

PIENAAR ENERGY (PTY) LTD

Flexible dye sensitized solar cell



Overview

Dye-sensitized solar cells comprised of supramolecular light-harvesting zinc-phthalocyanine···peryleneimide dyads on TiO₂ films generate photoelectricity throughout the 300–650 nm region with the power conversion efficiency reaching up to 2.3% and the incident-photon-to-current-efficiency up to 40%.

Flexible dye sensitized solar cell



Low-Temperature Fabrication of Flexible Dye-Sensitized Solar Cells

In particular, dye-sensitized solar cells (DSSCs) based on flexible plastic conductive substrates provide ample opportunities for unique applications; however, they prevent the use of high ...

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Key Materials and Fabrication Strategies for High-Performance Dye

Recent advancements have shown promising improvements in DSSCs with copper-based electrolytes, and integrating new interface materials like preadsorbents or postadsorbents has ...



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A very simple flexible tandem dye-sensitized solar cell

Dye-sensitized solar cells (DSSCs) have been proposed as the most important third generation photovoltaic devices owing to their low fabrication cost, design flexibility, having low ...

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Trends and developments in flexible solar cells: insights ...

Notably, flexible-PeSCs have achieved high power-conversion efficiencies (PCEs), making them a focal point of current research.

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Current advancement of flexible dye sensitized solar cell: A review

Recently, a study towards the flexible form of solar cells has gained the attention of researchers. The features possess in DSSC such as high flexibility, light weight and environmentally ...

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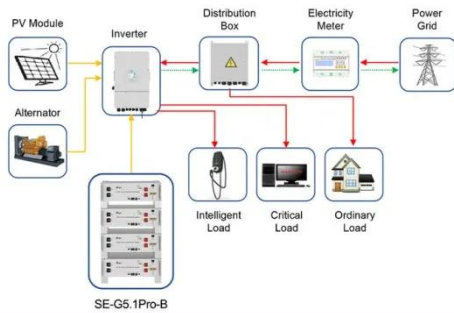
Recent advances in the development of flexible dye-sensitized solar

Flexible dye-sensitized solar cells (FDSSCs) show a huge potential for stretchable electronics and portable power sources due to their lightweight, handy, flexibility, cost-effective, and ...

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Dye-sensitized solar cells based on multichromophoric supramolecular



Application scenarios of energy storage battery products

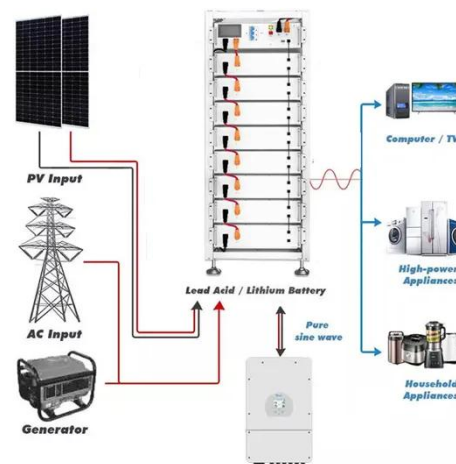
Abstract Dye-sensitized solar cells comprised of supramolecular light-harvesting zinc-phthalocyanine?peryleneimide dyads on TiO₂ films generate photoelectricity throughout the ...

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A review on the current status of dye-sensitized solar cells: Toward

Dye-sensitized solar cells (DSSCs) are among the most attractive third-generation photovoltaic technologies due to their low toxicity, versatility, roll-to-roll compatibility, ultralightness, ...

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High-efficiency (7.2%) flexible dye-sensitized solar cells with Ti

A dye-sensitized solar cell (DSSC, DSC, DYSC or Grätzel cell) is a low-cost solar cell belonging to the group of thin film solar cells. It is based on a semiconductor formed between a photo-sensitized ...

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