

Overall, the researchers demonstrated that achiral liquid crystal pathways show a 20 percent improvement in efficiency and three-fold improvement in stability when compared to random ...

We discuss the cooperative roles of DLCs in energy level alignment, interfacial/interlayer construction, and three-dimensional charge transport networks, and evaluate their contributions to ...

This article presents an overview of the developments in the field of organic photovoltaics (PVs) with liquid crystals (LCs).

It's made with a coating of "cholesteric liquid crystal," a substance that has a unique ability to reflect wavelengths of light. Then, the coating redirects sunlight toward photovoltaic...

The liquid crystal strategy helps address a critical issue in the scale-up of perovskite solar cells, which demonstrates the potential for more efficient and stable solar energy generation on a ...

Luminescent solar concentrators (LSCs) combined with photovoltaic cells are in high demand, and it is a very effective way to increase the efficiency of a commercially available silicon ...

Scientists have created a transparent solar coating that turns ordinary windows into clean energy generators without affecting clarity. Using cholesteric liquid crystal layers, the coating...

We'll cover the breakthrough behind this liquid solar technology, exploring how it works, its potential, and the challenges it still faces on the path to commercial viability.

This semi-transparent solar concentrator uses liquid crystal films to reflect and guide circularly polarized sunlight, enabling colorless energy harvesting for next-generation green buildings.

A report from Interesting Engineering explained that the innovation uses cholesteric liquid crystal multilayers to direct sunlight toward the edges of the glass, where tiny photovoltaic cells ...

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