CEMEX, S.A.B. de C.V. ("CEMEX") and Synhelion announced today the successful production of the world's first solar clinker, the key component of cement, a significant step towards developing fully solar-driven cement plants.

Will Cemex & synhelion develop fully solar-driven cement production?

Cemex and Synhelion have made significant progress in their joint effort to develop fully solar-driven cement production. They have scaled their technology to industrially-viable levels, enabling the continuous production of clinker, the most energy-intensive part of cement manufacturing, using only solar heat.

Will Cemex & synhelion build a pilot cement plant?

Cemex and Synhelion will now take further steps toward constructing a pilot cement plant powered by solar energy. Fernando A. González, CEO of Cemex, stated, "I am convinced we are getting closer to the technologies that will enable net-zero CO<sub>2</sub> cement and concrete production.



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### [Towards decarbonization of cement industry: a critical review ...](#)

Jul 4, 2025 · This makes resistance heating a viable retrofit for existing cement plants to reduce their CO<sub>2</sub> footprint through a judicious combination of emission reduction and CCUS.

### [CEMEX and Synhelion achieve breakthrough in cement ...](#)

Feb 2, 2022 · CEMEX and Synhelion announced today the successful production of the world's first solar clinker, the key component of cement, a significant step towards developing fully ...



### [Synhelion starts building solar tower for cement production](#)

Aug 7, 2023 · Synhelion's solar tower technology harnesses energy from a field of solar mirrors and concentrates it onto a receiver. The receiver converts the solar radiation into high ...

### [Cement Industry Solar Update - Cement Optimized](#)

Oct 25, 2023 · This marks a significant milestone in the companies' journey toward the world's first fully solar-powered cement plant. An early 2022 energy lab demonstration in Spain saw ...



### Greening the Concrete Jungle: Solarizing Cement Factories

An innovative and efficient solar power plant solution has been developed for cement factories. On an annual basis, solar PV systems in cement plants may save 22,941 tonnes of CO<sub>2</sub>.



### Constructing solutions using cement-based materials for ...

Jan 1, 2025 · This involves showcasing successful case studies like rechargeable concrete batteries, cement-based thermal energy storage systems for concentrated solar plants, energy ...



### Design of solar cement plant for supplying thermal energy in cement

Nov 10, 2023 · Abstract This work describes the implementation of concentrated solar energy for the calcination process in cement production. Approach used for providing solar energy ...





## Cemex and Synhelion make further progress toward the ...

Mar 8, 2023 · Cemex and Synhelion announced today a significant milestone in their joint effort to develop fully solar-driven cement production: the scaling of their technology to industrially ...



## Producing cement with solar energy

Mar 2, 2022 · This is where the CemSol project comes in, short for "solar production of cement with integrated CO<sub>2</sub> capture". The team of scientists is developing a process in which the ...

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