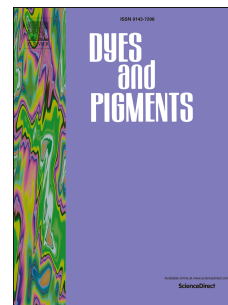


Accepted Manuscript

(D- π -A)³-Type metal-free organic dye for dye-sensitized solar cells application

Xiaoning Liao, Hai Zhang, Jianping Huang, Guoqiang Wu, Xiaoli Yin, Yanping Hong



PII: S0143-7208(18)30154-2

DOI: [10.1016/j.dyepig.2018.03.075](https://doi.org/10.1016/j.dyepig.2018.03.075)

Reference: DYPI 6660

To appear in: *Dyes and Pigments*

Received Date: 21 January 2018

Revised Date: 26 March 2018

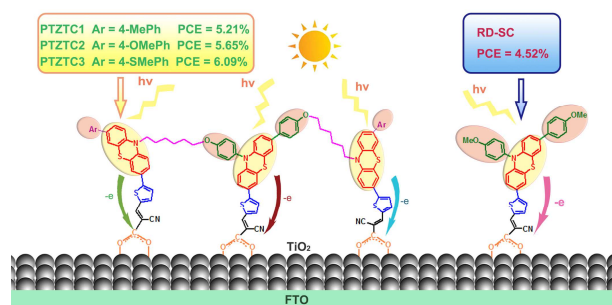
Accepted Date: 30 March 2018

Please cite this article as: Liao X, Zhang H, Huang J, Wu G, Yin X, Hong Y, (D- π -A)³-Type metal-free organic dye for dye-sensitized solar cells application, *Dyes and Pigments* (2018), doi: 10.1016/j.dyepig.2018.03.075.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Graphical abstract

Comparing to those of the dye **RD-SC** bearing a mono D- π -A branch, the dyes **PTZTC1-3** containing three independent D- π -A branches exhibit tripled molar extinction coefficient, higher IPCE values and broader IPCE spectra response in the visible region, as well as higher density of D- π -A light-harvesting units absorbed on the surface of TiO₂. Among the DSSCs sensitized by these dyes, the cell based on **PTZTC3** attained the best power conversion efficiency (PCE) due to the highest short-circuit current, open-circuit voltage and the longest electron lifetime of the device.



Download English Version:

<https://daneshyari.com/en/article/6598068>

Download Persian Version:

<https://daneshyari.com/article/6598068>

[Daneshyari.com](https://daneshyari.com)