

In the light of results, the increased contributions of LUMOs via end-capped acceptors and HOMOs by phenothiazine demonstrated that charge will transfer from the phenothiazine-based ...

The effects of dye-adsorption solvent on the performances of dye-sensitized solar cells based on phenothiazine dyes were investigated in this study. The highest conversion efficiency of 3.78% was ...

With the view to the poor coexistence between promoting molecular planarity towards improving the intramolecular charge transfer (ICT) effect and preventing charge recombination for dyes in Dye ...

Phenothiazines are one of the more common dye scaffolds for dye-sensitized solar cells. However, these sensitizers are exclusively based on a 3,7-substitution pattern. Herein, we have synthesized ...

?: In dye-sensitized solar cells (DSSCs), as the excited electrons from dye molecules are injected into the conduction band of semiconductor films through the acceptor/anchoring moieties, the accep ...

A D-A-?-A dye (PTZ-5) has been synthesized by introducing a benzothiadiazole (BTD) unit as an auxiliary acceptor in a phenothiazine-based D-?-A dye (PTZ-3) to broaden its spectral response ...

Phenothiazine derivatives with various conjugated linkers (furan, thiophene, and 3,4-ethylenedioxythiophene) were synthesized and used in dye-sensitized solar cells to study the effect of ...

1 Supporting Information Effect of Five-Membered Heteroaromatic Linkers to the Performance of Phenothiazine-Based Dye-Sensitized Solar Cells Se Hun Kim,aaHyun Woo Kim, aChun Sakong, ...

In combination with a previously reported one with anchoring group of carboxylic acid (-CH), the effects of the three anchoring groups on material properties and the performance of dye ...

This investigation's main goal is to ascertain how variations in the donor group--phenohydrazine, phenothiazine, or phenoxazine as well as the replacement of phenyl with ...

Eleven new dyes have been synthesized in order to investigate the effect of five different ?-spacers and two different auxiliary donors in phenothiazine-based sensitizers for dye-sensitized ...

This study provides a detailed investigation of phenothiazine-based sensitizers () for dye-sensitized solar cells (DSSCs), focusing on their spectral, electrochemical, and photovoltaic ...

The effect of ?-conjugation enlargement by incorporation of different heterocyclic substituents possessing

various electron-donor affinities was systematically experimentally and theoretically ...

This work described the role of the π -spacer for tuning the photovoltaic and electrochemical performance of phenothiazine-based dye-sensitized solar cells using quantum chemical analysis.

Abstract Three phenothiazine-based dyes have been prepared and utilized as dye-sensitized solar cells (DSSCs). The effects of dye-adsorption solvent on the performances of dye-sensitized solar cells ...

This paper reviews and analyzes almost all research works published to date on phenothiazine-based polymers and their uses in dye-sensitized and bulk heterojunction solar cells.

The incorporation of non-conjugated phenothiazine as a π -spacer in D-A- π -A dyes showed remarkable enhancement in the photovoltaic performance of dye-sensitized solar cell (DSSC) devices.

Abstract The phenothiazine-derivative dyes have been designed using phenothiazine group (donor part), thienothiophene (spacer part), and different acid groups (electron-acceptor part).

Developing p-type polymeric semiconductors with exceptional electrical performance, heat tolerance, and cost-effectiveness is pivotal for advancing the practical application of n-i-p perovskite solar cells. ...

Those phenothiazine dyes show better photovoltaic performance than their carbazole counterparts. Three N-phenylphenothiazine sensitizers bearing benzothiadiazole unit with benzene, ...

Abstract Eleven new dyes have been synthesized in order to investigate the effect of five different π -spacers and two different auxiliary donors in phenothiazine-based sensitizers for dye ...

Abstract: Developing p-type polymeric semiconductors with exceptional electrical performance, heat tolerance, and cost-effectiveness is pivotal for advancing the practical application of n-i-p perovskite ...

Dye-sensitized solar cells (DSSCs) were built to probe the effect of number of cyanocinnamic acid anchoring groups on the ring periphery of phenothiazine dyes. Two kinds of dyes, one having ...

Three phenothiazine-based dyes have been prepared and utilized as dye-sensitized solar cells (DSSCs). The effects of dye-adsorption solvent on the performances of dye-sensitized solar cells ...

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