

Supporting information

Electrosynthesis and electrochemical capacitive behavior of a new nitrogen

PEDOT analogue-based polymer electrode

Zilan Feng §, Daize Mo §, Weiqiang Zhou, Qianjie Zhou, Jingkun Xu *, Baoyang Lu

*, Shijie Zhen, Zhipeng Wang, Xiumei Ma

School of Pharmacy, Jiangxi Science and Technology Normal University, Nanchang
330013, China

* Corresponding author: Tel: +86-791-88537967; Fax: +86-791-83823320;

Email: xujingkun@tsinghua.org.cn; lby1258@163.com.

§ These authors contributed equally to this work.

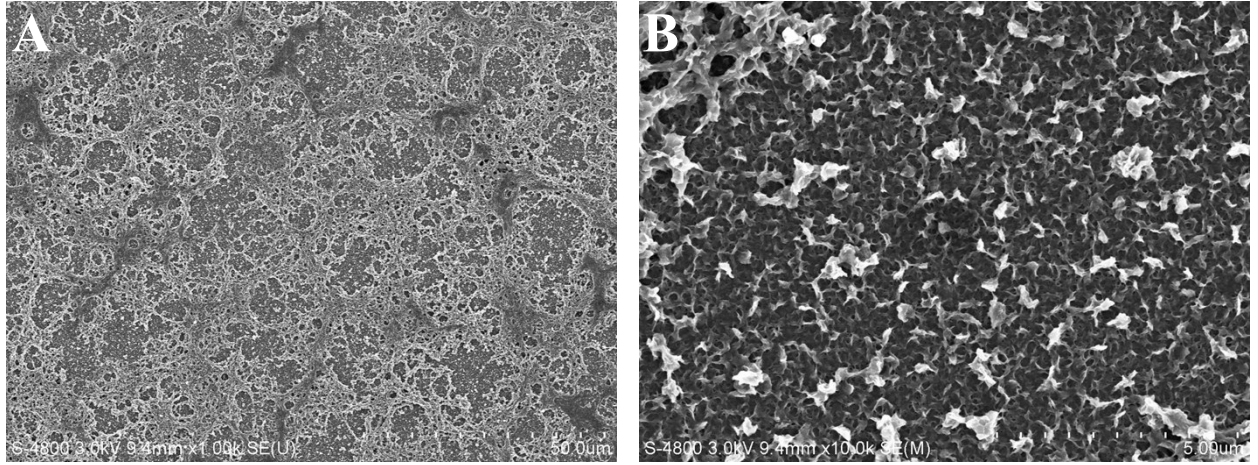


Fig. S1 SEM images of PMDTO obtained potentiostatically at 0.7 V (vs Ag/AgCl) on ITO electrode for 30 s. Magnification: (A) 1 000 ×, (B) 10 000 ×.

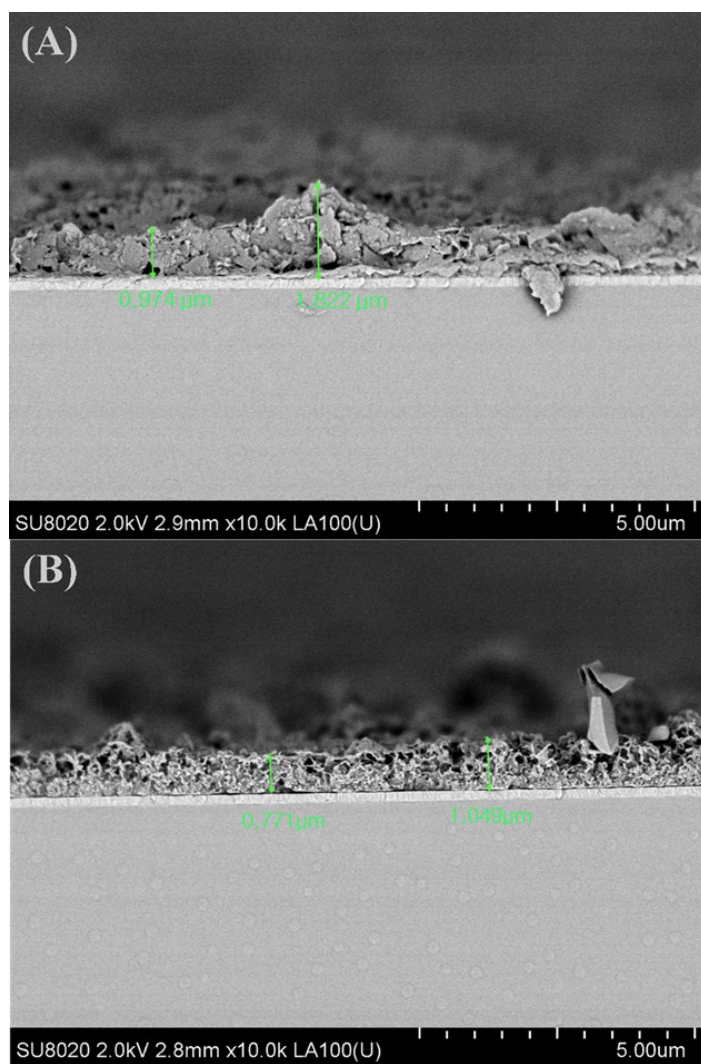


Fig. S2 SEM image of cross-section of PEDOT (A) and PMDTO (B) films.

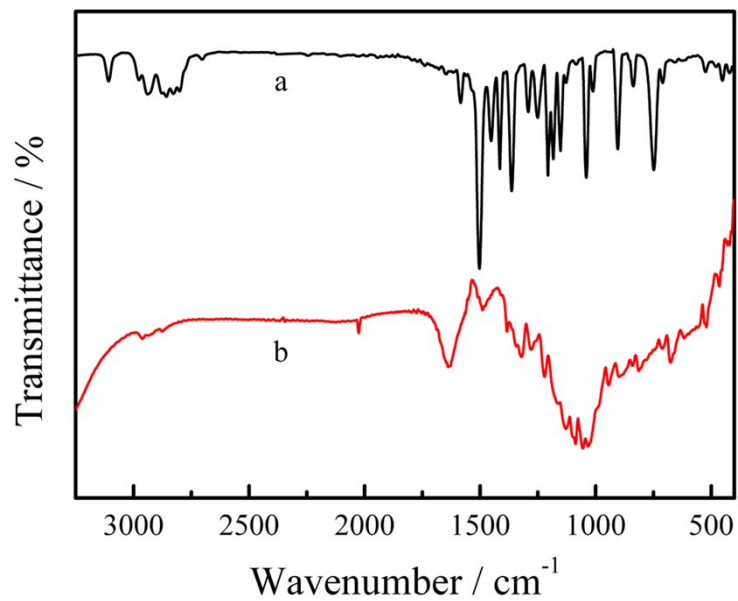


Fig. S3 FT-IR spectra of the MDTO monomer (a) and the doped PMDTO film (b) obtained potentiostatically at 0.7 V vs Ag/AgCl.

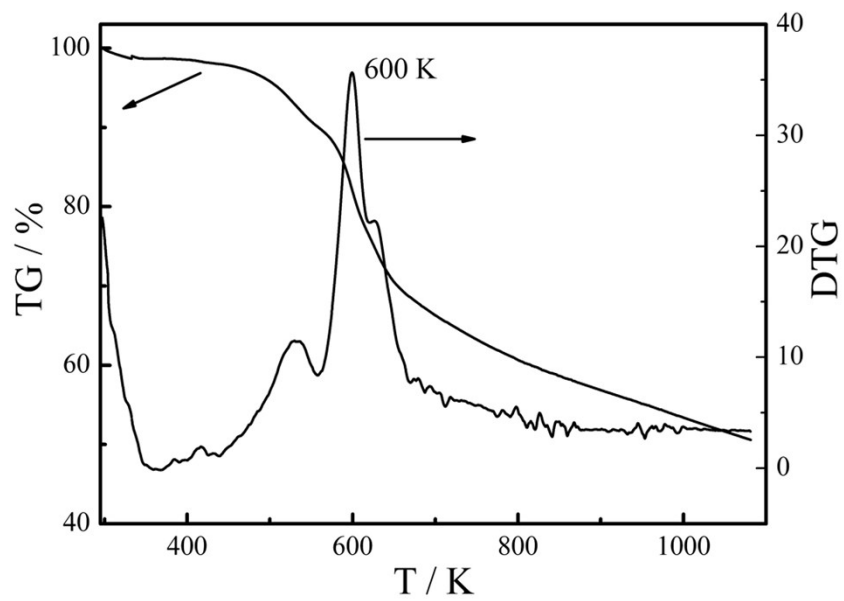


Fig. S4 TG and DTG curves of PMDTO obtained potentiostatically at 0.7 V vs Ag/AgCl.

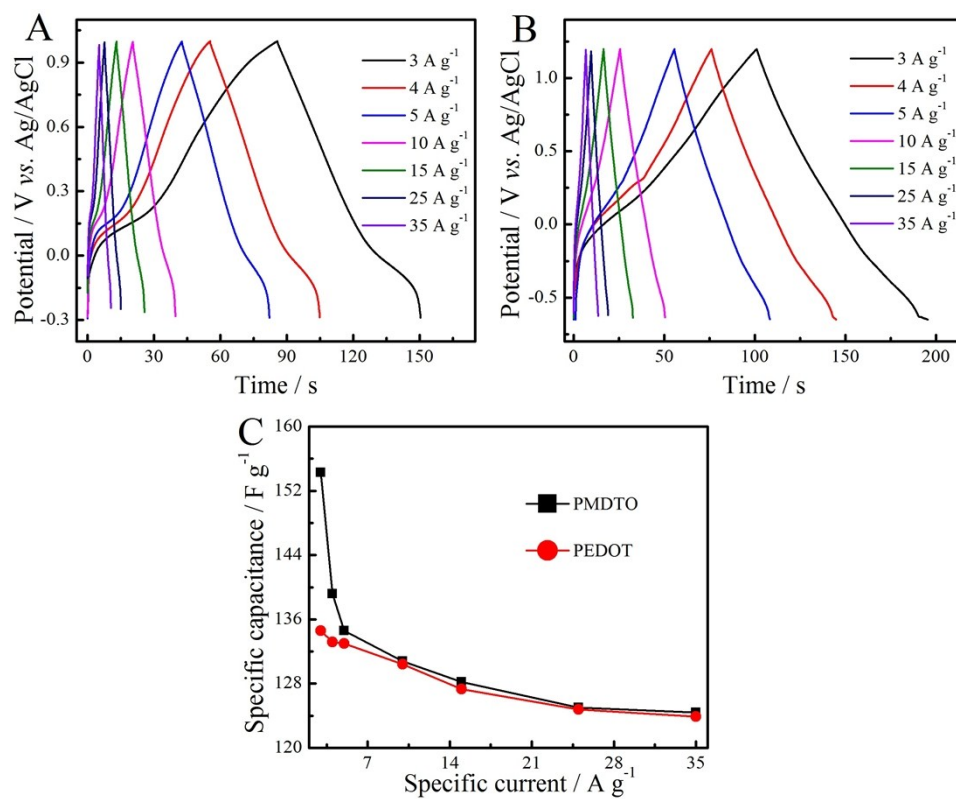


Fig. S5 Galvanostatic charge/discharge curves of PMDTO (A) and PEDOT (B) in 0.1 mol L⁻¹ CH₃CN-Bu₄NBF₄ at different current densities; (C) Specific capacitance as a function of current density.

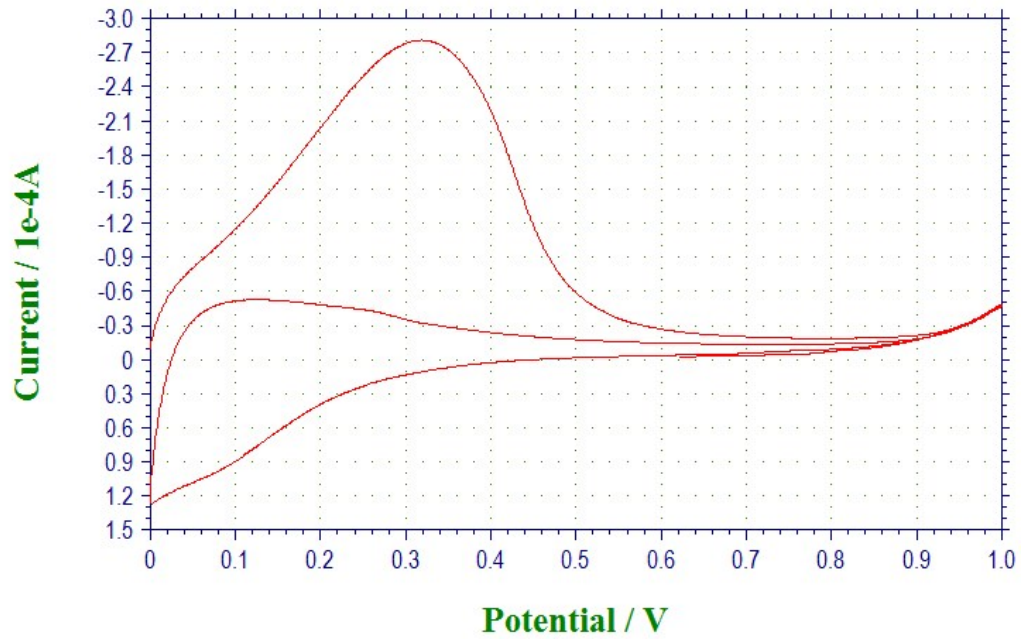


Fig. S6 Cyclic voltammograms of a symmetric supercapacitor based on two PMDTO electrodes in the potential voltage of 0-1.0 V.