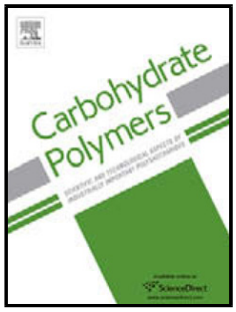

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PII: S0144-8617(18)31117-2
DOI: https://doi.org/10.1016/j.carbpol.2018.09.043
Reference: CARP 14086

To appear in:

Received date: 7-6-2018
Revised date: 18-9-2018
Accepted date: 18-9-2018

Please cite this article as: Ravit R, Abdullah J, Ahmad I, Sulaiman Y, Electrochemical performance of poly(3, 4-ethylenedioxythipohene)/nanocrystalline cellulose (PEDOT/NCC) film for supercapacitor, *Carbohydrate Polymers* (2018), https://doi.org/10.1016/j.carbpol.2018.09.043

Electrochemical performance of poly(3, 4-ethylenedioxythipohene)/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 Ω).
- 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-ethylenedioxythipohene) (PEDOT) doped with nanocrystalline cellulose (NCC) films were prepared via electrochemical polymerization technique. Different applied potential, concentration and