

Supporting Information

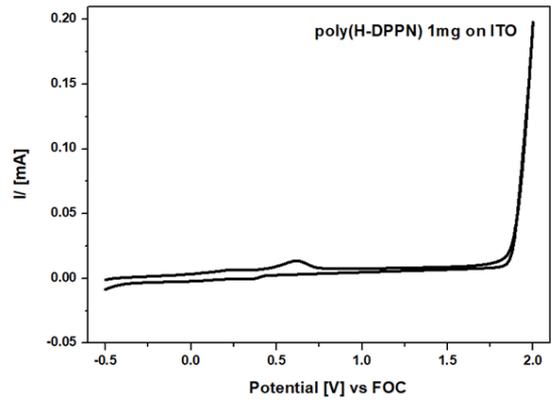
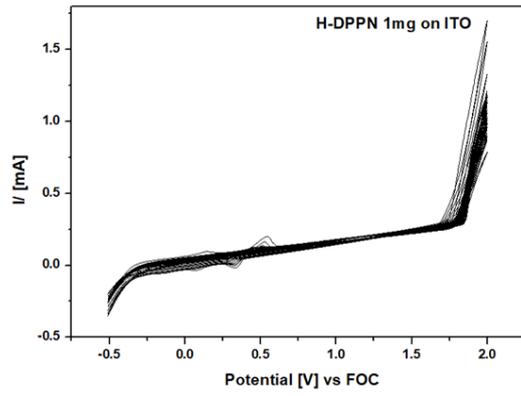
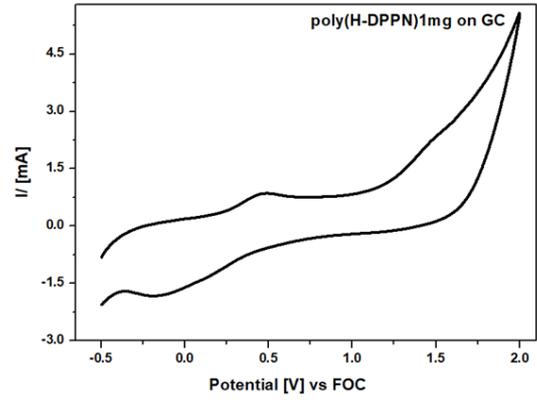
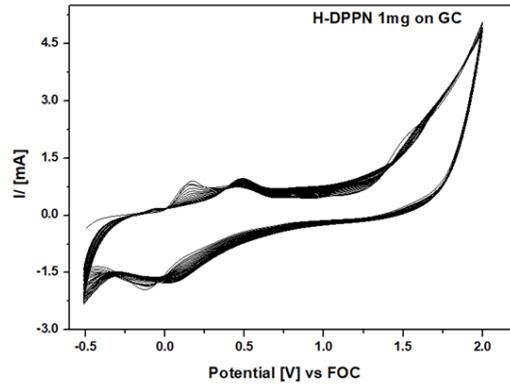
Naphthalene Flanked Diketopyrrolopyrrole: A New Conjugated Building Block with Hexyl or Octyl Alkyl Side Chains for Electropolymerization Studies and its Biosensor Applications

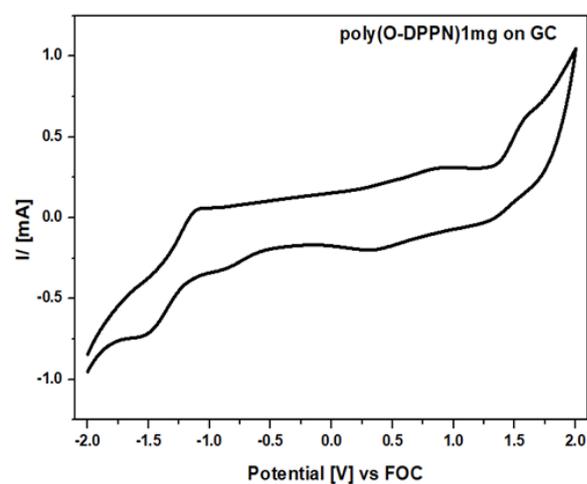
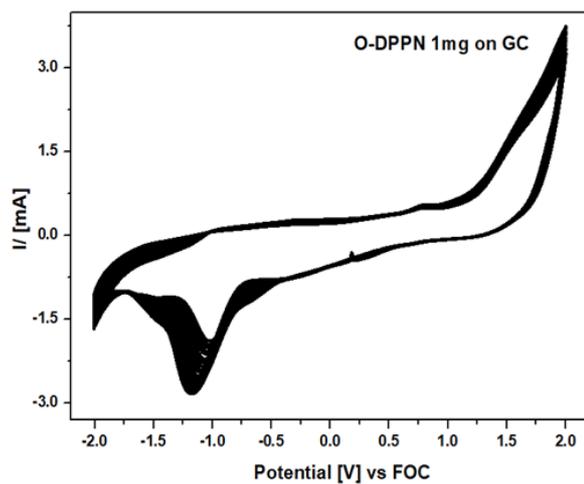
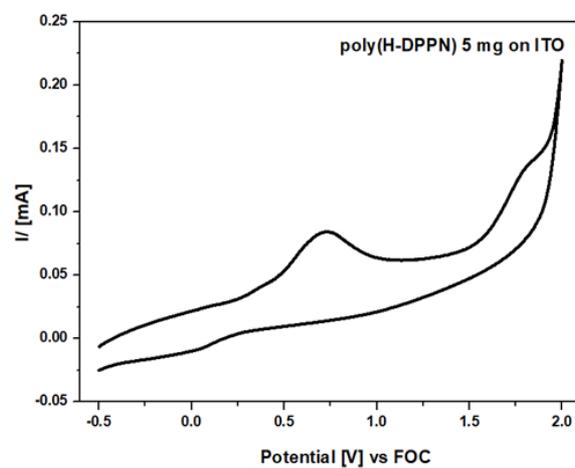
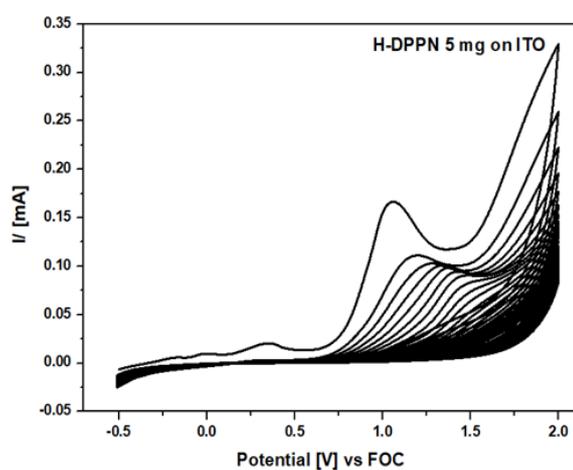
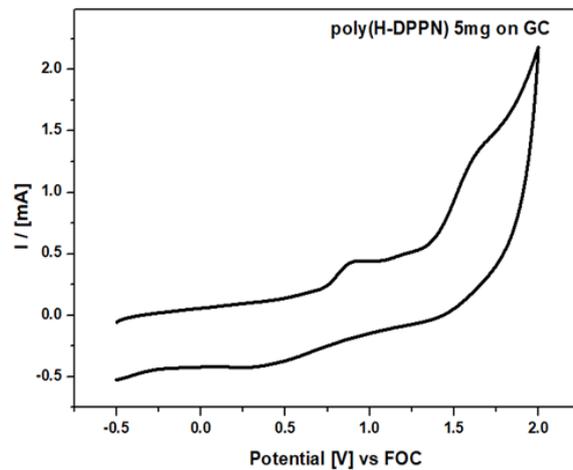
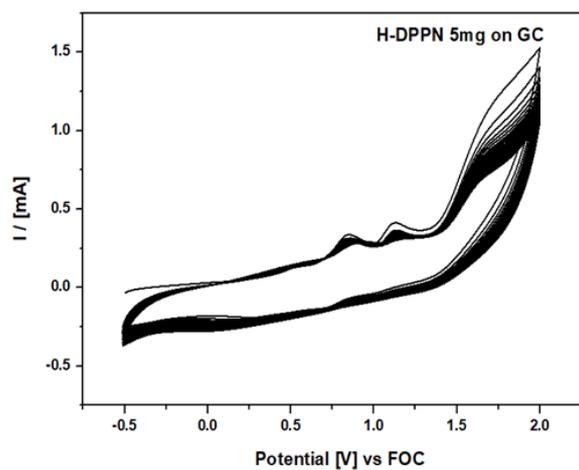
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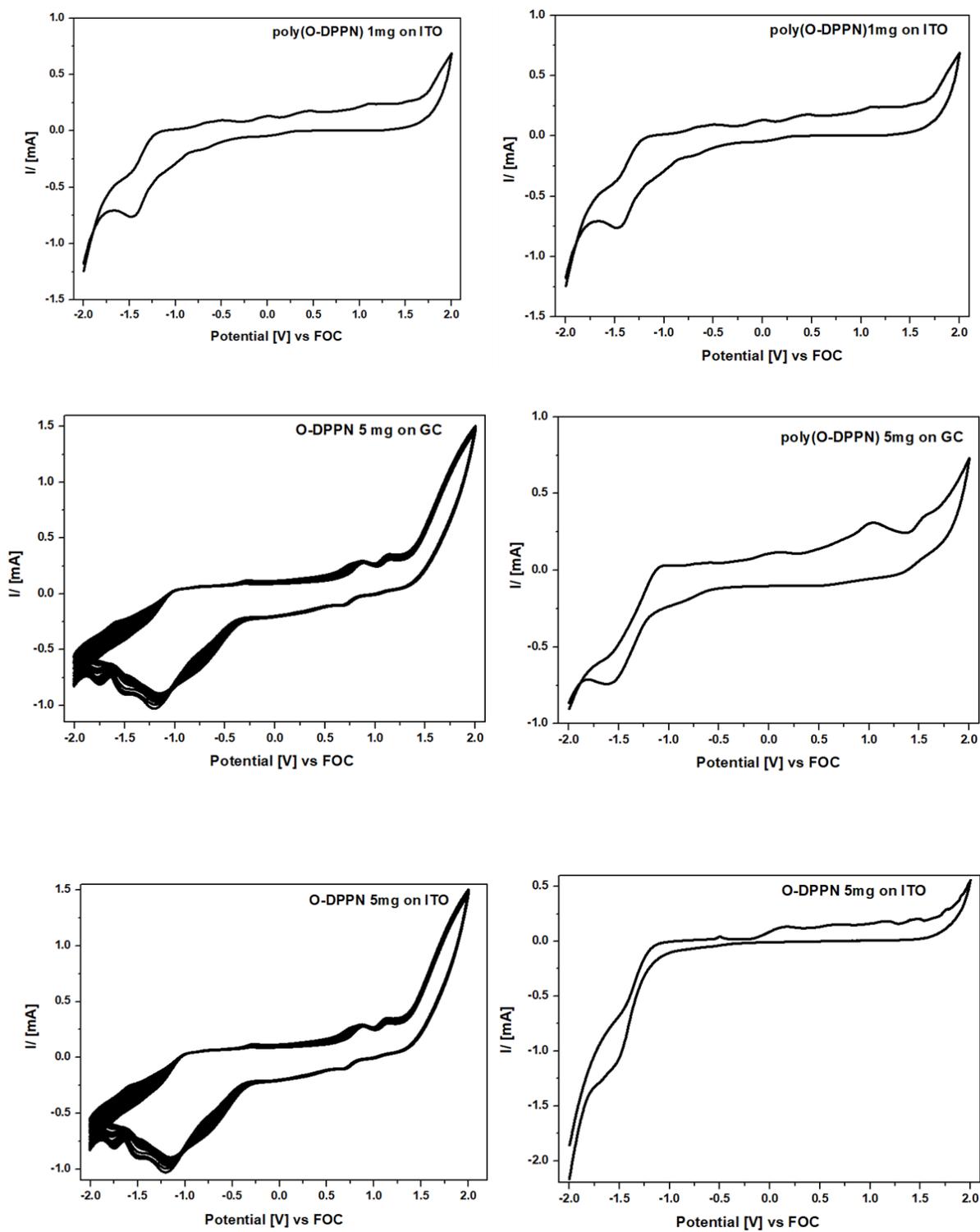


Figure S1: Repetitive cyclic voltammograms for the electropolymerization of monomers and polymers of **H-DPPN** and **Poly(H-DPPN)**, **O-DPPN** and **poly(O-**

DPPN) 1 mg/10 ml of monomer concentration on GC and ITO electrode, 5 mg/ 10 ml of monomer concentration on GC and ITO, electrodes in dichloromethane containing 0.1 M TBAPF₆ as supporting electrolyte. The scan rate employed in all cases was 0.1 V_S⁻¹

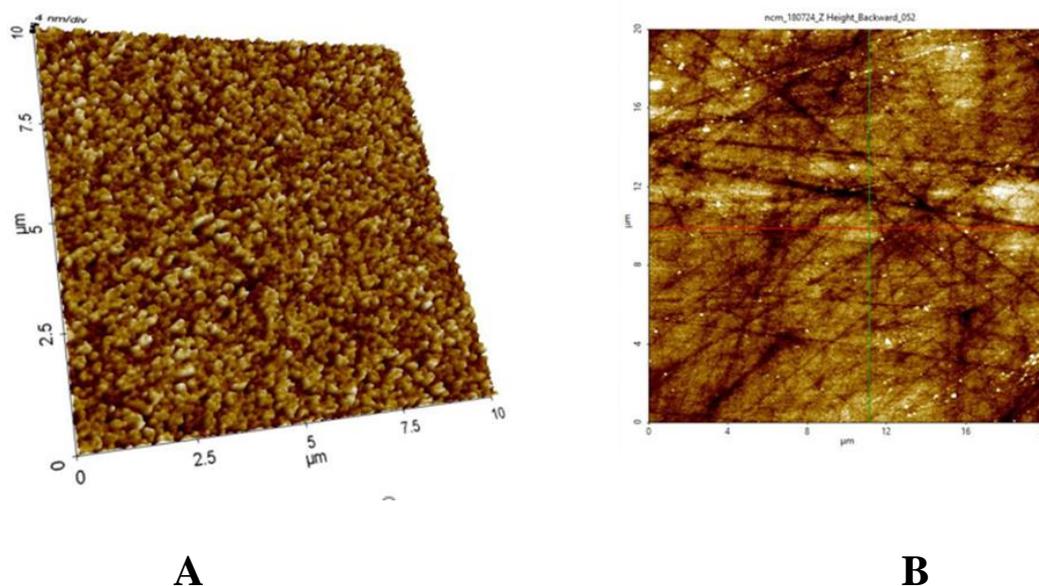


Figure S2: AFM image of (A) plain ITO and (B) plain GC before deposition

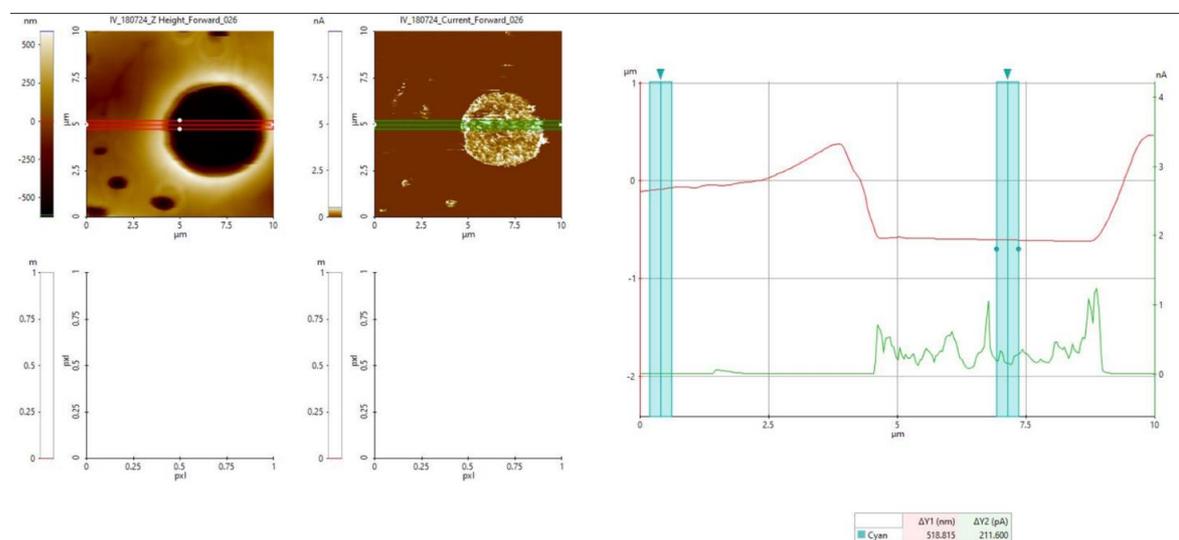


Figure S3: Line profile of **poly(H-DPPN)** GC electrode of monomer concentration 10mg per 10 ml in DCM with supporting electrolyte TBAPF₆.

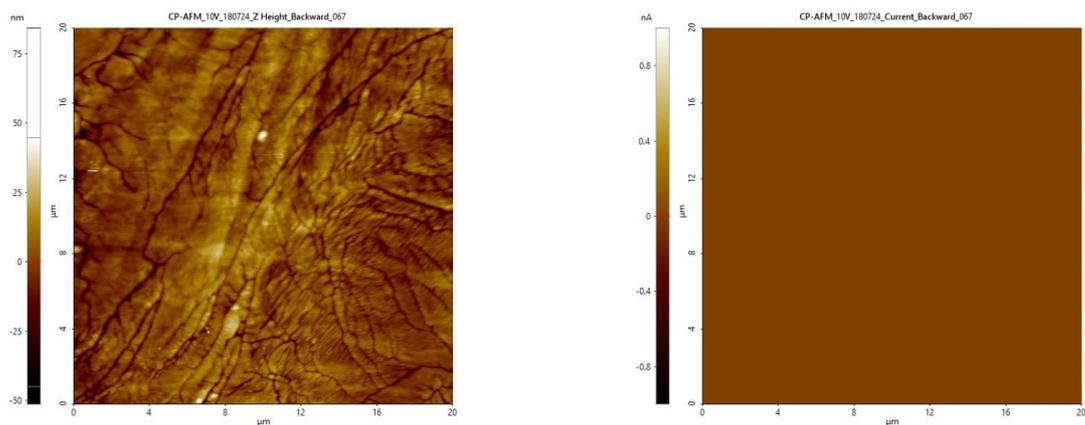


Figure S4: Current profile of **poly(H-DPPN)** on ITO electrode of monomer concentration 1mg per 1 ml in DCM with supporting electrolyte TBAPF₆.

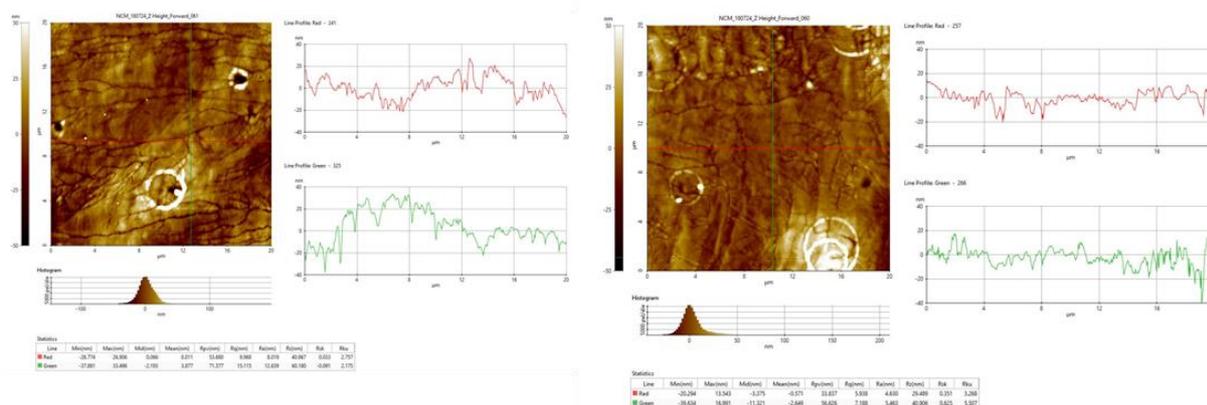


Figure S5: Line profile of **poly(H-DPPN)** on ITO electrode of monomer concentration 10mg per 10 ml in DCM with supporting electrolyte TBAPF₆.

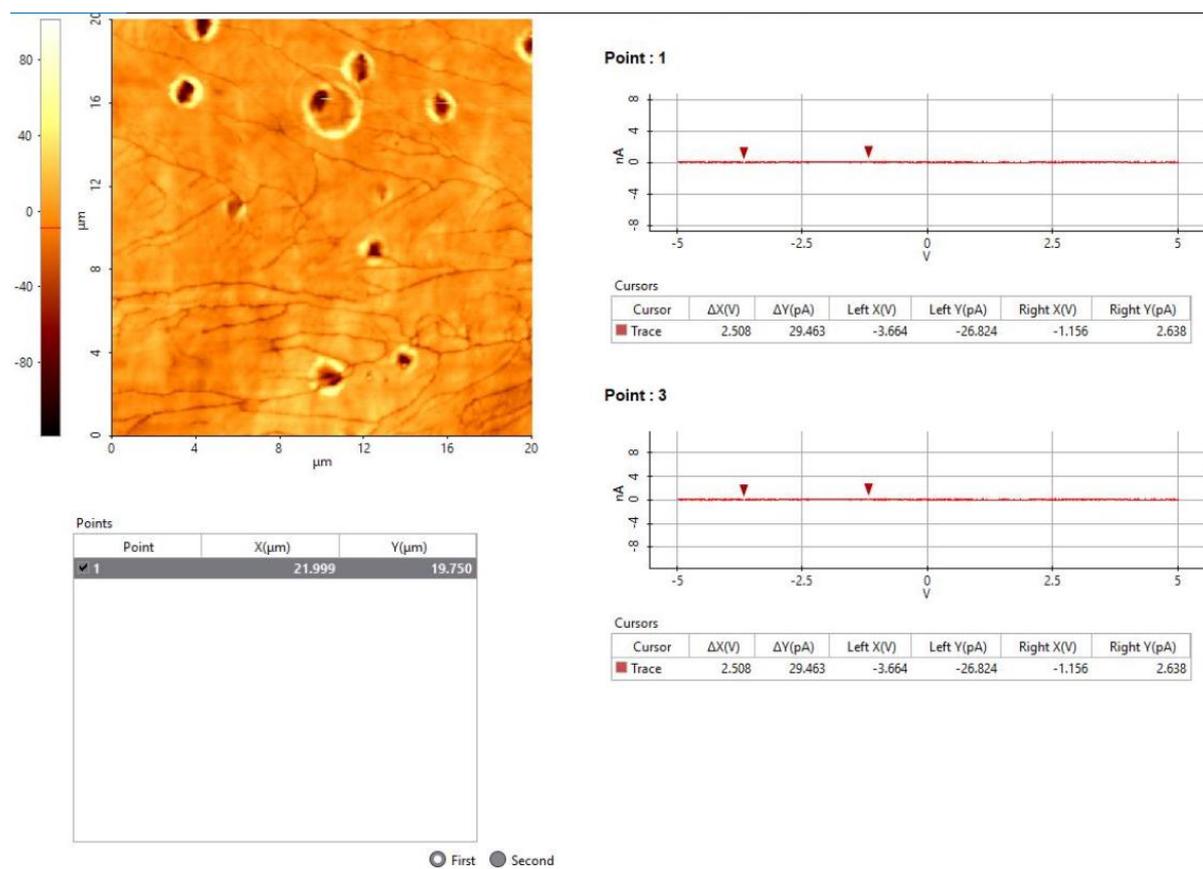


Figure S6: I-V profile of **poly(H-DPPN)** on ITO electrode of monomer concentration 10mg per 10 ml in DCM with supporting electrolyte TBAPF₆.

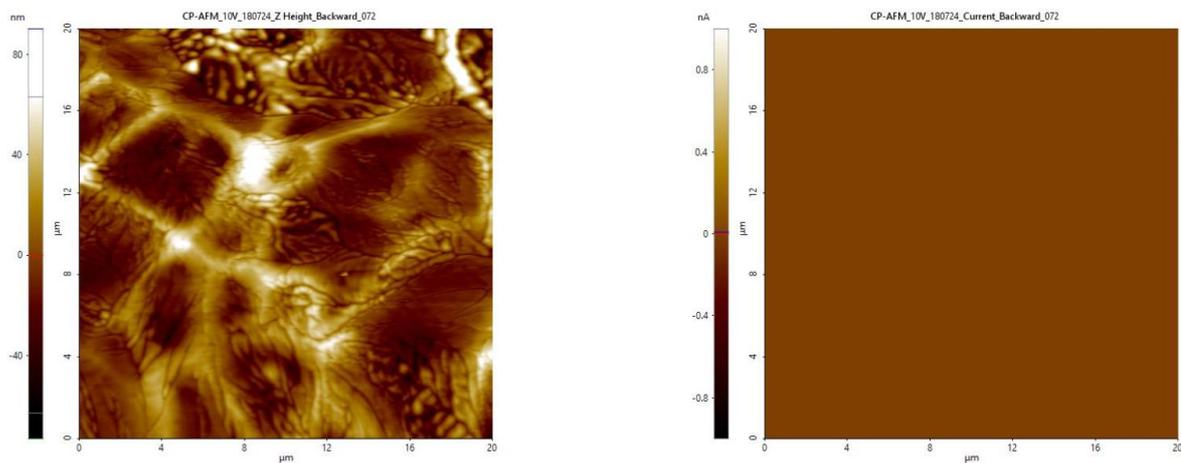


Figure S7: Current profile of **poly(O-DPPN)** on GC electrode of monomer concentration 10mg per 10 ml in DCM with supporting electrolyte TBAPF₆

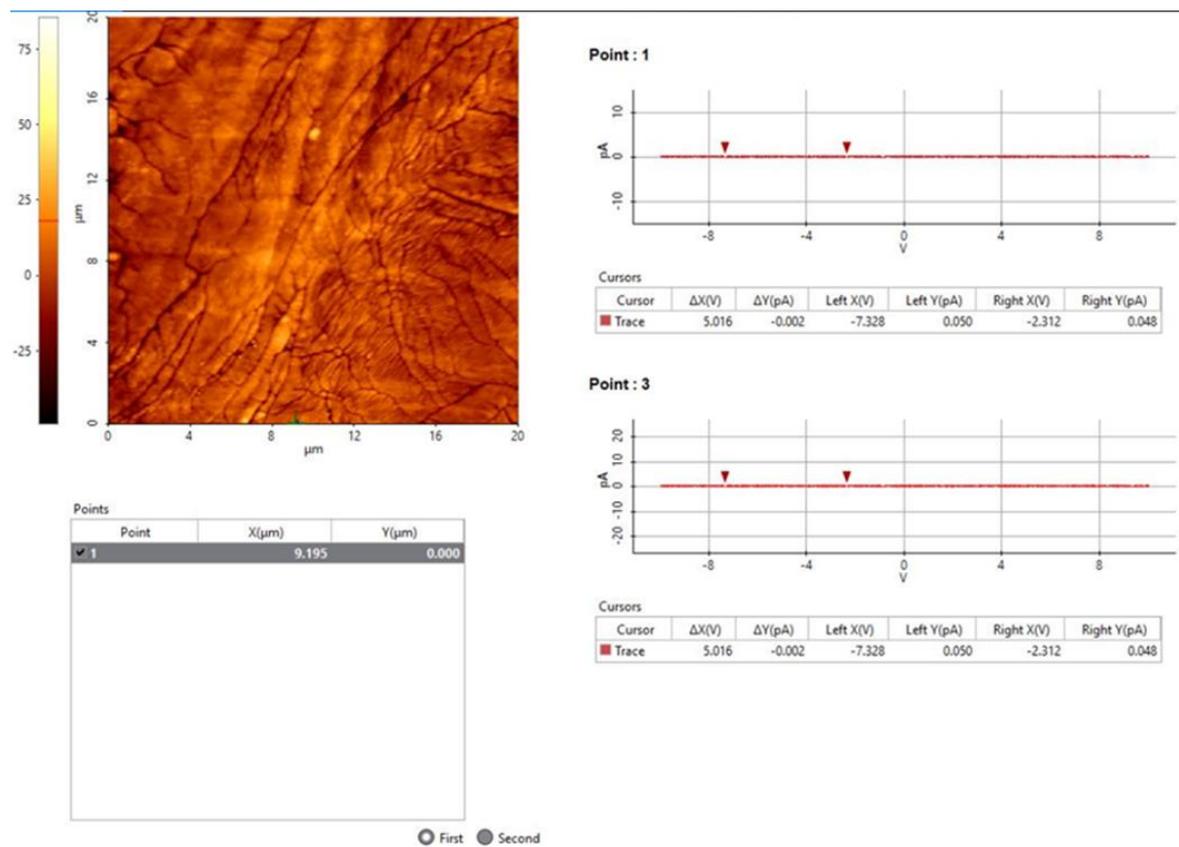


Figure S8: I-V profile of **poly(O-DPPN)** on GC electrode of monomer concentration 10 mg per 10 ml in DCM with supporting electrolyte TBAPF₆.

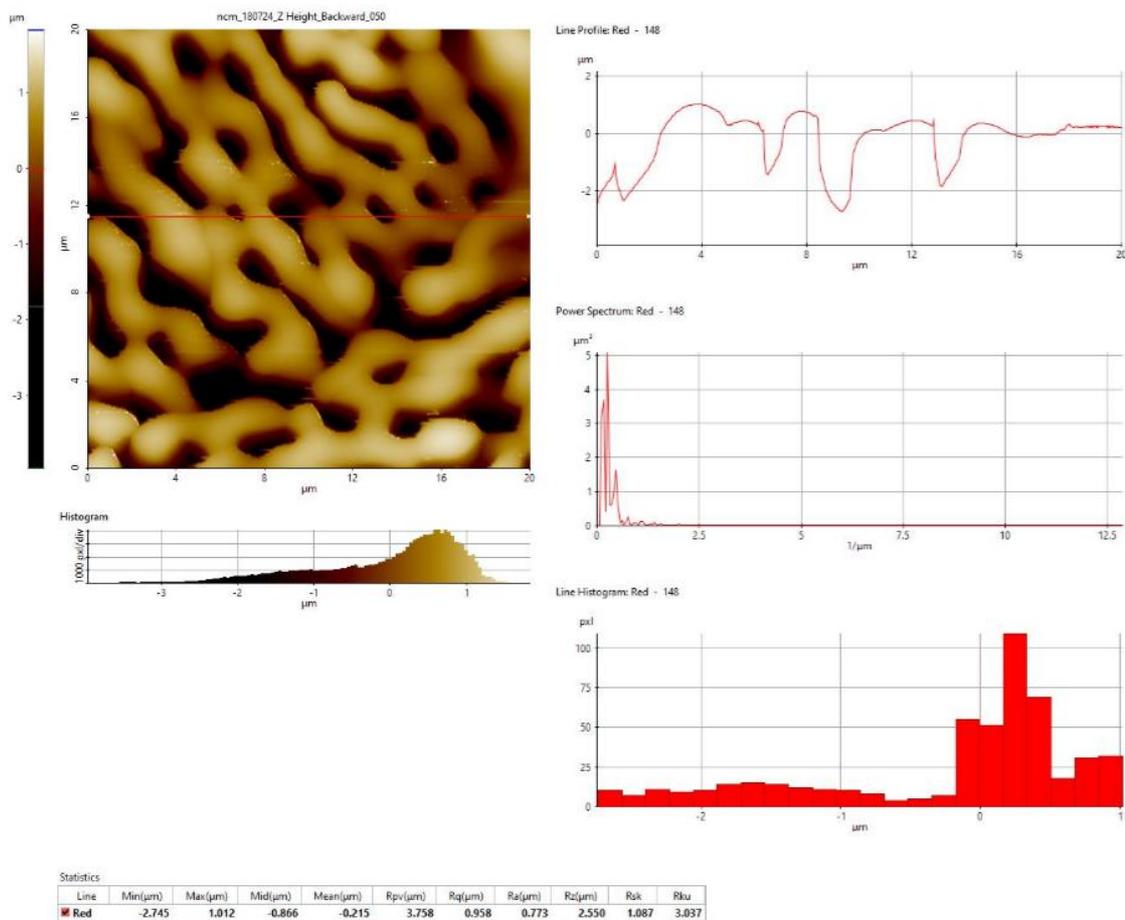
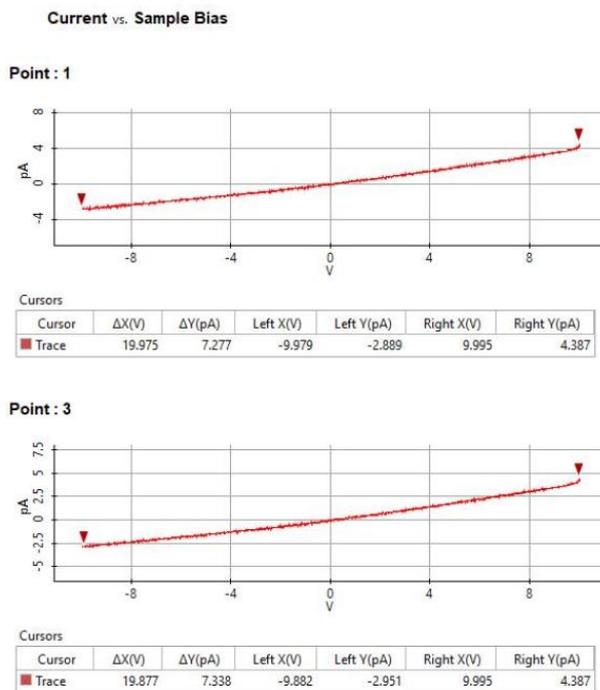
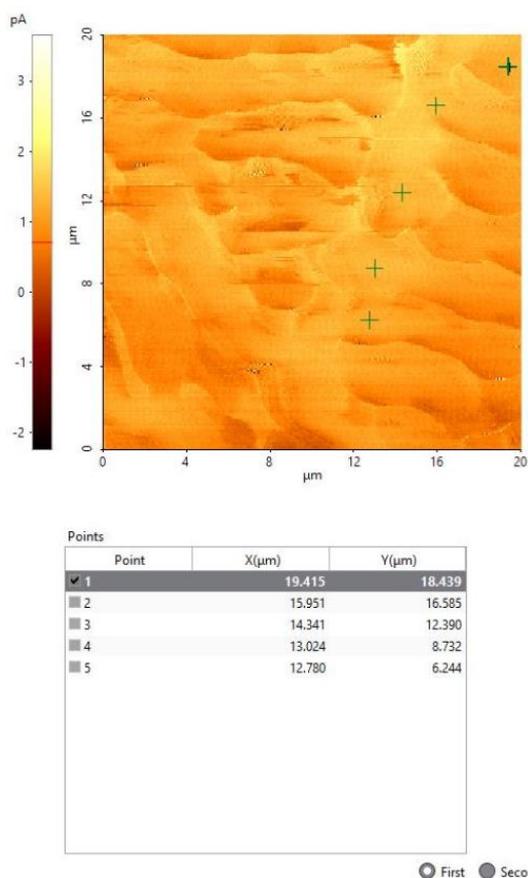
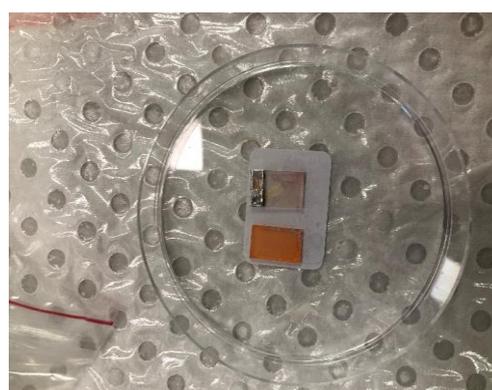


Figure S9: Line profile of **poly(O-DPPN)** on ITO electrode of monomer concentration 10mg per 10 ml in DCM with supporting electrolyte TBAPF₆.



Supporting Figure S10: I-V profile of **poly(O-DPPN)** on ITO electrode of monomer concentration 10mg per 10 ml in DCM with supporting electrolyte TBAPF₆.



Supporting Figure S11: Polymer film on GC (left); Colour differentiation of spin coated monomer (deep orange) and electropolymerised film on ITO (right).

Sample number	Sample name	Surface Roughness (nm)
1	Plain Glassy Carbon	<50 (40-50nm)
2	Plain ITO	1
3	H DPPN (1mg) GC	199.91
4	H DPPN (5mg) GC	69.63
5	H DPPN (10mg) GC	82.29
6	ODPPN (1mg) GC	24.49
7	ODPPN (5mg) GC	70.81
8	ODPPN (10mg) GC	41.35
9	H DPPN (1mg) ITO	61.37
10	H DPPN (5mg) ITO	132.90
11	H DPPN (10mg) ITO	70.10
12	ODPPN (1mg) ITO	121.13
13	ODPPN (5mg) GC	63.34
14	ODPPN (10mg) ITO	110.70

Table S1: Surface roughness of the electropolymerised **poly(H-DPPN)** and **poly(O-DPPN)** polymer films on GC and ITO.