

NKOSITHANDILEB SOLAR

French Sulfuric Acid solar container outdoor power



Overview

Can solar thermal plants decompose sulphuric acid?

A solar thermal plant can provide the high temperatures required for the decomposition of sulphuric acid using concentrated solar radiation. The resulting products, sulphur dioxide (SO₂) and water (H₂O), can then be reused to obtain sulphur in a process referred to as disproportionation.

Can sulphur be stored like a pile of coal?

Sulfur can be stored like a pile of coal. "This cycle allows you to get energy out of the sulphur and store it in between. Why it's in focus now is that we can use 100% renewable energy - concentrated solar - to heat the reaction. That's why chemical companies now come in and are interested in demonstrating the plant."

Can sulphuric acid be used as fuel?

In such cycles, sulphur can be repeatedly used as fuel. As demonstrated in the PEGASUS project, this can be achieved with the help of renewable energy sources. A solar thermal plant can provide the high temperatures required for the decomposition of sulphuric acid using concentrated solar radiation.

Could sulfur be a suitable storage material for base-load electricity production?

"Solar power plants effectively capture process heat and sulfur might be a suitable storage material to use this power for base-load electricity production," Professor Dimosthenis Trimis of KIT's Engler-Bunte Institute says. Sulfur and sulfuric acid are used in many industrial applications.

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The focused sunlight of the solar power plant supplies the process heat with the energy and temperature required to close the sulfur cycle and to ...

In May 2019, the first energy container in France was installed on the biodynamic farm 'Un Jardin et des Graines' in Alsace, the first ...

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