Micro-nano solar container devices

o Micro-nano water lm enhanced interfacial solar evaporator enables a high evaporation rate of 2.18 kg m-2 h -1under 1 sun. o An outdoor device with an enhanced condensation design demonstrates a ...

Here, we show that the superposition of properly designed in-plane nano- and micro-scaled periodic patterns results in enhanced device performance in the case of solar cell applications.

Using heat energy converted from solar energy to evaporate seawater is a potential approach to mitigate the shortage of fresh water. Interfacial solar evaporation systems employing ...

Building on their dual functionality for solar photothermal absorption and storage, slurries/dispersions of micro/nano-encapsulated phase-change materials (ePCMs) are capable of revolutionizing the solar ...

Figure 1. Trends of research on the integration of artificial intelligence with micro-nano-systems. In particular, the integration of micro- and nano-systems in energy management and ...

The functioning of micro/nano containers can be divided in two principal groups: autonomous (based on defect filling and corrosion inhibition) and non-autonomous (based on dynamic bonds and shape ...

f current developments in solar stills with nano/micro materials is presented. Most of recent efforts were interested in mproving solar evaporation, which is just one of basic process in solar still. Various ...

Recently, to overcome the bottleneck of conventional SS and improve its performance, optimizing the solar evaporation process based on micro/nano-materials has been proposed as a ...

Abstract Light management by optical micro/nano structures (OMNSs) is an effective strategy to enhance the efficiency of perovskite solar cells (PSCs). However, integrated top-down ...

Keywords: optoelectronic (OE) devices, micro-nano structure, light emitting device (LED), laser, sensor, perovskite Citation: Liu Y-F, Gao X-M and Li Y-F (2022) Editorial: Recent ...

Those devices" performance (speed, energy consumption) is highly dependent on manipulating information bits (spin-orientation in flexible spintronics). In this work, we established an organic ...

The functionalities of micro-nano optical devices are dependent not only on their structural factors but also on the optical and structural properties of the materials. Here, we will ...

Then, a homemade device containing a micro-nano interfacial solar evaporator and an enhanced condensation

design is employed for outdoor experiments based on the simulated results.