Solar high temperature and high pressure power generation

This paper demonstrates a facile solar steam generator for the generation of high-temperature steam at ambient pressure. The steam generator consists of a coiled copper tube (CCT) ...

The following sections will delve into how solar-driven technologies, particularly solar power towers and SSCPV systems, can be harnessed to optimize high-temperature hydrogen ...

In this study, linear Fresnel solar collectors and high-temperature heat pumps driven by photovoltaics are considered heat sources for steam generation in industrial processes. Energetic ...

This study proposes and investigates a novel solar power tower-based tri-generation system producing electricity, hydrogen, and green ammonia through integrated thermodynamic cycles.

In this article, we integrate and demonstrate a system that generates solar electricity and high-temperature heat in a modular, small footprint, low cost, and high-efficiency design.

Solar Radiation STEG is a new low cost high efficiency solar conversion technology

In this work, we demonstrated a passive solar thermal device mostly built from low-cost off-the-shelf components capable of delivering saturated and pressurized steam to drive sterilization cycles even ...

Because of the harsh working conditions of high temperature, high pressure and non-uniform high-intensity solar radiation, the solar receiver can be easily damaged or even has safety...

Two methods by which an sCO2 heat pump can be combined with an sCO2 power cycle for CSP are described and techno-economic results are presented. Results indicate that these systems can ...

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