



## Poly(thiophenes) derivatized with oligo(oxyethylene) chains as donor materials for organic solar cells

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Auteur	Bricaud, Quentin [1], Cravino, Antonio [2], Leriche, Philippe [3], Roncali, Jean [4]
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Résumé en anglais	Regioregular poly[3-(3,6-dioxaheptyl)thiophene] (PDHT) has been synthesized by Grignard metathesis (GRIM). The UV-vis absorption spectrum of spin-cast films of PDHT presents a well-resolved vibrational fine structure typical of well-ordered polymers. The characterization of bulk heterojunction solar cells fabricated using PCBM as acceptor shows that PDHT leads to power conversion efficiencies in ca 4-5 times lower than that obtained with regioregular poly(3-hexylthiophene) (P3HT). In contrast, the characterization of bilayer solar cells realized by thermal evaporation of C60 on spin-cast polymer films shows that PDHT leads to performances similar or even better than P3HT both before and after thermal treatment.
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