

# Rational Topological Design for Fluorescence Enhancement upon Aggregation of Distyrylfuran Derivatives

Submitted by Fr d ric Gohier on Mon, 04/27/2015 - 10:04

Titre	Rational Topological Design for Fluorescence Enhancement upon Aggregation of Distyrylfuran Derivatives
Type de publication	Article de revue
Auteur	Mallet, Charlotte [1], Moussallem, Chady [2], Faurie, Alexandre [3], Allain, Magali [4], Gohier, Fr�d�ric [5], Skene, William G [6], Fr�re, Pierre [7]
Editeur	Wiley-VCH Verlag
Type	Article scientifique dans une revue � comit� de lecture
Ann�e	2015
Langue	Anglais
Date	18/05/2015
Num�ro	21
Pagination	7944 - 7953
Volume	21
Titre de la revue	Chemistry - A European Journal
ISSN	0947-6539
Mots-cl�s	aggregation [8], fluorescence [9], solid-state interactions [10], topology design [11], X-ray diffraction [12]
R�sum� en anglais	<p>A series of 2,5-distyrylfuran derivatives bearing pentafluorophenyl- and cyanovinyl units have been synthesized for aggregation-induced emission (AIE). The effect of the type and extent of the supramolecular connections on the AIE of the furan derivatives were examined and correlated with their X-ray crystal structures. It was found that the simultaneous presence of cyano and perfluorophenyl units strongly enhances the fluorescence upon aggregation. Single-crystal X-ray diffraction analysis confirmed that C — H...F, F...F, C — H...nitrile, Ar...ArF (Ar=aryl, ArF=fluoroaryl), and nitrile...ArF intra- and intermolecular interactions drive the topology of the molecule and that solid-state supramolecular contacts favor AIE of the furan derivatives.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua10374">http://okina.univ-angers.fr/publications/ua10374</a> [13]
DOI	10.1002/chem.201500023 [14]
Lien vers le document	<a href="http://doi.wiley.com/10.1002/chem.201500023">http://doi.wiley.com/10.1002/chem.201500023</a> [15]
Titre abr�g�	Chem. Eur. J.

---

## Liens

[1] [http://okina.univ-angers.fr/publications?f\[author\]=2799](http://okina.univ-angers.fr/publications?f[author]=2799)

[2] [http://okina.univ-angers.fr/publications?f\[author\]=3242](http://okina.univ-angers.fr/publications?f[author]=3242)

- [3] <http://okina.univ-angers.fr/alfaurie/publications>
- [4] <http://okina.univ-angers.fr/magali.allain/publications>
- [5] <http://okina.univ-angers.fr/f.gohier/publications>
- [6] [http://okina.univ-angers.fr/publications?f\[author\]=18237](http://okina.univ-angers.fr/publications?f[author]=18237)
- [7] <http://okina.univ-angers.fr/pierre.frere/publications>
- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=7866](http://okina.univ-angers.fr/publications?f[keyword]=7866)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=3583](http://okina.univ-angers.fr/publications?f[keyword]=3583)
- [10] [http://okina.univ-angers.fr/publications?f\[keyword\]=16336](http://okina.univ-angers.fr/publications?f[keyword]=16336)
- [11] [http://okina.univ-angers.fr/publications?f\[keyword\]=16337](http://okina.univ-angers.fr/publications?f[keyword]=16337)
- [12] [http://okina.univ-angers.fr/publications?f\[keyword\]=5082](http://okina.univ-angers.fr/publications?f[keyword]=5082)
- [13] <http://okina.univ-angers.fr/publications/ua10374>
- [14] <http://dx.doi.org/10.1002/chem.201500023>
- [15] <http://doi.wiley.com/10.1002/chem.201500023>

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