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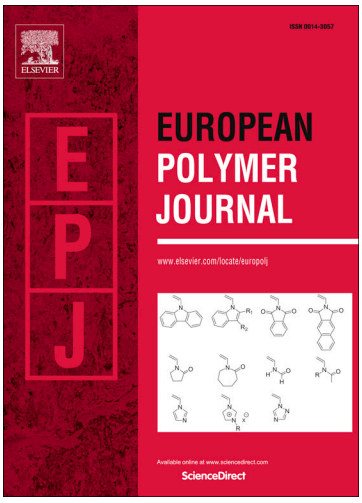

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Thieno[2,3-*b*]thiophene Based Polymers: Synthesis and Optoelectronic Properties

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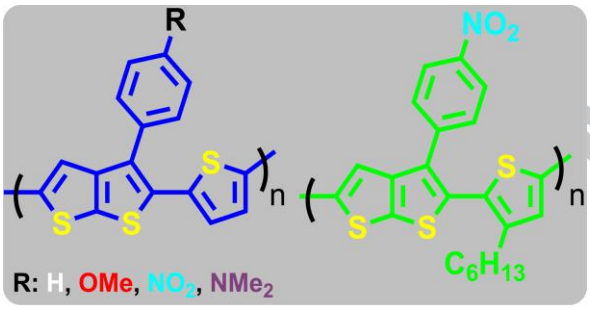
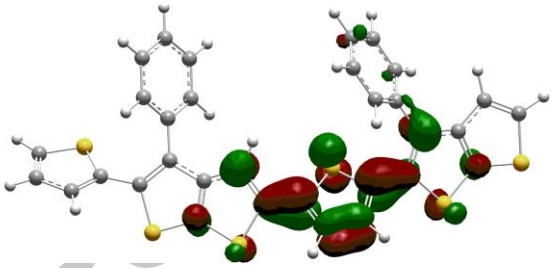
Graphical abstract





Highlights

- In spite of the cross-conjugated TTs, polymers obtained via Suzuki cross coupling with thiophene demonstrated bathochromic shifts with respect to their monomers in UV-Vis investigations up to 203 nm.
- While the polymer with H unit had the smallest band gap of 2.18 eV, the highest one was observed to be 2.65 eV for NMe_2 containing polymer. Electrochemical studies revealed relatively low oxidation potentials recorded between 1.10 and 1.31 V.
- The experimental results were supported by DFT and TD-DFT computational studies.

Abstract