Multifunctional oil-electric solar power generation

A device consisting of four APCP can generate stable electricity of 3.35 V and produce clean water with an evaporation rate of 2.06 kg m -2 h -1 simultaneously. This work provides ...

Interfacial solar steam generation (ISSG) is the main method to get fresh water from seawater or wastewater. The balance between evaporation rate and salt resistance is still ...

For the generation of electricity in far flung area at reasonable price, sizing of the power supply system plays an important role. Photovoltaic systems and some other renewable ...

Design rules and tools for composite multifunctional materials and three multifunctional structure-power concepts: structure-battery, autophagous (self-consuming) structure-fuel, and solar-skin ...

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In the European Union (EU) specifically, photovoltaic (PV) electricity already contributed 5.5% to the gross electricity output in 2021, demonstrating the promising potential ...

In this context, the development of cost-effective water treatment and electricity generation technologies has always been a research hotspot. By utilizing the renewable solar ...

Emerging water purification technology, known as interfacial solar steam generation (ISSG), has been rapidly developing in recent years. ISSG offers a promising solution to address both freshwater ...

Efficient utilization of solar energy cannot only be found in water purification, but also in solar-power generation [71]. We designed a solar-electric power generation device ...

Oily wastewater from ocean oil spills endangers marine ecosystems and human health. Therefore, developing an effective and sustainable solution for separating oil-water ...

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