



MODERNIZATION SOLAR

# Multifunctional solar system application





## Overview

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Can a multifunctional semitransparent organic photovoltaic (St-OPV) be used in building-integrated solar systems?

Multifunctional semitransparent organic photovoltaics (ST-OPVs) combining power generation, light transparency, and heat rejection have emerged as a promising technology for application in building-integrated photovoltaic systems, but maximizing all of these features simultaneously is challenging.

How can Australia improve the viability of solar energy solutions?

Further research and development in this direction hold the promise of enhancing the viability of solar energy solutions in the long term. The Australian Government has supported this work through the Australian Renewable Energy Agency (ARENA).

Is a non-porous multilayer coating a spectrally selective filter for solar modules?

This paper aims to develop a non-porous multilayer coating (MLC) that is more durable and will act as a spectrally selective filter for solar modules. Studies have been conducted on MLCs in terms of optical, microstructure, mechanical, and durability properties compared with commercial single-layer AR coatings.

Can a solar-assisted heat pump provide space heating?

This paper presents a hybrid multifunctional solar-assisted heat pump (SAHP) system that can provide space heating, space cooling, domestic hot water, and onsite electricity generation. Photovoltaic-thermal collectors are used for electricity generation, heat collection, and radiative cooling.



## Multifunctional solar system application



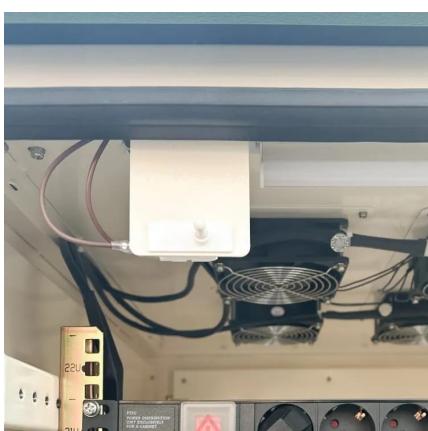
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This study developed a multifunctional and movable solar PV system with a capacity of 3.3 kWp for on-grid and off-grid applications. The main objective of



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## Performance simulation and analysis of a solar-assisted multifunctional

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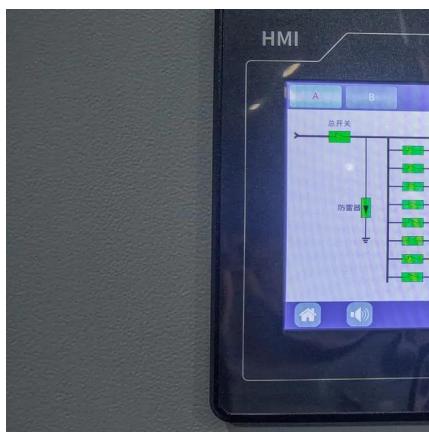


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