HJ Solar

Liquid crystal polymer solar container

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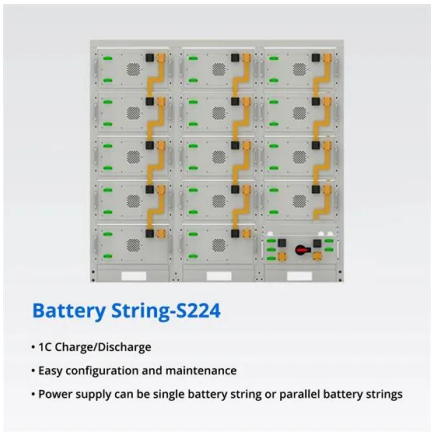

Polymer dispersed liquid crystals-impregnated switchable ...

Polymer dispersed liquid crystals (LCs) (PDLCs) are a type of smart materials in which LCs are embedded in a continuous polymer matrix. Thermochromic LC-based smart windows switch ...

Application of discotic liquid crystals in organic solar cells

Driven by the global energy transition and the demand for flexible photovoltaics, organic solar cells (OSCs) have attracted extensive attention owing to their low weight, mechanical flexibility, ...

Polymers in Liquid Crystal Displays (LCDs): Recent Advances and ...

In this chapter, we summarize the role of polymers in the advancement of liquid crystal displays (LCDs) and highlight the role of polymers in the world of light, as well as image industry. The ...

Integration of liquid crystals with redox electrolytes in dye

This thesis examines the electro-optic, electric and electrochemical properties of liquid crystal (LC) materials in self-assembly systems, that is, liquid crystal-polymer electrolyte composites ...

Chiral liquid crystals improve solar cell efficiency and stability by

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

Liquid-crystal polymer

Molecular structure of the LCP Vectran [5] Liquid crystallinity in polymers may occur either by dissolving a polymer in a solvent (lyotropic liquid-crystal polymers) or by heating a polymer above its glass or ...

Polymer dispersed liquid crystal device with integrated luminescent

ABSTRACT Polymer dispersed Liquid crystal (PDLC) windows are regarded as a good choice for curtain-free windows. However, conventional PDLC needs external electricity to operate, ...

Liquid crystal polymer (LCP), an attractive substrate for retinal

Recently, there has been growing interest in liquid crystal polymer (LCP) as a new biomaterial for next-generation implantable neural prosthetic devices. LCP has a very low moisture absorption rate ...

Liquid crystal structures key to organic solar cell performance, study

Solidification of a donor polymer D18 used in organic solar cell devices from its chiral liquid crystal phase. The movie was recorded under a cross-polarized optical microscope.

Liquid crystals in photovoltaics: a new generation of organic

This article presents an overview of the developments in the field of organic photovoltaics (PVs) with liquid crystals (LCs). A brief introduction to the PV and LC fields is given first,

Propellantless Attitude Control of Solar Sail Technology Utilizing

In order to perform attitude control without propellant, the solar sail's reflectivity is switched, which enables the modification of light photon pressure on the sail and hence control attitude (see Figure ...

Switchable Solar Window Devices Based on Polymer Dispersed Liquid Crystals

Request PDF , Switchable Solar Window Devices Based on Polymer Dispersed Liquid Crystals , Windows are an interesting target for photovoltaics due to the potential for large area of ...

A thermotropic liquid crystal enables efficient and stable perovskite

Retaining high performance of perovskite solar cells over large areas is a challenge. Yang et al. use a thermotropic liquid crystal with high diffusivity that does not co-crystallize with the

Lyotropic Liquid Crystal Mediated Assembly of Donor Polymers ...

Herein, lyotropic liquid crystal (LLC) mediated assembly across multiple conjugated polymers is reported, which generally gives rise to improved device performance of blade-coated non ...

Power generating reflective-type liquid crystal displays using a

We herein report the results of a study of a power generating reflective-type liquid crystal display (LCD), composed of a 90° twisted nematic (TN) LC cell attached to the top of a light ...

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