Solar Cell Nanogenerator

The harvester consists of electromagnetic-triboelectric nanogenerator units for collecting rotational energy and a commercial water-proof flexible solar cell. At a rotation rate of 500 rpm, the ...

T1 - Wind-driven hybridized triboelectric-electromagnetic nanogenerator and solar cell as a sustainable power unit for self-powered natural disaster monitoring sensor networks. AU - ...

For example, the solar cell cannot work effectively during rainy and cloudy days [4]. In order to solve this inevitable challenge for solar cells, the hybrid energy system by ...

A raindrop solar cell can work either on rainy days to collect mechanical energy of the raindrops or on sunny days to harvest solar energy, which achieves high energy conversion efficiency in various energy ...

To develop a practical strategy to simultaneously scavenge multiple types of energies from the environment, the concept of a hybridized energy harvester incorporating two kinds of conversion cells for concurrently ...

The hybrid nanogenerator comprises a waterproof Si-based solar cell, a contact separation TENG, and a freestanding sliding mode electromagnetic generator. They demonstrated the powering of LED and ...

As a new concept of the device, hybrid energy harvester integrated with a water droplet triboelectric nanogenerator (WD-TENG) and a solar cell has been reported to convert ...

Herein, we proposed a hybrid solar and rain energy harvesting device featuring the integration of triboelectric nanogenerator (TENG) top-cell and a crystalline Si solar cell ...

Solar cells, as promising devices for converting light into electricity, have a dramatically reduced performance on rainy days. Here, an energy harvesting structure that integrates a solar cell ...

The harvester consists of electromagnetic-triboelectric nanogenerator units for collecting rotational energy and a commercial water-proof flexible solar cell. At a rotation rate ...

Liu, Y. et al. Integrating a silicon solar cell with a triboelectric nanogenerator via a mutual electrode for harvesting energy from sunlight and raindrops. ACS Nano 12, 2893-2899 ...

KEYWORDS: integrated device, silicon solar cell, triboelectric nanogenerator, energy harvesting, shared electrode configuration olar cells have become one of the most widespread both solar ...

As the first-generation solar cell, crystalline silicon solar cell is the most widely useful because of its

high-efficiency performance and excellent stability, although the maximum certified ...