



Laboratoire PPSM – UMR CNRS 8531

Photochimie et Photophysique Supramoléculaires et Macromoléculaires

Séminaire du PPSM

Mardi 27 juillet 2010 - 11h

Salle de conférence du Pavillon des Jardins

Docteur Cyril Poriel

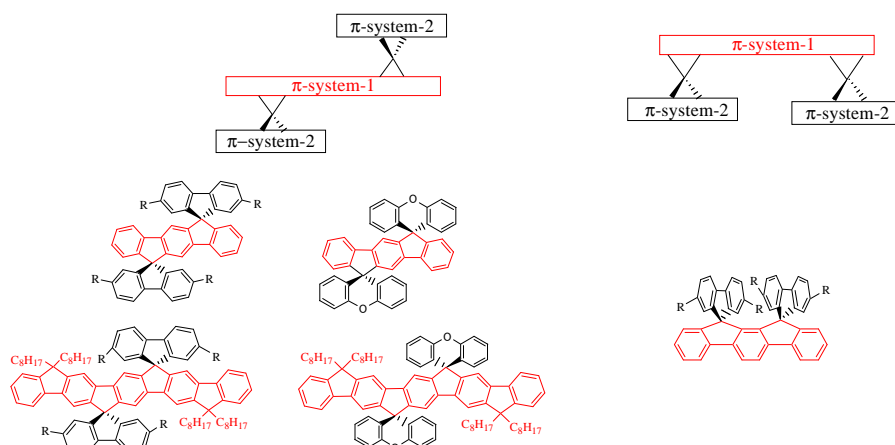
Université de Rennes 1, France

Invité par : Rémi Métivier

«New 3 π -2spiro derivatives for organic electronics»

Advances in organic electronics have imposed a strong demand on the required oligomer or polymer for a desired application.^{1,2} In this context, the synthesis of new materials with well defined geometry and specified properties is strongly developed worldwide.^{3,4} Among the promising materials for Organic Electronic applications, spiro compounds⁴ have been widely used for the last fifteen years and the knowledge of their physico-chemical properties drives the development of optoelectronic devices. We developed in our group, for blue OLED applications, new families of fluorophores, which present depending of their geometry profiles, different and tunable properties.

"3 π -2spiro"



We thus report in this communication our investigations towards the design and the synthesis of original fluorophores with 3 π -2spiro architecture, based on the indenofluorene or pentaphenylene cores.⁵⁻¹⁰ Their electrochemical, thermal and optical properties will be evaluated in order to understand the specific properties of these new materials. Their use in OLED will be finally presented.

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Référence :

- (1) *Chem. Rev.* **2007**, *107*, 4, Thematic issue: Organic Electronics and Optoelectronics. Guest editors: S. R. Forrest and M. E. Thompson.
- (2) Grimsdale, A. C.; Chan, K. L.; Martin, R. E.; Jokisz, P. G.; Holmes, A. B. *Chem. Rev.* **2009**, *109*, 897–1091.
- (3) Grimsdale, A. C.; Müllen, K. *Macromol. Rapid. Commun.* **2007**, *28*, 1676-1702.
- (4) Saragi, T. P. I.; Spehr, T.; Siebert, A.; Fuhrmann-Lieker, T.; Salbeck, J. *Chem. Rev.* **2007**, *107*, 1011-1065.
- (5) Poriel, C.; Liang, J.-J.; Rault-Berthelot, J.; Barrière, F.; Cocherel, N.; Slawin, A. M. Z.; Horhant, D.; Virboul, M.; Alcaraz, G.; Audebrand, N.; Vignau, L.; Huby, N.; Hirsch, L.; Wantz, G. *Chem. Eur. J.* **2007**, *13*, 10055-10069. (VIP)
- (6) Poriel, C.; Rault-Berthelot, J.; Barrière, F.; Slawin, A. M. Z. *Org. Lett.* **2008**, *10*, 373-376.
- (7) Cocherel, N.; Poriel, C.; Rault-Berthelot, J.; Barrière, F.; Audebrand, N.; Slawin, A. M. Z.; Vignau, L. *Chem. Eur. J.* **2008**, *14*, 11328-11342.
- (8) Thirion, D.; Poriel, C.; Barrière, F.; Métivier, R.; Rault-Berthelot, J. *Org. Lett.* **2009**, *11*, 4794-4797.
- (9) Poriel, C.; Barrière, F.; Thirion, D.; Rault-Berthelot, J. *Chem. Eur. J.* **2009**, *15*, 13304-13307.
- (10) Cocherel, N.; Poriel, C.; Vignau, L.; Bergamini, J.-F.; Rault-Berthelot, J. *Org. Lett.* **2010**, *12*, 452-455.

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