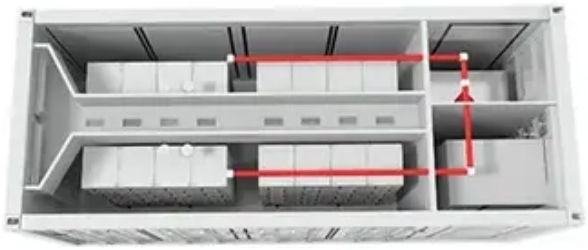
Nano pyramid solar power generation



Nano pyramid solar power generation

Performance enhancement using an embedded nano-pyramid in ...

The trapping of photons and broad-spectrum absorption of solar irradiance are the primary focus of numerous solar cell research applications. In the current work, a novel paradigm for ...

High efficiency thermophotovoltaic emitter by metamaterial ...

Obviously, a wavelength-selective TPV emitter is desirable for maximizing power generation and conversion efficiency of TPV systems.

Investigation on silver nanoparticle-enhanced pyramid solar still

Limited studies have explored the improvement of pyramid solar still (PSS) performance and water temperature by incorporating energy storage materials, nanoparticle inclusion for ...

Novel Nano-Pyramid/Polish Hybrid Morphology Designed ...

When applied to TOPCon solar cells, the hybrid structure outperforms both secondary- textured and polished morphologies in terms of optical absorption, passivation, and contact ...

Multi-scale CuS-rGO pyramidal photothermal structure for highly

Abstract Integrated water evaporation and thermoelectric power generation system (IWETPGS) has been recognized to be a promising strategy for the utilization of solar energy. ...

Nanopyramid Structures with Light Harvesting and Self

The inverted nanopyramids (INP) were applied at the front side of the solar cells using UV nanoimprint lithography. These structures provided effective light-trapping properties and led to ...

Prediction of sub-pyramid texturing as the next step towards ...

Over the past few decades, silicon wafer-based silicon solar cells have dominated the photovoltaic (PV) industry, given low production cost, high energy-conversion efficiency and long ...

Enhancing the Overall Performance of

Perovskite Solar Cells with a Nano

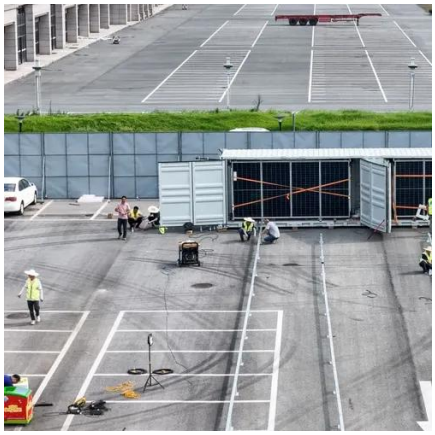
Perovskite solar cells (PSCs) still suffer from varying degrees of optical and electrical losses. To enhance the light decoupling and capture ability of Planar PSCs, an ultra-thin PSC ...

GaN nano-pyramid arrays as an efficient photoelectrode for solar water

A prototype photoelectrode has been fabricated using a GaN nano-pyramid array structure grown on a cost-effective Si (111) substrate, demonstrating a significant improvement in ...

MXene-CuS pyramid array photothermal structures inspired by ...

MXene-CuS pyramid array photothermal structures inspired by Roman broccoli for solar-driven water evaporation and power generation



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