



# Electropolymerizable 3D $\pi$ -conjugated architectures with ethylenedioxythiophene (EDOT) end-groups as precursors of electroactive conjugated networks

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Titre	Electropolymerizable 3D $\pi$ -conjugated architectures with ethylenedioxythiophene (EDOT) end-groups as precursors of electroactive conjugated networks
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Auteur	Piron, Flavia [1], Leriche, Philippe [2], Grosu, Ion [3], Roncali, Jean [4]
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Année	2010
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Résumé en anglais	<p>Three-dimensional conjugated architectures involving conjugated branches with terminal EDOT groups attached onto a bithiophene core twisted by ca. 90 degrees by steric interactions have been synthesized by Stille coupling reactions. The UV-Vis absorption spectra recorded in solution show complex spectral features that depend on both the size and chemical structure of the main conjugated segment and of the conjugated side chains. Thanks to the fixation of the terminal EDOT groups, these compounds undergo straightforward and complete electropolymerization to produce stable electrode materials. The analysis of the electrochemical and optical properties of the polymers by cyclic voltammetry and spectroelectrochemistry suggests that the electrochemical coupling of the terminal EDOT groups leads to the formation of <math>\pi</math>-conjugated networks the electrochemical and optical properties of which can be tuned through the length and chemical composition of the oligomeric conjugated links.</p>
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## Liens

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[3] [http://okina.univ-angers.fr/publications?f\[author\]=2688](http://okina.univ-angers.fr/publications?f[author]=2688)

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[6] <http://dx.doi.org/10.1039/C0JM01873B>

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