

Solar transparent glass smart greenhouse





Overview

Do smart and solar materials cover greenhouses?

The aim of this review article was to examine smart and solar materials covering greenhouse. However, the scope was limited to intelligent PhotoVoltaic (PV) systems, optimization of some material properties including smart covers, heat loading and the use of Internet of Things (IoT) to reduce the cost of operating greenhouse.

Should smart-materials be customized for a greenhouse?

The need for on-time and on-demand customization of smart-materials for greenhouse is critical considering the absorption and concentration of solar radiation was contingent on the size of the absorber (light in 6 and 8 cm focus) (Korecko et al., 2010).

Does a solar greenhouse save energy?

ClearVue's pioneering solar greenhouse at Murdoch University has been operating since 2021 and has achieved remarkable results, reducing energy consumption by nearly 40%. Over four growing seasons, we've consistently observed energy and water savings, with many plant species producing higher yields in solar grow rooms.

Can fullerene-based PV materials be used for smart greenhouse covers?

A greater emphasis is made on the future prospects of fullerene-based PV materials, and PCMs, and energy modelling for smart greenhouse covers, considering their practical benefits and promising applications in offsetting the drawbacks of existing materials.



Solar transparent glass smart greenhouse



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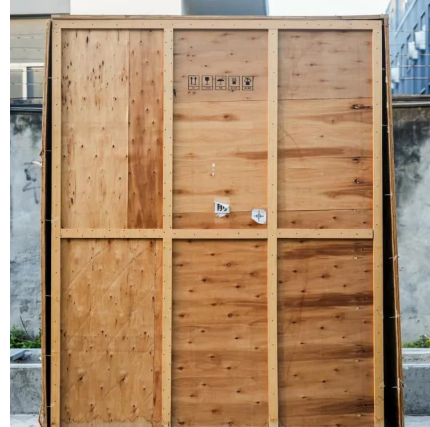
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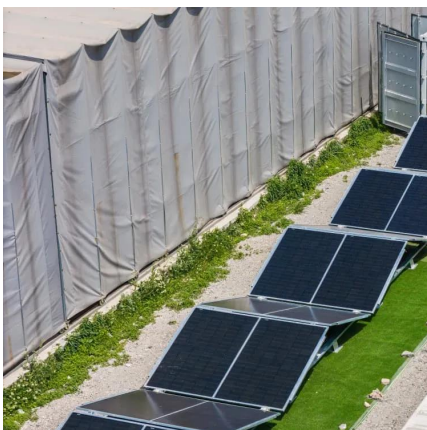


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