

Glass Smart Greenhouse solar





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.

Can smart and solar greenhouse covers improve commercial agriculture?

The novelty of the current research paper stems from the fact that it provides a comprehensive and elaborate discussion on the development of smart and solar greenhouse covers including existent limitations and potential advantages that can enhance commercial agriculture.

What is the future of smart greenhouse covering materials?

As such, the future of smart greenhouse covering materials would be predicted by the pace of adoption of phase change materials and energy modelling for optimal regulation of the microclimate (Han et al., 2021; Mishra et al., 2020) to address temperature fluctuations (25–52°C) (Nayak and Tiwari, 2021).

What are the benefits of a solar greenhouse?

The unique properties help to reduce construction costs. The optimal energy benefits associated with advances in DSSCs, QDs, and friendly semitransparent (ST) organic solar cells (OSCs) and other materials for PV modules depend on the transient heat loading in solar greenhouse.



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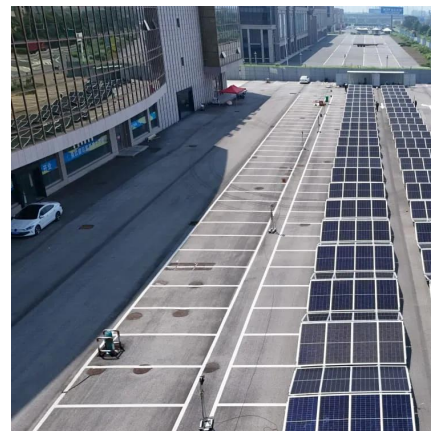
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