



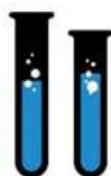
Società Chimica Italiana



# XXIV Congresso Nazionale della Società Chimica Italiana

Lecce 11-16 settembre 2011

Lecce 2011



International Year of  
**CHEMISTRY**  
2011

**ATTI DEL CONGRESSO**

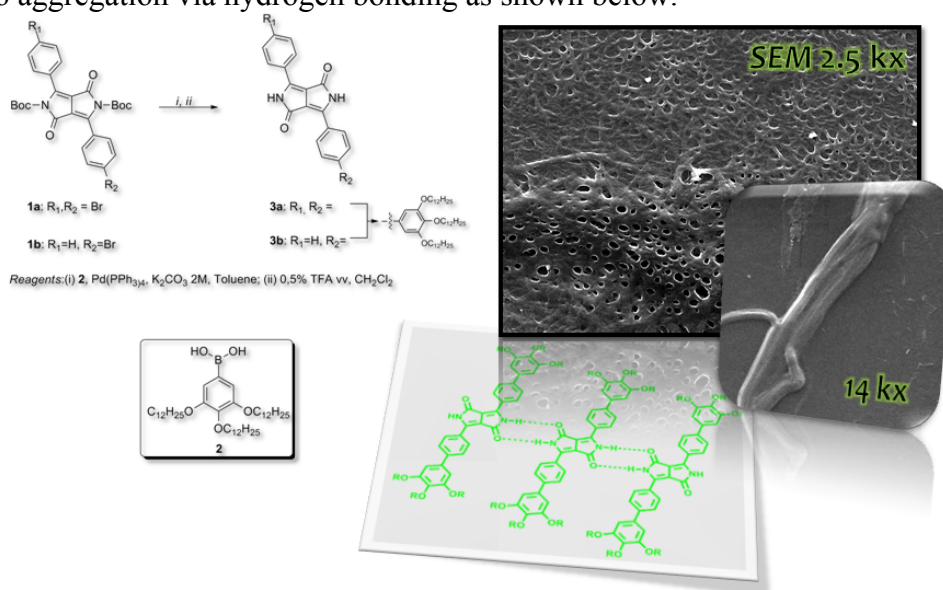
## ORG-PO-15 Diketopyrrolopyrrole Supramolecular Network

**G. Borsato,<sup>a</sup> R. Beninatto,<sup>a</sup> E. Vagnozzi,<sup>a</sup> O. De Lucchi,<sup>a</sup> F. Fabris,<sup>a</sup> V. Lucchini<sup>b</sup> and E. Zendri<sup>b</sup>**

<sup>a</sup>Dipartimento di Scienze Molecolari e Nanosistemi, <sup>b</sup>Dipartimento di Scienze Ambientali, Informatica e Statistica; Ca' Foscari Venezia, Dorsoduro 2137, I-30123, Venezia.

e-mail: gborsato@unive.it

Diketopyrrolopyrrole (DPP) is among the most important high performance pigments (Colour Index PR 255). It is used in automotive industries and in general paint and tinting applications. In recent years, research in the DPP focused on the synthesis of new derivatives to be used in the field of organic photovoltaic (OPV) applications<sup>[1]</sup> and as chromophore for near-infrared spectroscopy (NIR).<sup>[2]</sup> Our research aims to the synthesis of new soluble DPPs via Suzuki cross-coupling,<sup>[3]</sup> starting from the dibromide **1**. In the case of **3a**, the SEM image indicates the formation of supramolecular networks in the solid state which was rationalized as due to aggregation via hydrogen bonding as shown below.



[1] (a) B. Walker, C. Kim, T. Q. Nguyen, *Chem. Mater.* **2011**, 23, 470; (b) B. P. Karsten, R. A. J. Janssen, *Macromol. Chem. Phys.* **2011**, 212, 515.

[2] (a) G. M. Fischer, E. Daltrozzo, A. Zumbusch, *Angew. Chem. Int. Ed.* **2011**, 50, 1406; (b) G. M. Fischer, A. P. Ehlers, A. Zumbusch, E. Daltrozzo, *Angew. Chem. Int. Ed.* **2007**, 46, 3750; (c) G. M. Fischer, M. Isomäki-Krondahl, I. Göttker-Schnetmann, E. Daltrozzo, A. Zumbusch, *Chem. Eur. J.* **2009**, 15, 4857.

[3] Lincker, F.; Bourgun, P.; Masson, P.; Didier, P.; Guidoni, L.; Bigot, J-Y.; Nicoud, J-F.; Donnio, B.; Guillon, D. *Org. Lett.* **2005**, 7, No. 8, 1505.