



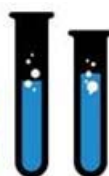
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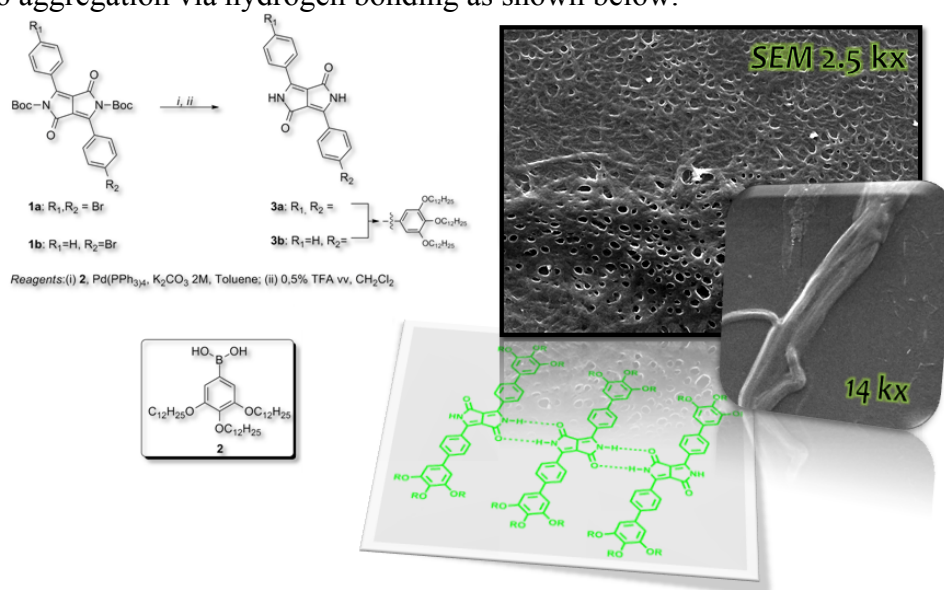
ORG-PO-15 Diketopyrrolopyrrole Supramolecular Network

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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^[1] and as chromophore for near-infrared spectroscopy (NIR).^[2] Our research aims to the synthesis of new soluble **DPPs** via *Suzuki cross-coupling*,^[3] 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.