

Desiccant agents (DAs) have drawn much interest from researchers and businesses because they offer a potential method for lowering environmental impact, ...

air-conditioning using a liquid desiccant system is a possible application for solar PV waste heat utilisation. This system consists of a liquid desiccant dehumidifier unit and an evaporative...

The current paper experimentally studied the performance of solar-driven internally cooled liquid desiccant system for hot and humid climates using  $\text{CaCl}_2$  as a liquid ...

Therefore, a novel solar-driven liquid desiccant air conditioning system is described and investigated in this study. It combines photovoltaic and thermal solar power, dehumidification, ...

DOI: 10.1016/j.energy.2020.117324 Corpus ID: 216215184; Optimization of the areas of solar collectors and photovoltaic panels in liquid desiccant air-conditioning systems using solar ...

Therefore, this study proposes a novel solar-driven liquid desiccant air conditioning (SLDAC) system, which uses a combined photovoltaic and solar thermal energy ...

Liquid desiccant dehumidifiers are effective in removing moisture from the air by using a liquid solution to absorb water vapour. The liquid desiccant dehumidifier's performance ...

Regeneration of liquid desiccant is an important desalination process in the LDAC system, which aims at re-concentrating the diluted desiccant solution to renew its ...

Besides traditional liquid desiccants ( $\text{LiBr}$ ,  $\text{LiCl}$  and  $\text{CaCl}_2$ ), new liquid desiccants which may be used in the liquid desiccant air-conditioning system have also ...

The photovoltaic power generation can be calculated using the following formula: (38)  $Q_{PV} = A_c I_{in} - I_{out}$  (39)  $I_{in} = I_{mp} \cdot \text{bat} \cdot \text{mppt} \cdot D \cdot S_D$  (40)  $I_{mp} = 1 - C_r \cdot T_c - T_r \cdot \dots$

The purpose of this research is to investigate the feasibility of using PV solar waste heat to regenerate liquid desiccant in the solar air conditioning system. A typical liquid desiccant ...

Liquid desiccant air dehumidification has gained substantial attention recently due to its attractive energy-saving capability, high moisture retention, and low regeneration ...

# Solar Liquid Desiccant Photovoltaic Construction Solution System

We demonstrate use of solar-powered liquid desiccant system to meet water and cooling needs. We predict the liquid desiccant system performance in Beirut climate. We ...

Photovoltaic-electrodialysis (PV-ED) regeneration is a novel method for liquid desiccant cooling system (LDCS), which has a higher performance than the conventional ...

In this work, a solar-powered liquid desiccant air-conditioning system is considered as a suitable system, and the working principle of the air-conditioning system and ...

In this paper, recent theoretical and experimental works on solar TH regeneration method and solar ED regeneration method of the liquid desiccant air-conditioning ...

can be obtained along with concentrated desiccant solution. Below diagram shows schematic of Photovoltaic based ED system. The dilute desiccant from the dehumidifier is drained is ...

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