Photocell active polymer compounds

Which polymers are used in solar cells?
The partial polymers with good conductivity, named as conductive polymers, were widely used in many fields [24, 25, 26]. In this review, the applications of polymers in solar cells are mainly concentrated on DSSC, PSC, and OPV. 2. Polymers in DSSC

Which polymers are used in the photovoltaic field?
Summary and Outlook The polymers have been widely used in the photovoltaic fields,including the DSSC,PSC,and OPV.

Can polymers be used in organic solar cells?
In organic solar cells,polymers are often usedas donor layers,buffer layers,and other polymer-based micro/nanostructures in binary or ternary devices to influence device performances. The current achievements about the applications of polymers in solar cells are reviewed and analyzed.

Do incorporated polymers improve the performance of perovskite solar cells?
The functions of the incorporated polymers in improving performanceand related influencing mechanisms are elucidated. Main challenges and the future prospects are outlooked. Polymer strategy has been widely adopted for efficient,stable,and hysteresis-reduced perovskite solar cells (PSCs).

What is the polymer strategy of perovskite solar cells?
Polymer strategy has been widely adopted for efficient,stable,and hysteresis-reducedperovskite solar cells (PSCs). Herein,a comprehensive review of polymer strategy is provided,by categorizing the polymers as additives in the perovskite active layer and charge transport layer,as an interfacial layer,and as an encapsulation layer.

Can -conjugated polymers be used in organic photovoltaics?
?-Conjugated polymers show promising potentialin the application of organic photovoltaics,including organic solar cells (OSCs) and organic photodetectors (OPDs) because of merits of light-weight,flexibility,facilely tuned color,large-scaled solution-processability,etc.

Organic solar cells (OSCs) have gained increasing attention. Among the various directions in OSCs, all-polymer solar cells (all-PSCs) have emerged as a highly promising and currently active research area due to their excellent film formation properties, mechanical properties, and thermal stabilities. However, most of the high ...

Although photocells are commonly characterized under AM1.5G 100 mW cm -2 (1 sun) illumination, their performance under low light illumination is also important, because photocells are frequently used for indoor applications. In this study, polymer photocells based on a bulk heterojunction composite consisting of a low

energy gap polymer PTB7 and unmodified C ...

In this Review, we discuss the fundamental concepts of polymeric photocatalysis and examine different polymeric photocatalysts, including carbon nitrides, conjugated polymers, covalent triazine...

Herein, we demonstrate highly thermally stable OSCs using multicomponent photoactive layer synthesized via a facile one-pot polymerization, which show the advantages of low synthetic cost and...

Polymer strategy has been widely adopted for efficient, stable, and hysteresis-reduced perovskite solar cells (PSCs). Herein, a comprehensive review of polymer strategy is provided, by categorizing the polymers as additives in the perovskite active layer and charge transport layer, as an interfacial layer, and as an encapsulation ...

In this review recent developments in the area of ?-conjugated polymeric semiconductors for organic thin-film (or field-effect) transistors (OTFTs or OFETs) and bulk-heterojunction photovoltaic (or solar) cell (BHJ-OPV or ...

In dye-sensitized solar cells, polymers can be used as flexible substrates, pore- and film-forming agents of photoanode films, platinum-free counter electrodes, and the ...

In this Review, we discuss the most relevant classes of molecular photoswitches, and demonstrate a selection of photochromic polymers, gels, porous materials, surfaces, energy-storing materials and other systems ...

This review delves into various nonconjugated polymer (NCP) strategies that have played a crucial role in the success of perovskite devices, encompassing modifiers for the electron transport layer (ETL), polymer templates facilitating perovskite growth, and interface layers in the devices.

In this Review, we discuss the most relevant classes of molecular photoswitches, and demonstrate a selection of photochromic polymers, gels, porous materials, surfaces, energy-storing materials and other systems triggered with visible light.

In dye-sensitized solar cells, polymers can be used as flexible substrates, pore- and film-forming agents of photoanode films, platinum-free counter electrodes, and the frameworks of quasi-solid-state electrolytes.

Herein, we demonstrate highly thermally stable OSCs using multicomponent photoactive layer synthesized via a facile one-pot polymerization, which show the advantages ...

This review highlights general design strategies of ?-conjugated polymers for high-performance OPVs, including conjugated backbone engineering, side-chains ...

In recent years, developing potent antioxidants has been a very active area of research. In this context,

phenolic compounds have been evaluated for their antioxidant activity. However, the use of phenolic compounds has also been limited by poor ...

This review delves into various nonconjugated polymer (NCP) strategies that have played a crucial role in the success of perovskite devices, encompassing modifiers for the electron transport layer (ETL), polymer ...

Halide perovskites (HPs) are gaining traction as effective photoactive materials due to their unique properties in numerous applications, which have significantly demonstrated several methods in improving HPs. Nonetheless, the role of active polymers in HPs as ...

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