High temperature trough solar integrated system

Figure 3 illustrates a flow diagram of the simulated CSP and high temperature electrolysis (CSP-HTE) process, including key components of the CSP system, O-SOEC subsystem, heat recuperation, trim ...

On the basis of the negative thermal-flux phenomenon discovered in the PTC system, a novel PTC system integrated with photovoltaic (PTC-PV) panels is proposed in this study to ...

This paper proposes a solar-integrated energy system at medium-high temperature (i.e., working temperature >300 °C) for power generation, desalination, and sodium hydroxide (NaOH) production.

Therefore, this research offers a thermodynamic evaluation of a novel integrated system driven by solar energy that aims to produce power, heating and freshwater.

This study offers a comprehensive assessment of the thermodynamic performance of a novel solar-based multigeneration system, which caters to the energy needs of a sustainable ...

To stabilize the system operation, the solar receiver has to assure a proper thermal inertia. Therefore, a solar receiver integrated with a short-term storage system based on high-temperature phase-change ...

Several works have been presented with regards to feasibility of integrating various thermal storage options with parabolic trough (PT) or linear Fresnel reflector (LFR) solar fields using DSG ...

This paper presents a comprehensive analysis of this medium-high temperature solar-integrated energy system in terms of energy, exergy, economics, and environment.

In contrast to the low-temperature solar devices, high-temperature solar systems achieve temperatures beyond 250 °C and can go up to 3000 °C or more by using concentrating collectors in the path of ...

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DOE funds solar research and development (R& D) in parabolic trough systems as one of four concentrating solar power (CSP) technologies aiming to meet the goals of the SunShot Initiative.

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