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# Solar air conditioning integrated machine

Can a microclimate solar cooling system improve human thermal comfort?

This research introduces a microclimate solar cooling system to enhance human thermal comfort and reduce electrical grid energy-based consumption. A novel solar photovoltaic thermoelectric air conditioner (SPVTEAC) for local air conditioning of a 1.0 m<sup>3</sup> compartment was experimentally examined under several interior cooling loads.

Does a solar desiccant air conditioning system work with a m-cycle evaporative cooler?

In this Paper solar desiccant air conditioning system integrated with cross flow Maisotsenko cycle (M-cycle) indirect evaporative cooler is used to investigate the performance of whole system in different range of parameters.

Does a solar photovoltaic thermoelectric air conditioner provide thermal comfort?

In this work, a solar photovoltaic thermoelectric air conditioner (SPVTEAC) is experimentally established and assessed to provide the simultaneous thermal comfort of local air conditioning of 1.0 m<sup>3</sup> compartment was experimentally examined under several interior cooling loads changing from 65.0 to 260 W.

What is the performance of a solar photovoltaic thermoelectric air conditioner?

The performance of a solar photovoltaic thermoelectric air conditioner was experimentally studied. The COP of the air conditioner is estimated to be 1.14 at a PV current of 4.28 A and air flow rate of 14.40 m<sup>3</sup> /h. Random vector functional link approach was employed to model the solar air conditioner.

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In recent years solar energy for environmental control has received much more attention in the engineering fields, as a result of the world energy shortage [1]. Particularly, ...

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Air conditioning systems integrated with thermal energy storage (AC-TES) are promising for improving energy efficiency and minimizing operational costs [24]. These ...

Back Design of Solar Air Conditioning System Integrated with Photovoltaic Panels and Thermoelectric Coolers: Experimental Analysis and Machine Learning Modeling by ...

Design of solar air conditioning system integrated with photovoltaic panels and thermoelectric coolers: Experimental analysis and machine learning modeling by random ...

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The Chinese manufacturer said its new photovoltaic air conditioner is available in three versions with a cooling capacity ranging ...

Desiccant materials, dehumidifiers, regenerators, integrated air conditioning systems, and solar regeneration are included in the extensive set of keywords for this work.

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In this study, the performance of a solar thermoelectric air-conditioning system (STEACS) is predicted using advanced optimized artificial intelligenc...

The Chinese manufacturer said its new photovoltaic air conditioner is available in three versions with a cooling capacity ranging from 12.1 kW to 16 kW and a heating capacity of ...

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This research introduces a microclimate solar cooling system to enhance human thermal comfort and reduce electrical grid energy-based consumption. A novel solar ...

Integrating solar power with heating, ventilation, and air conditioning (HVAC) systems transforms energy management for residential and commercial properties. This synergy not only reduces ...

Solar energy-assisted heating air conditioning system that integrates a solar thermal module with conventional air conditioning components. The system comprises a main ...

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