



Poly(thiophenes) derivatized with linear and macrocyclic polyethers: from cation detection to molecular actuation

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Auteur	Demeter, Dora [1], Blanchard, Philippe [2], Grosu, Ion [3], Roncali, Jean [4]
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Résumé en anglais	<p>The association of linear or macrocyclic polyethers with the electronic properties of the π-conjugated polythiophene backbone leads to functional conducting polymers that exhibit metal cation dependent electronic properties. Based on this concept, various classes of cation sensors have been proposed and investigated for almost two decades. The interactions of metal cations with linear or macrocyclic polyether functional groups lead to modifications of the electronic properties of the π-conjugated backbone through various mechanisms including direct electronic effects on a single conjugated chain, collective electrochemical processes, or conformational changes. Conjugated polymers and oligomers representative of these various processes are discussed with an emphasis on recent examples of derivatized conjugated systems in which the interactions between metal cations and polyether groups serve as driving force to create molecular motion in conjugated systems.</p>
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Liens

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