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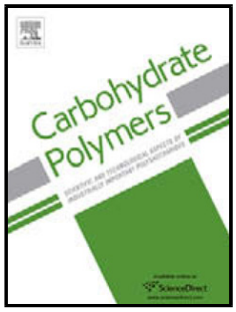

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Surface functionalization of cellulose with poly(3-hexylthiophene) via novel oxidative polymerization

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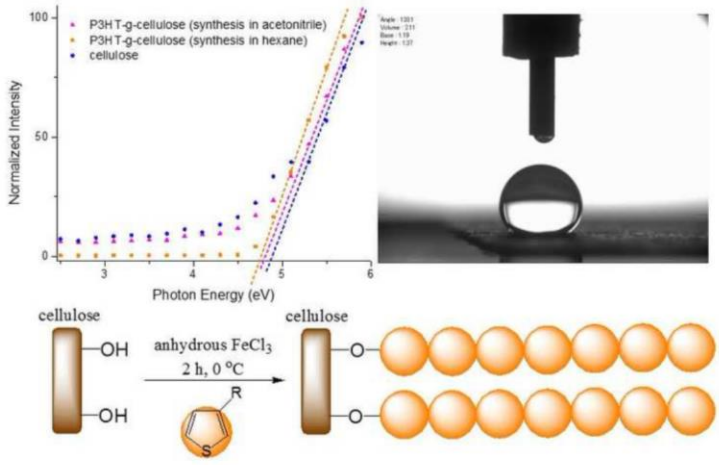
Graphical abstract



Highlights

- Poly(3-hexylthiophene) was grafted onto cellulose surface via directly oxidative polymerization
- The thermal stability and crystallinity of grafted cellulose decrease upon grafting
- The modified cellulose display high hydrophobic property with a lotus effect
- The conductivity and electronic surface state of grafted cellulose were improved