

SUPPLEMENTARY MATERIAL TO
Electrical, optical and structural characterization of interfaces containing poly(3-alkylthiophenes) (P3ATs) and polydiphenylamine on ITO/TiO₂: interaction between P3ATs polymeric segments and TiO₂

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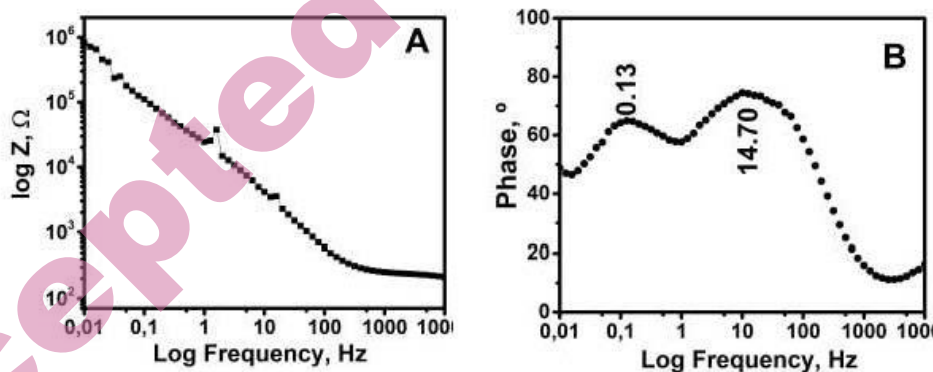


Fig. S1. Impedance magnitude (A) and Bode-Phase (B) diagrams at open-circuit potential and constant temperature of 22 °C for the ITO/TiO₂ system.

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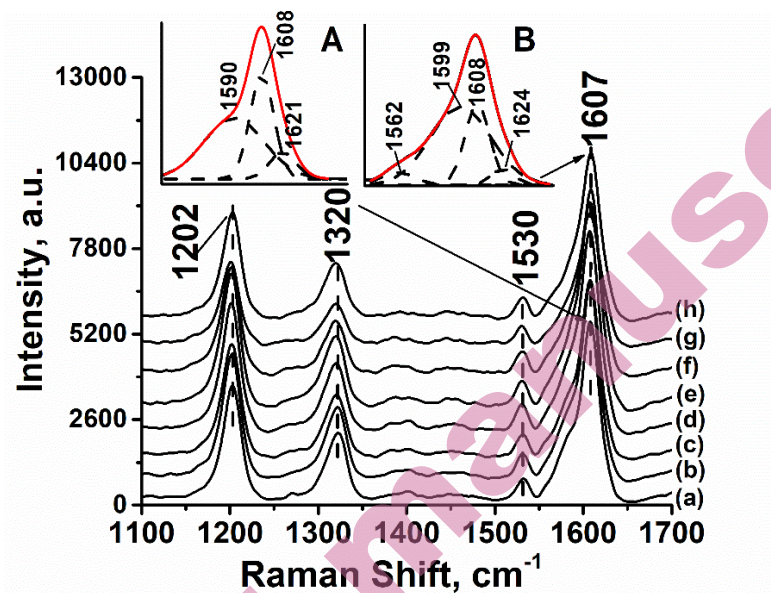


Fig. S2. Raman spectra of the ITO/TiO₂/PDPA system. Post-synthesis analysis times were a) 0 h, b) 1 h, c) 5 h, d) 10 h, e) 15 h, f) 24 h, g) 30 h and h) 97 h at excitation of 532 nm. Insert 5. Deconvoluted Raman spectra for the ITO/TiO₂/PDPA system after A) 0 h and B) 97 h.

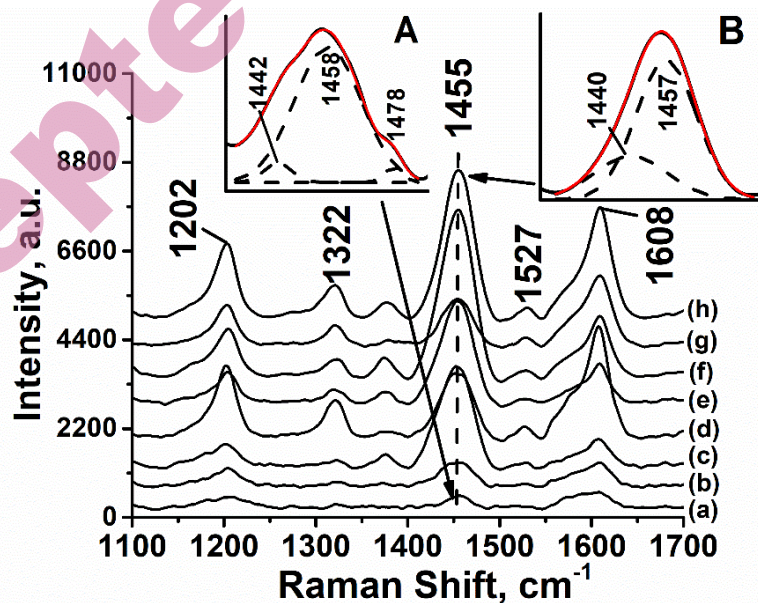


Fig. S3. Raman spectra of the ITO/TiO₂/PDPA/P3HT system. Post-synthesis analysis times were a) 0 h, b) 1 h, c) 5 h, d) 10 h, e) 15 h, f) 24 h, g) 30 h and h) 97 h, at excitation of 532 nm. Insert 6. Deconvoluted spectra for the ITO/TiO₂/PDPA/P3HT after A) 0 h and B) 97 h.

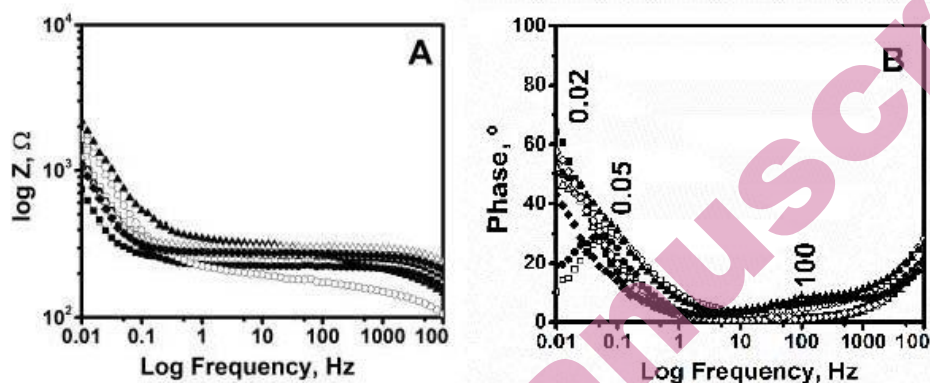


Fig. S4. Impedance magnitude (A) and Bode-Phase (B) diagrams at open-circuit potential and constant temperature of 22 °C for the ITO/TiO₂/PDPA/P3HT system. Post-synthesis analysis times were a) 0 h (solid square), b) 1 h (empty square), c) 5 h (solid circle), d) 10 h (empty circle), e) 15 h (solid triangle), f) 24 h (empty triangle), g) 30 h (empty lozenge) and h) 97 h (solid lozenge), after electrochemical synthesis.

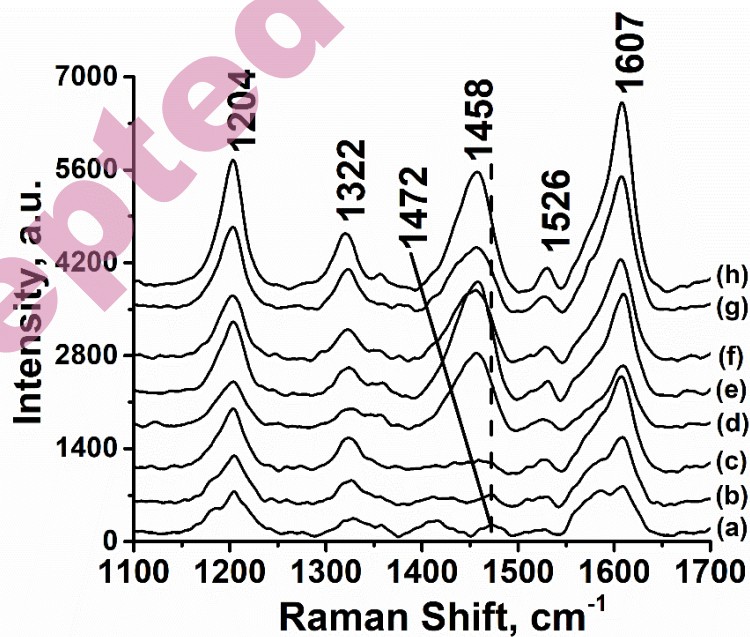


Fig. S5. Raman spectra of the ITO/TiO₂/PDPA/P3MT system. Post-synthesis analysis times were a) 0 h, b) 1 h, c) 5 h, d) 10 h, e) 15 h, f) 24 h, g) 30 h and h) 97 h, at excitation of 532 nm.

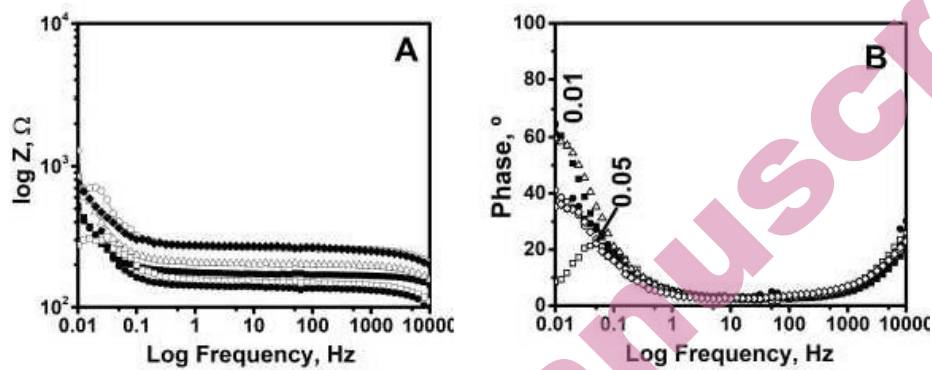


Fig. S6. Impedance magnitude (A) and Bode-Phase (B) diagrams at open-circuit potential and constant temperature of 22 °C for the ITO/TiO₂/PDPA/P3MT system. Post-synthesis analysis time were a) 0 h (solid square), b) 1 h (empty square), c) 5 h (solid circle), d) 10 h (empty circle), e) 15 h (solid triangle), f) 24 h (empty triangle) and g) 30 h (empty lozenge), after electrochemical synthesis.