Miura Solar Power Generation

What is Miura folding based triboelectric nanogenerator?

Herein,a highly flexible and stretchable Miura folding based triboelectric nanogenerator (MF-TENG) is prepared by using flexible polyethylene terephthalate (PET) as a folding substrate with a double working side design,specifically one side as the main TENG (M-TENG) and other side as the excitation TENG (E-TENG).

How do we determine the geometric properties of a Miura-ori plate?

Here,we uniformly use the folded dihedral angle as the basis for calculating the remaining parameters when =0? when the Miura unit is fully collapsed,and when =180? The Miura-ori plate has identical Miura cells,so that its geometric properties are essentially determined by the Miura cellsand are consistent throughout. Figure. 1.

What is the geometry of Miura-ori origami?

2.1. Geometry of the Miura-ori Miura-ori origami is made up of a series of parallelogram unitsarranged according to certain rules,with the horizontal and vertical folds formed at the joints of each unit,the horizontal folds are straight and the vertical folds are jagged in the fully unfolded state.

<p>Miniaturized mobile electronic devices have aroused great attention due to their convenience to daily life. However, they still face a problem that power supply from the conventional cell needs to be ...

Despite scholars [63] expressing a desire to apply Miura origami to fold solar arrays, there is currently no feasible way to employ Miura origami to fold a rectangular plate with uniform thickness ...

To address the challenges associated with existing space solar power station (SSPS) concepts, including noncompact structural design, nonuniform solar energy flow density, and orbital ...

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In fact, solar power accounts for the majority of spacecraft in orbit today, reaching 90% of power generation [1]. Solar cells on early spacecraft were set on the surface of the spacecraft and ...

In order to adapt to the growing demand for renewable energy, solar power generation hasbecome a research hotspot. The article proposes a new type of solar power generation device based onMiura ...

In conclusion, this project successfully demonstrates the feasibility of manufacturing a full-size Miura-Ori solar panel prototype, comprising 60 solar cells and about 388 Wp of power.

Miura-origami-inspired electret/triboelectric power generator for wearable energy harvesting with water-proof capability Kai Tao 1, Haiping Yi 1, Yang Yang1, Lihua Tang 2, Zhaoshu ...

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