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Interface solar steam power generation technology

The interface solar-driven steam generation technology is a new type of solar energy utilization technology that can simultaneously meet the needs of energy, environment, and freshwater....

Herein, we report a rational Janus-interface solar-steam generator (J-SSG), which separates the water evaporation and the solar-thermal conversion on the two sides of the film ...

This Review summarizes the recent progress in solar-driven steam generation in diverse functionalizations and highlights its applications beyond water purification and desalination.

With the increasing shortage of water resources and the aggravation of water pollution, solar-driven interfacial steam generation (SISG) technology has garnered considerable attention because of its ...

The interfacial solar steam generation and water evaporation-driven power generation are regarded as promising strategies to address energy crisis. However, it remains challenging to ...

In the direct process, steam is produced immediately following the direct conversion of solar radiation into heat. In contrast, in the indirect method, solar irradiance is first

Improving energy efficiency and reducing costs are the challenges in applications. The interface solar-driven steam generation technology is a new type of solar energy utilization ...

Here we review the design and applications of wood-based solar steam generation devices, with focus on wood structure and properties, different types of devices, and factors ...

This work briefly reviews the basic concepts to develop low-cost interfacial solar steam generation (ISSG) for crucial applications such as desalination, water purification, power generation, and sea ...

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