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Electrochemical performance of poly(3, 4-ethylenedioxythiophene)/nanocrystalline cellulose (PEDOT/NCC) film for supercapacitor

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Highlights

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- PEDOT doped with NCC was prepared via electrochemical polymerization technique.
- Highest specific capacitance of 117.02 F/g at 100 mV/s was achieved.
- PEDOT/NCC showed low resistance for charge transfer ($R_{ct} = 0.53 \Omega$).
- PEDOT/NCC thin film retain 86% of original capacitance after 1000 cycles.
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Abstract

Supercapacitor electrode based on conducting polymer of poly (3,4-ethylenedioxythiophene) (PEDOT) doped with nanocrystalline cellulose (NCC) films were prepared via electrochemical polymerization technique. Different applied potential, concentration and

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