

Organic photovoltaics (OPVs) have rapidly improved in efficiency, with single-junction cells now exceeding 18% efficiency.

In this work, we primarily investigated the performance of plasmonic NPs (e.g., Ag and Au) based OPV cells using the General-Purpose Photovoltaic Device Model (GPVDM) ...

The report presents results of the solar resource mapping and photovoltaic power potential evaluation, as a part of a technical assistance for the renewable energy .

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Most importantly, a PCE of 14.46% on 204.11 cm<sup>2</sup>; total module area is the highest certified PCE of an OPV module >200 cm<sup>2</sup>; to this date, and it thus constitutes a new world record, as further confirmed by the official "Champion Photovoltaic Module Efficiency Chart" by the National Renewable Energy Laboratory (NREL, Golden/USA). 12 Last but ...

To review the electrical properties, performance, and efficiency of photovoltaic (OPV) cells, highlighting current developments, trends, and challenges.

This paper provides a comprehensive overview of organic photovoltaic (OPV) cells, including their materials, technologies, and performance.

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Organic photovoltaic (OPV) technology is flexible, lightweight, semitransparent and ecofriendly, but it has historically suffered from low power conversion efficiency (PCE).

We have prepared OPV devices using various non-halogen solvents--toluene, o-xylene, TMB, and THF--as potential replacement for the commonly used halogen solvent CF. Among the non-halogen-processed devices, the toluene ...

Organic photovoltaic (OPV) has shown great potential for energy conversion in specific applications, such as

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In this work, we primarily investigated the performance of plasmonic NPs (e.g., Ag and Au) based OPV cells using the General-Purpose Photovoltaic Device Model (GPVDM) and Semiconducting Thin Film Optics Simulation (SETFOS) environments and compare them to a reference cell without any NPs.

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