



Effect of side chains on the electronic and photovoltaic properties of diketopyrrolopyrrole-based molecular acceptors

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Auteur	Josse, Pierre [1], Labrunie, Antoine [2], Dalinot, Clément [3], McAfee, Seth M [4], Dabos, Sylvie [5], Roncali, Jean [6], Welch, Gregory C [7], Blanchard, Philippe [8], Cabanetos, Clément [9]
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Résumé en anglais	Four molecular electron acceptors based on a common phthalimide end-capped diketopyrrolopyrrole pconjugated backbone, solubilized by different alkyl groups, have been synthesized. The influence of the nature and position of the solubilizing alkyl chains attached at the three constitutive blocks has been investigated. Results collected from UV-Vis absorption spectroscopy, cyclic voltammetry, solar cells fabrication and testing as well as atomic force microscopy show that the mode of substitution has negligible effect at the molecular level but strongly affects the material self-assembling properties, charge carrier transport and in turn, devices performances.
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Liens

- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26390>
- [2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=19923>
- [3] <http://okina.univ-angers.fr/cdalinet/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=26388>
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- [15] <http://okina.univ-angers.fr/publications/ua15688>
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