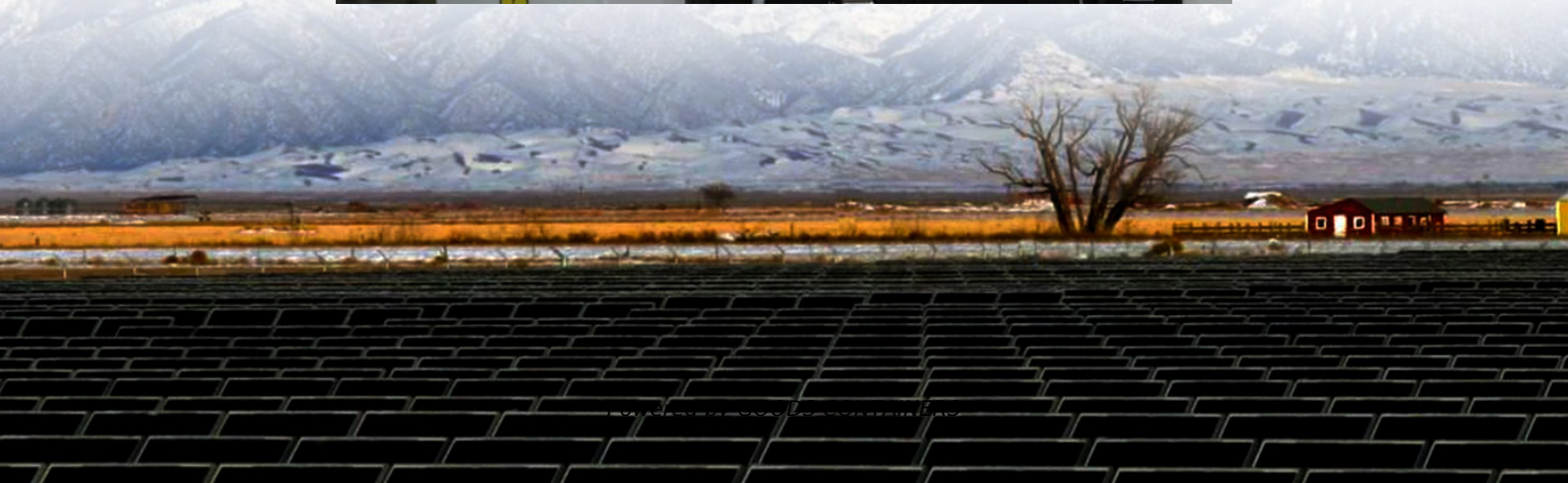


Customization of cadmium telluride solar tiles for roofs in Southeast Asia





Overview

Are polyimide solar cells better than glass?

The solar cells achieved an efficiency of 11 %. However, polyimide (PI) is less thermally stable compared to glass and may exhibit thermal expansion, which can cause delamination and degradation of the device. PI is also more susceptible to moisture and oxygen, which can degrade the effectiveness of the flexible CdTe solar cells . Fig. 4.

Can flexible CdTe solar cells be used on UTG substrates?

UTG is recognized as a lightweight and flexible substrate material that is highly regarded for its remarkable optical and electrical properties, illustrated in Fig. 3 (b). However, the optimization of flexible CdTe solar cells on UTG substrates presents a significant challenge and remains an unresolved issue .

Are CdTe solar panels durable?

The exploration of CdTe solar panels was further continued in 2010 when Korea University introduced a new type of flexible substrate that was made from a polymer called polyethylene naphthalate (PEN) . PEN was identified to be durable with acceptable thermal stability as compared to the other flexible substrates.

Can a polyimide substrate make a solar cell?

A group of researchers from the University of Mexico (UNAM) managed to develop a flexible substrate made from polyimide. The team deposited CdTe onto polyimide substrates and generated a single solar cell with an efficiency of 11.4 % .



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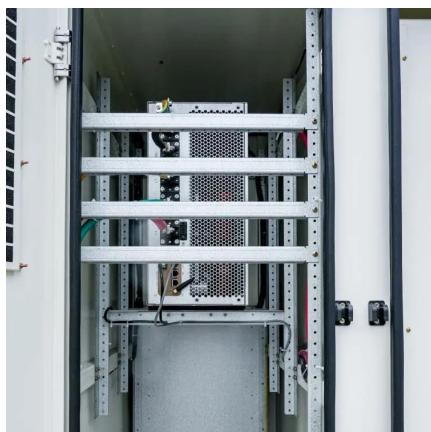


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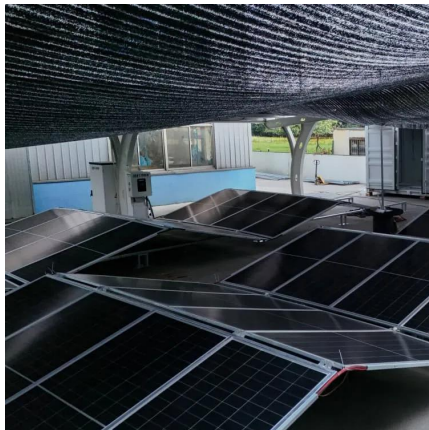
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