

High-Temperature Resistant Solar Containers for Bridges





Overview

Are solar absorber materials suitable for high-temperature operation?

One major barrier is the unavailability of suitable solar absorber materials for operation at higher temperatures. In this work, we report on a new high-temperature absorber material by combining Ti₂AlC MAX phase material and iron-cobalt-chromite spinel coating/paint.

Do CIGS thin-film solar cells have a high-temperature resistant PI film?

This article reviews the current status of CIGS thin-film solar cells, the introduction of the high-temperature resistant PI film, and focuses on the recent progress on the high temperature resistance and low coefficient of thermal expansion (CTE) modification of PI film.

What is high temperature thermal energy storage?

High temperature thermal energy storage offers a huge energy saving potential in industrial applications such as solar energy, automotive, heating and cooling, and industrial waste heat recovery. However, certain requirements need to be faced in order to ensure an optimal performance, and to further achieve widespread deployment.

Is CIGS a suitable material for thin-film solar cells?

CIGS is a direct bandgap semiconductor material with an absorption coefficient in the visible range of up to 10^5 /cm. Only 1.5- to 2.5- μ m-thick CIGS can absorb almost all incident sunlight, which is very suitable for the preparation of thin-film solar cells. Fig. 1.



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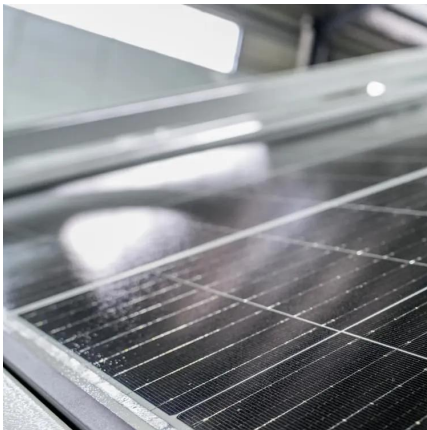
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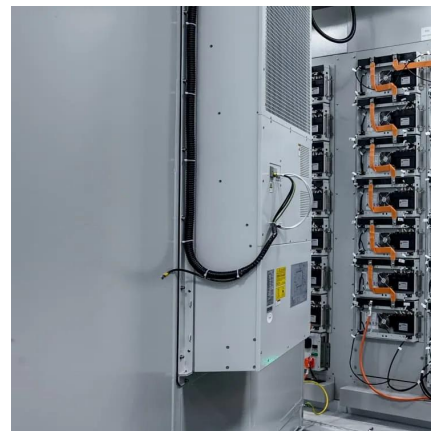


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