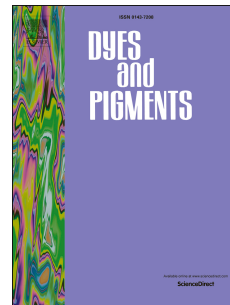


Accepted Manuscript

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PII: S0143-7208(17)32512-3

DOI: [10.1016/j.dyepig.2018.03.017](https://doi.org/10.1016/j.dyepig.2018.03.017)

Reference: DYPI 6602

To appear in: *Dyes and Pigments*

Received Date: 8 December 2017

Revised Date: 14 February 2018

Accepted Date: 11 March 2018

Please cite this article as: Marzouk S, Heinrich B, Lévêque P, Leclerc N, Khiari J, Méry S, Phthalocyanine-based dumbbell-shaped molecule: Synthesis, structure and charge transport studies, *Dyes and Pigments* (2018), doi: 10.1016/j.dyepig.2018.03.017.

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Phthalocyanine-based dumbbell-shaped molecule: synthesis, structure and charge transport studies

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Abstract

We describe the synthesis of a fully conjugated donor-acceptor-donor triad (ZnPc-BTD-ZnPc) made of zinc phthalocyanine donor fragments (ZnPc) at both ends of a benzothiadiazole-based central dye (BTD). The molecule exhibits a broad absorption in the whole visible range. The introduction of sterically demanding alkoxy chains to the ZnPc fragments is found to limit the molecular organization to a short-range columnar order and the charge-carrier mobility to moderate values, but provides outstanding solubilities in organic solvents.

Keywords

Phthalocyanine, Benzothiadiazole, Stille cross-coupling, self-assembling, charge transport, photostability

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