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Title: Super strong polymer meets photovoltaic bracket

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This polymer meets the highest reported level of photovoltaic conversion efficiency (19%) using organic solar cells, while also showing 10 times the stretchability of existing devices.

Here, the authors introduce 1,3,5-tris (bromomethyl)benzene into polymer donors as a crosslinker to improve the devices' flexibility while achieving 20.48% efficiency in ternary organic solar...

Insulating polymers are promising components for constructing high performance organic solar cells (OSCs) due to their advantages including low cost, excellent mechanical properties, and ...

Research is being conducted on polymers used in encapsulants and backsheets to increase cell efficiency by using additives or composites with various materials.

Advanced encapsulation polymers based on polyolefin elastomers have demonstrated superior UV resistance and reduced potential-induced degradation compared to traditional ethylene-vinyl acetate ...

Among third-generation solar cells, organic or polymer solar cells are extremely environment-friendly, lightweight, and flexible, making themselves potential candidates for integrated ...

This work builds a high-efficiency ternary all-polymer solar cell and pays attention to the change of film ductility. The structure-property relationship based on efficiency, morphological ...

We designed a mechanical robust interface comprising a monolithic single-layer graphene and poly (methyl methacrylate) (PMMA) coupling interlayer to reinforce the perovskite thin films.

The new material is a two-dimensional polymer that self-assembles into sheets and could be used as a lightweight, durable coating for car parts or cell phones, or as a building material for ...

## Super strong polymer meets photovoltaic bracket

Chen et al. described the enhanced photovoltaic performance by using a novel medium bandgap polymer as the donor for BHJ. A copolymer based on thiophene, difluorobenzothiadiazole ...

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