Electron-transporting Thiazole-based polymer synthesized through direct (hetero)arylation polymerization

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Supplementary Information.

1. Polymer ^{1}H NMR traces

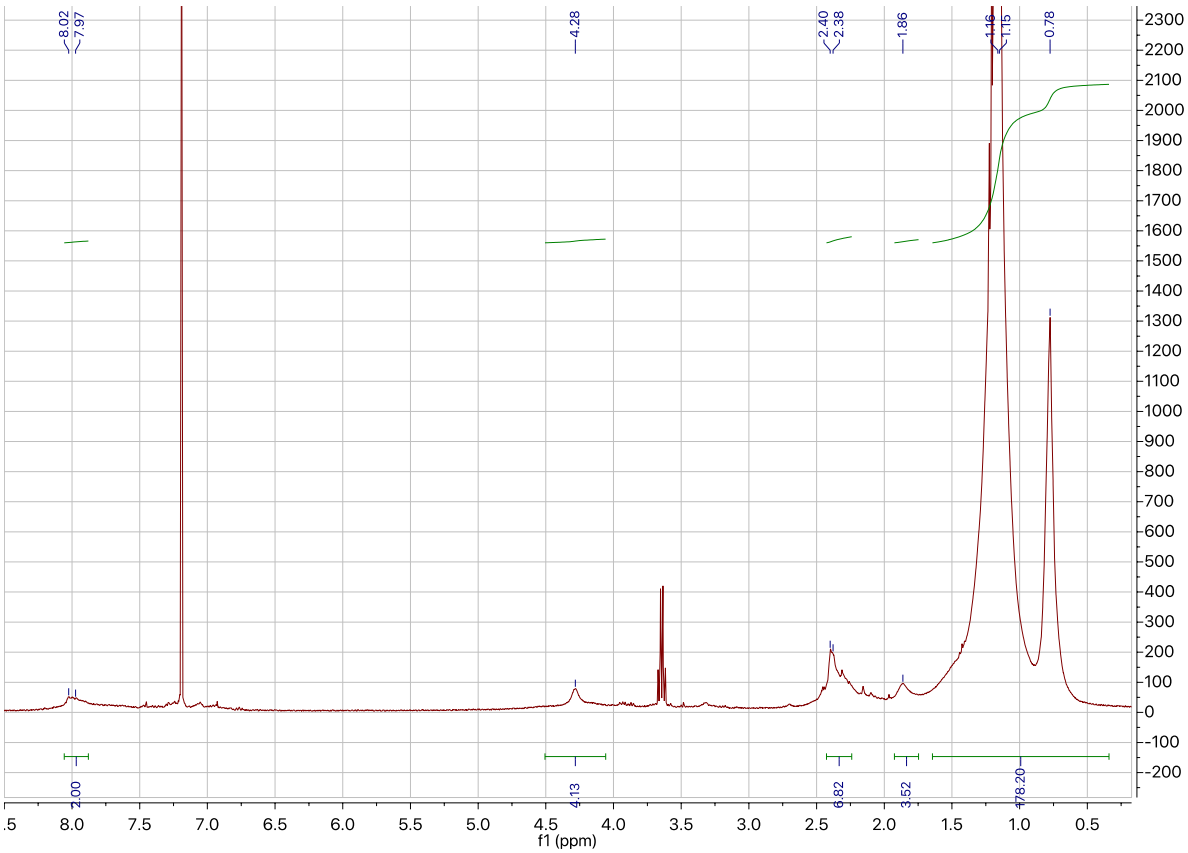


Figure S1. ^{1}H NMR spectrum of the P(TzDPP-Th) batch B1 in $CDCl_3$

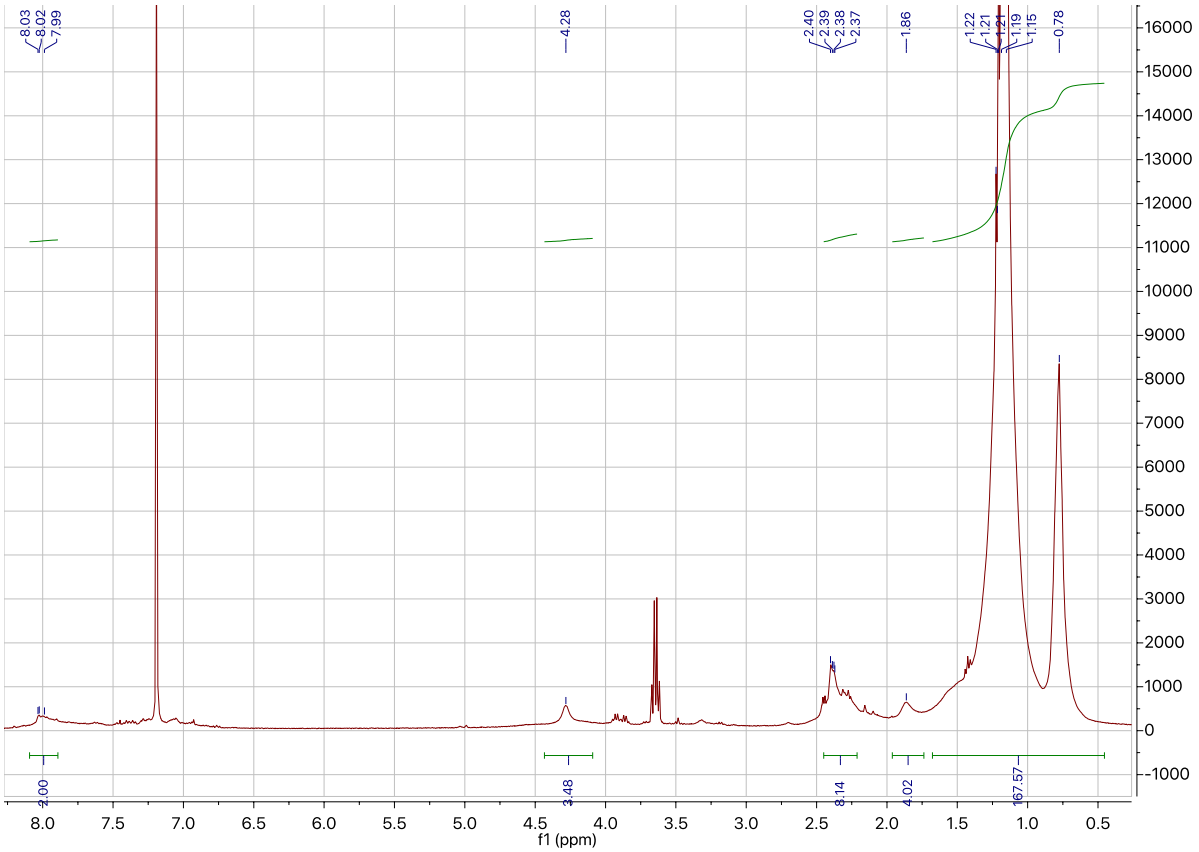


Figure S2. ^{1}H NMR spectrum of the P(TzDPP-Th) batch B2 in $CDCl_3$

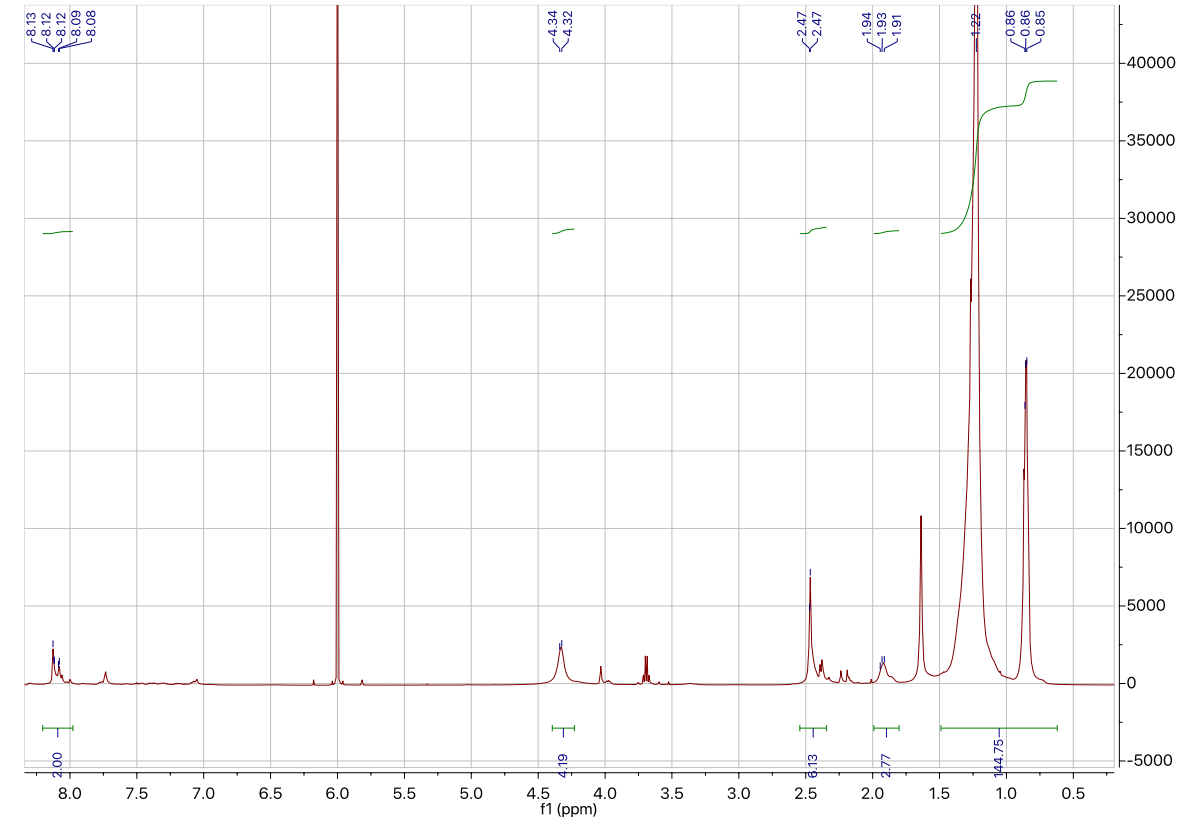


Figure S3. ^{1}H NMR spectrum of the P(TzDPP-Th) batch B3 in $C_2D_2Cl_4$

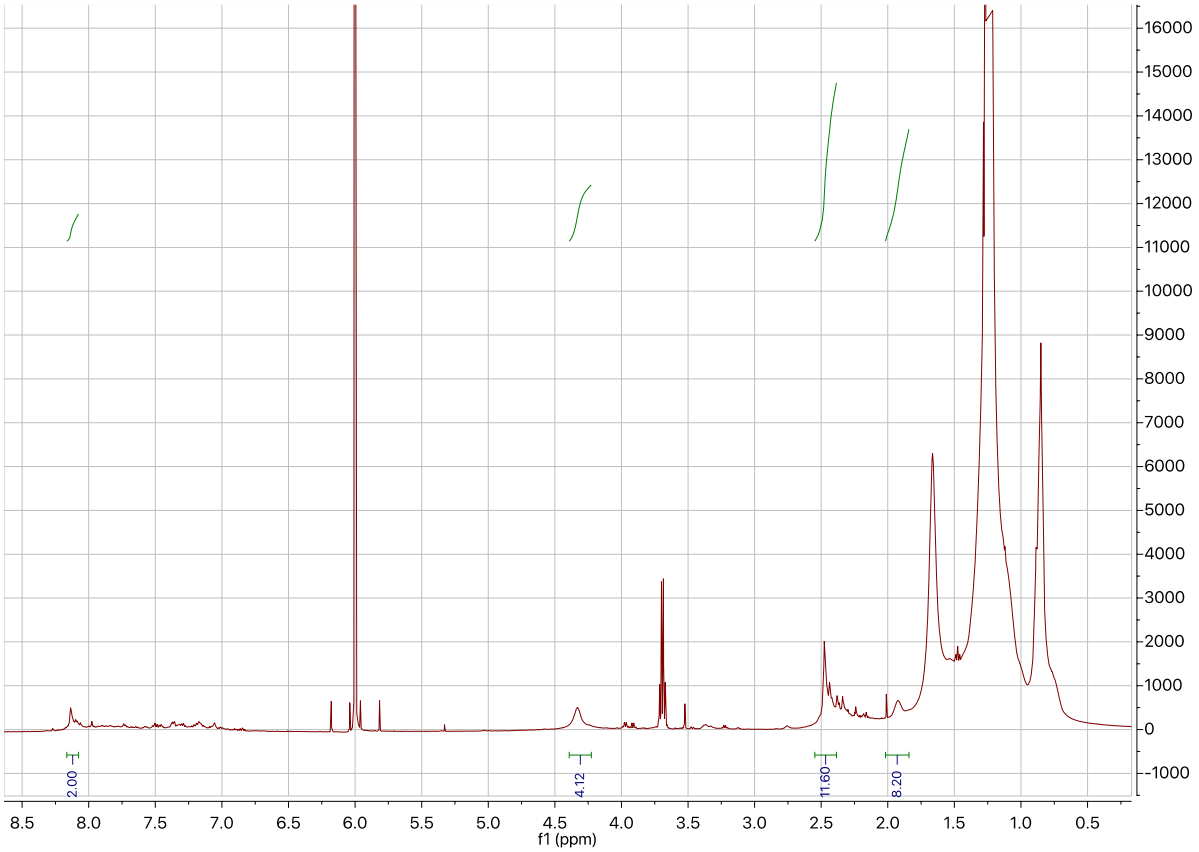


Figure S4. ^{1}H NMR spectrum of the P(TzDPP-Th) batch B4 in $C_2D_2Cl_4$

2. Polymer SEC chromatograms

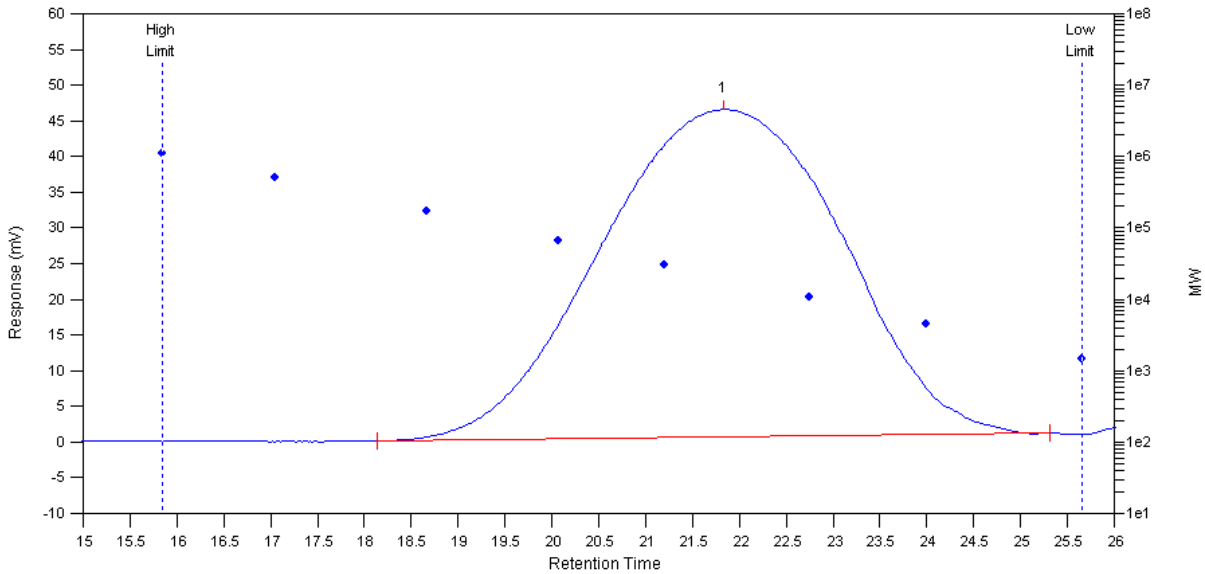


Figure S5. SEC chromatogram of the P(TzDPP-Th) batch B1

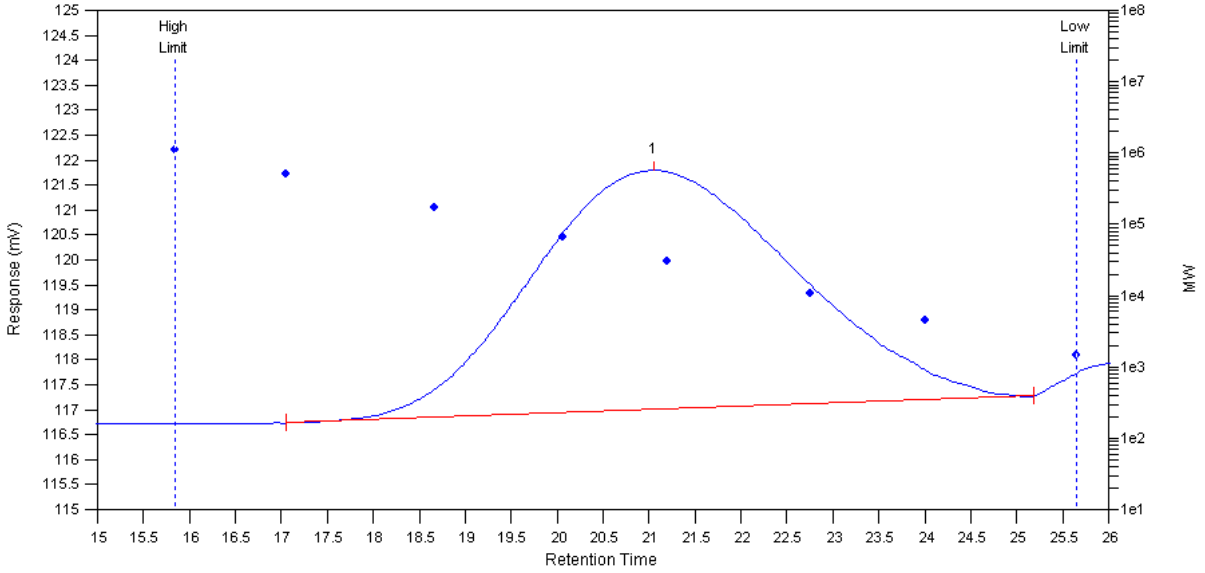


Figure S6. SEC chromatogram of the P(TzDPP-Th) batch B2

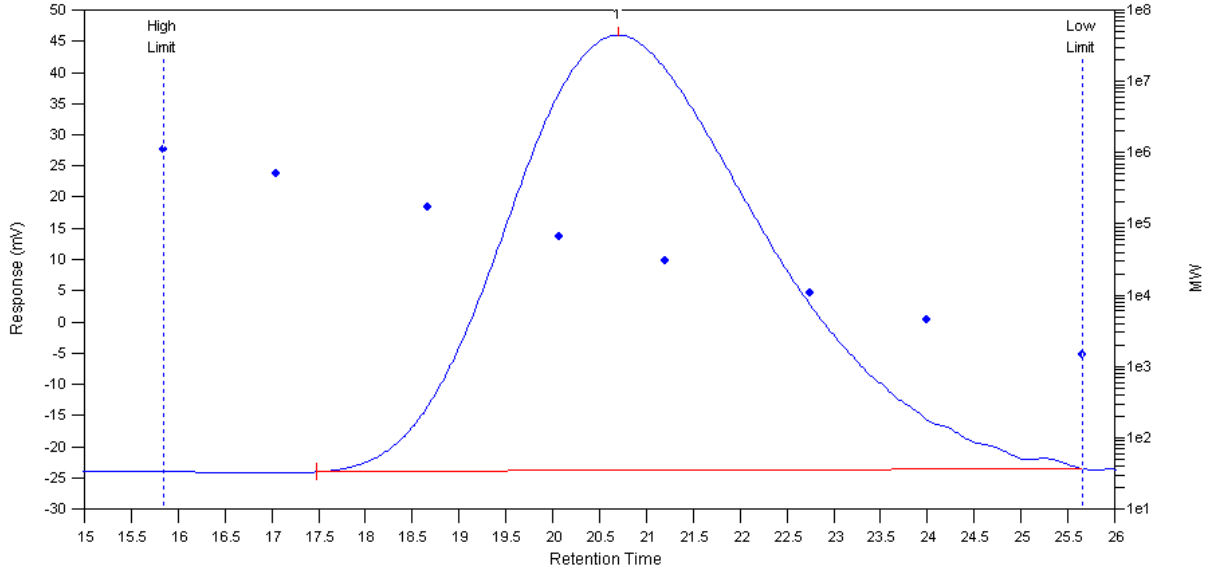


Figure S7. SEC chromatogram of the P(TzDPP-Th) batch B3

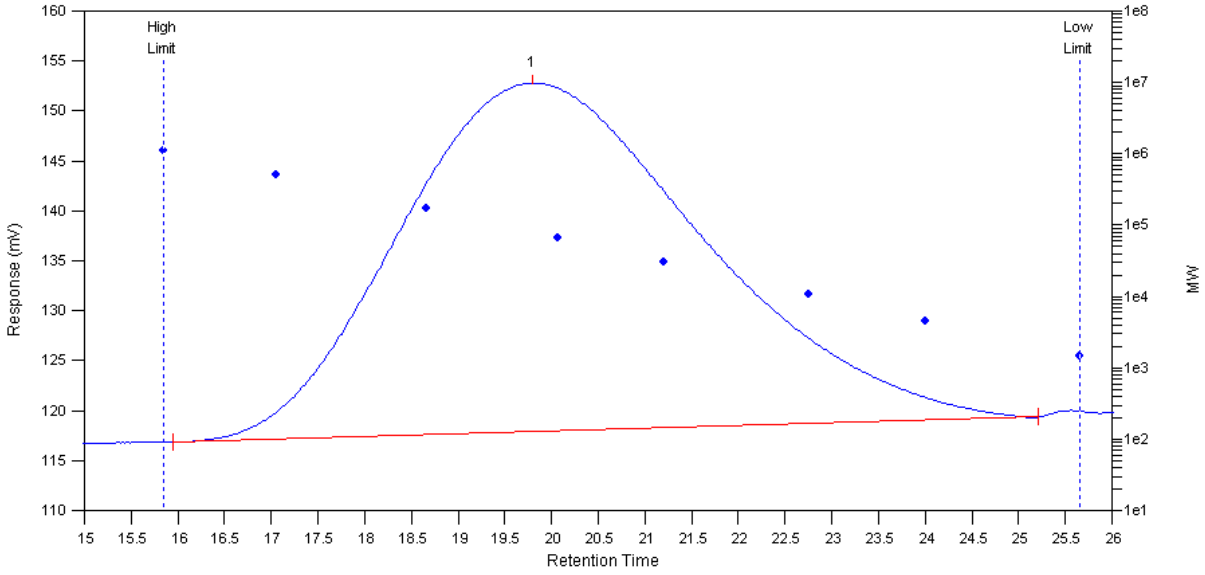


Figure S8. SEC chromatogram of the P(TzDPP-Th) batch B4

3. Cyclic voltammogram

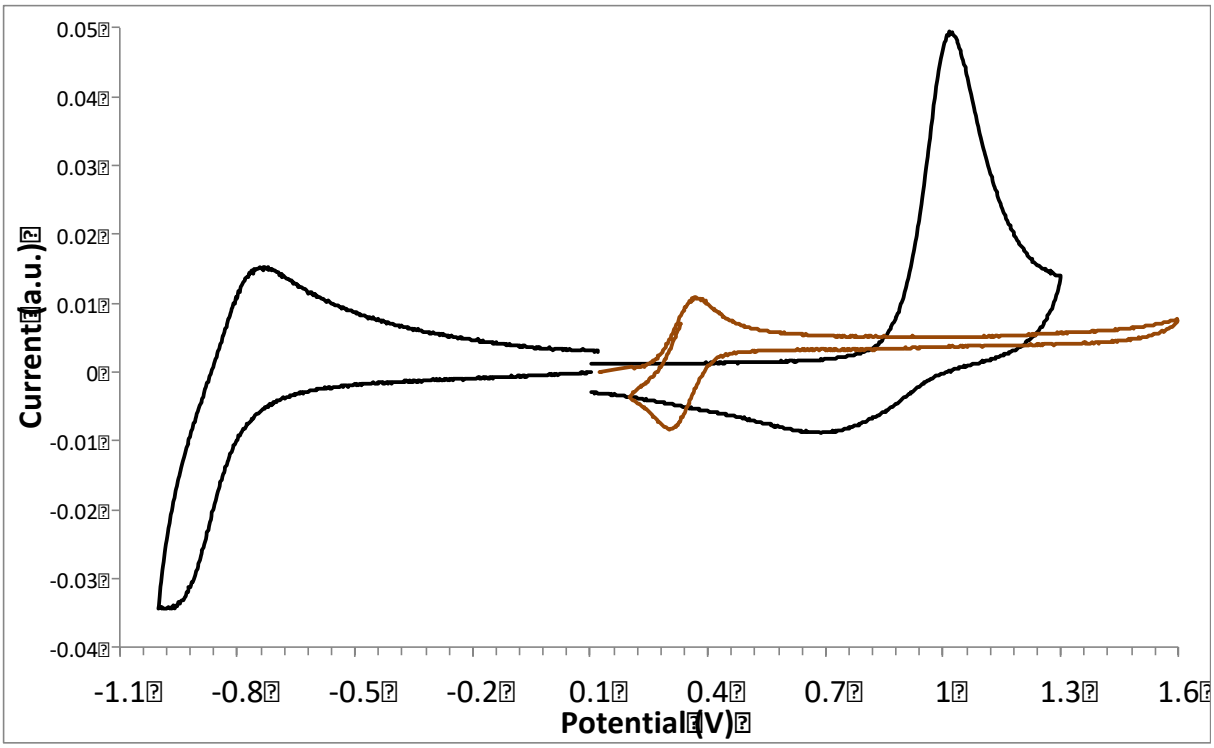
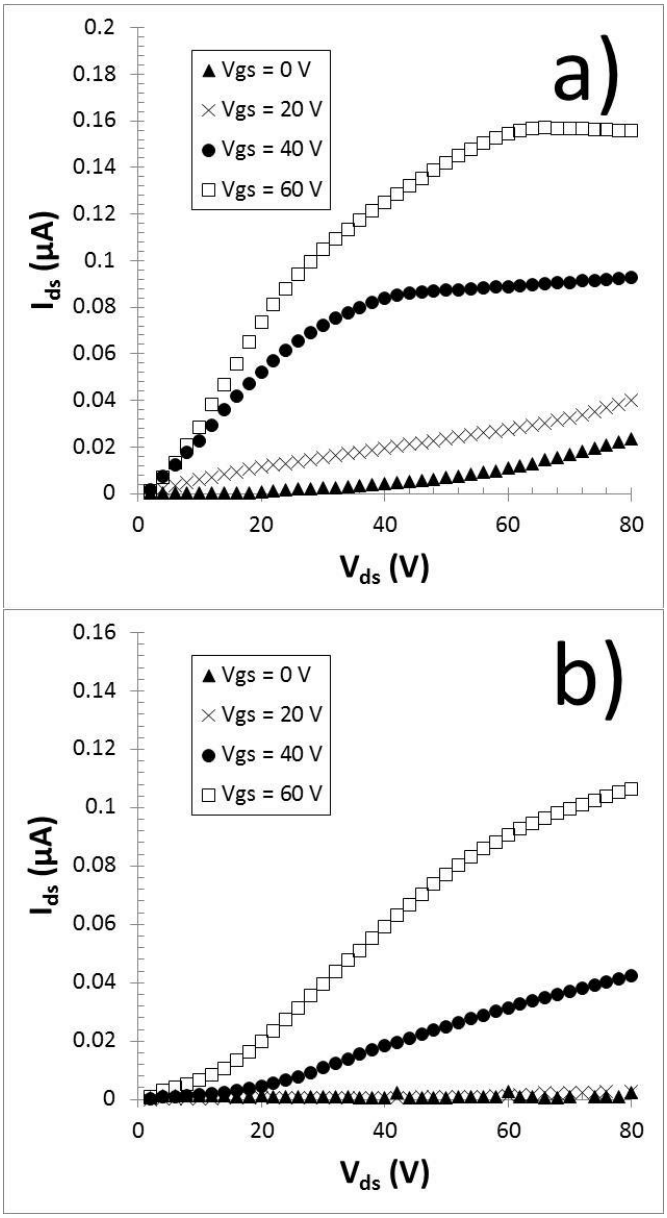


Figure S9. Cyclic voltammogram of P(TzDPP-Th) reference in thin-film recorded in acetonitrile + 0.2 M $[NBu_4][PF_6]$. Cyclic voltammogram of ferrocene vs SCE. Platinum working electrode, sweep-rate: 100 $mV.s^{-1}$.

4. OFET output and transfer characteristic



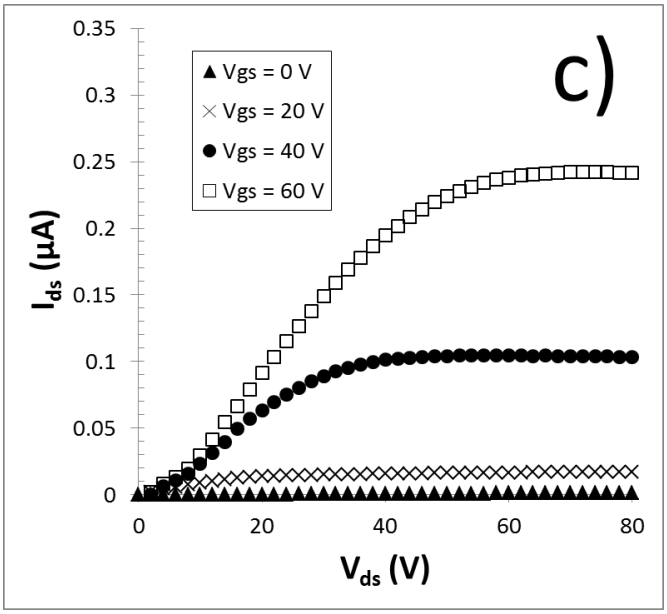


Figure **S10**. Output characteristics of the OFETs whose channel is **B2** (a), **B3** (b) and **B4** (c). I_{ds} is the drain-source current, V_{ds} the voltage difference between drain and source and V_{gs} the voltage difference between gate and source.

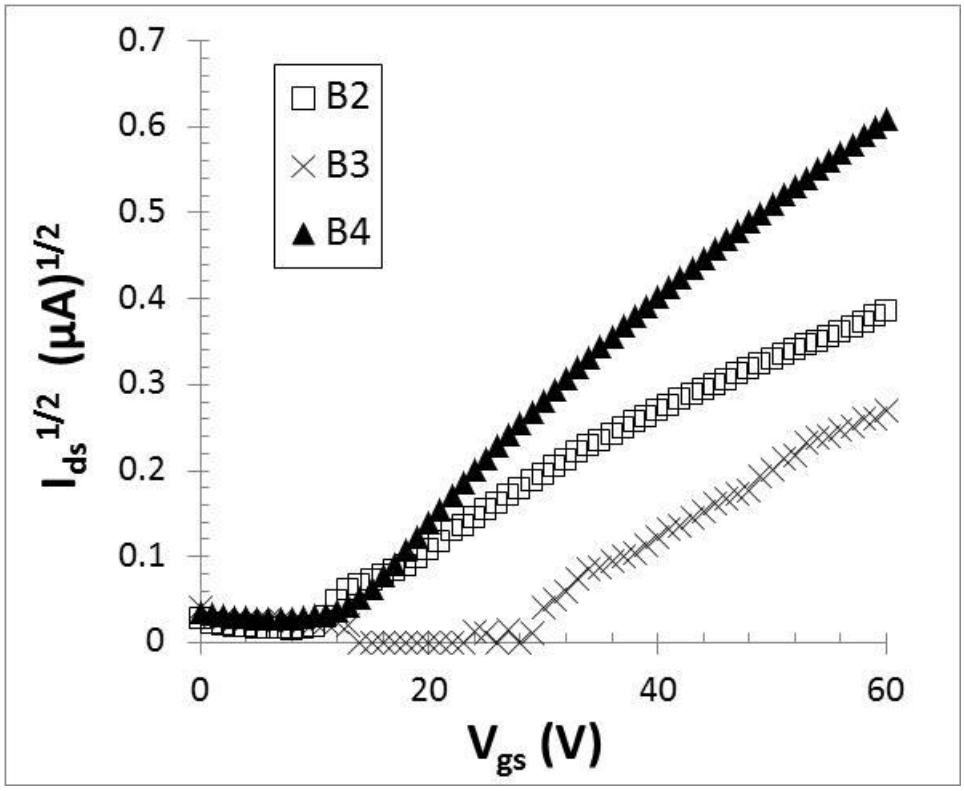


Figure **S11**. Transfer characteristics measured on the same **B2, B3** and **B4** OFETs at a drain-source voltage difference (V_{ds}) of 80 V. The electron mobility.is directly proportional to the slope of the square-root of I_{ds} as a function of V_{gs} using the standard formalism of OFETs in the saturation regime.