



TTF based donor-pi-acceptor dyads synthesized for NLO applications

Submitted by Régis Barille on Fri, 03/10/2017 - 10:13

Titre	TTF based donor-pi-acceptor dyads synthesized for NLO applications
Type de publication	Article de revue
Auteur	Ayadi, Awatef [1], Szukalski, Adam [2], El-Ghayoury, Abdelkrim [3], Haupa, Karolina [4], Zouari, Nabil [5], Mysliwiec, Jaroslaw [6], Kajzar, François [7], Kulyk, Bohdan [8], Sahraoui, Bouchta [9]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2017
Langue	Anglais
Date	Mars 2017
Pagination	255-266
Volume	138
Titre de la revue	Dyes and Pigments
ISSN	0143-7208
Mots-clés	DFT calculations [10], Donor-pi-acceptor [11], Nonlinear optics [12], Optical Kerr effect [13], TTF [14], UV-Visible absorption [15]
Résumé en anglais	<p>Two new TTF-pi-acceptor dyads that contain p-nitrophenyl group as acceptor and bis-(styryl)benzene system as an efficient π-conjugated bridge have been synthesized by multistep synthetic procedure and their electrochemical behavior has been studied by cyclic voltammetry (CV). The occurrence of an intramolecular charge transfer (ICT) in these molecules has been evidenced by UV-Visible electronic absorption spectroscopy and these studies were completed by DFT calculations in both gas phase and in solution. The nonlinear optical parameters obtained via SHG and THG measurements are described and indicate that these materials are valuable candidates for the construction of optoelectronic and photonic devices. The Optical Kerr Effect measurements indicate that these materials exhibit a great potential in the field of optical switchers construction, where the material's photoresponse time is a crucial parameter.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua15727 [16]
DOI	10.1016/j.dyepig.2016.11.030 [17]
Lien vers le document	http://www.sciencedirect.com/science/article/pii/S0143720816303709 [18]
Titre abrégé	Dyes pigm.

Liens

[1] <http://okina.univ-angers.fr/aayadi/publications>

[2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26482>

- [3] <http://okina.univ-angers.fr/a.elghayoury/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26483>
- [5] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26452>
- [6] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=4316>
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- [8] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26477>
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- [16] <http://okina.univ-angers.fr/publications/ua15727>
- [17] <http://dx.doi.org/10.1016/j.dyepig.2016.11.030>
- [18] <http://www.sciencedirect.com/science/article/pii/S0143720816303709>

Publié sur *Okina* (<http://okina.univ-angers.fr>)