

5.6 Supplementary Information

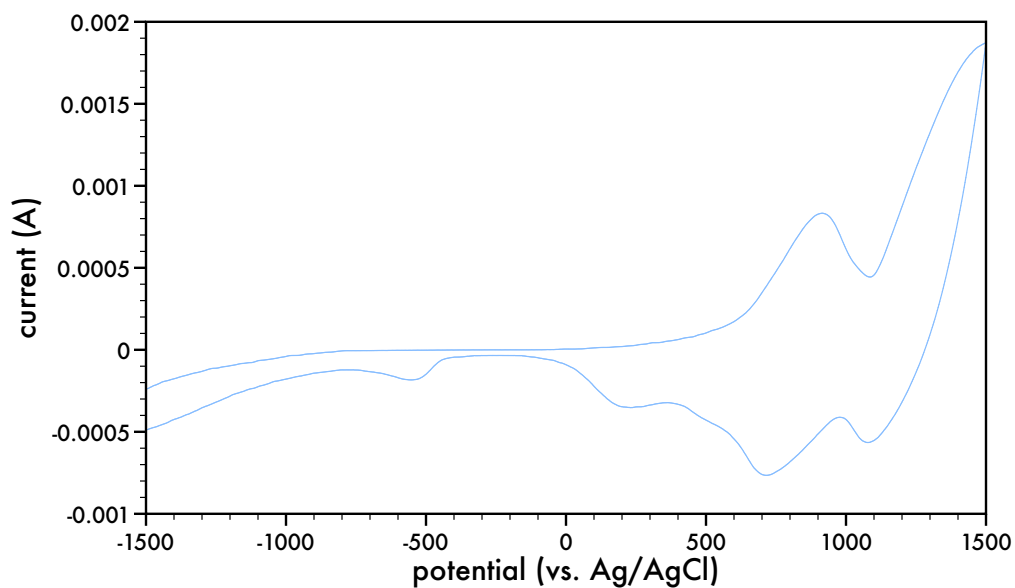


Figure 15: Extended range cyclic voltammograms for the oxidation of pC6DTP. Electrolyte was ACN / 0.1 M TBAPF₆ and scan rate was 100 mV/s.

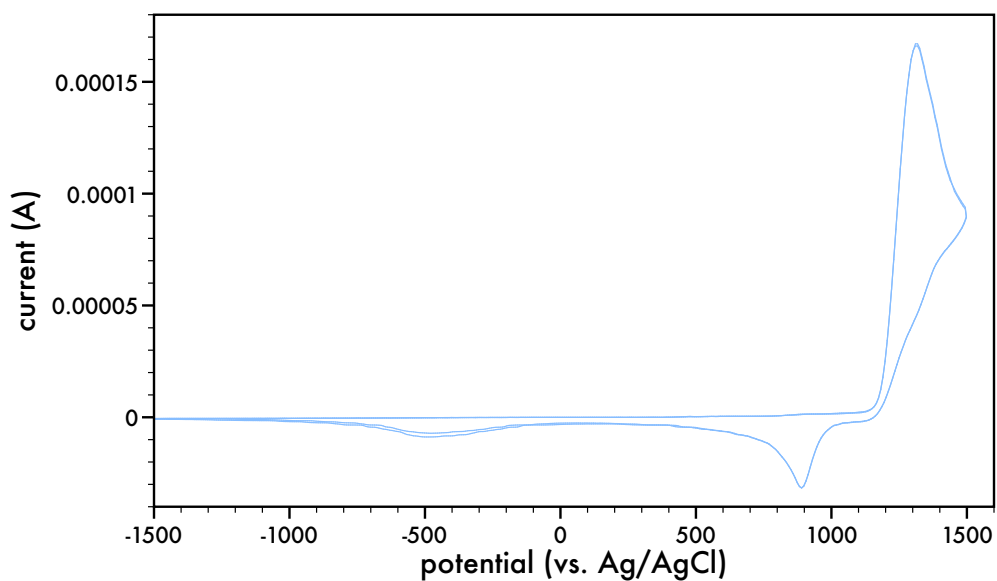


Figure 16: Cyclic voltammograms for H-carbazole. Electrolyte was ACN / 0.1 M TBAPF₆ and scan rate was 100 mV/s.

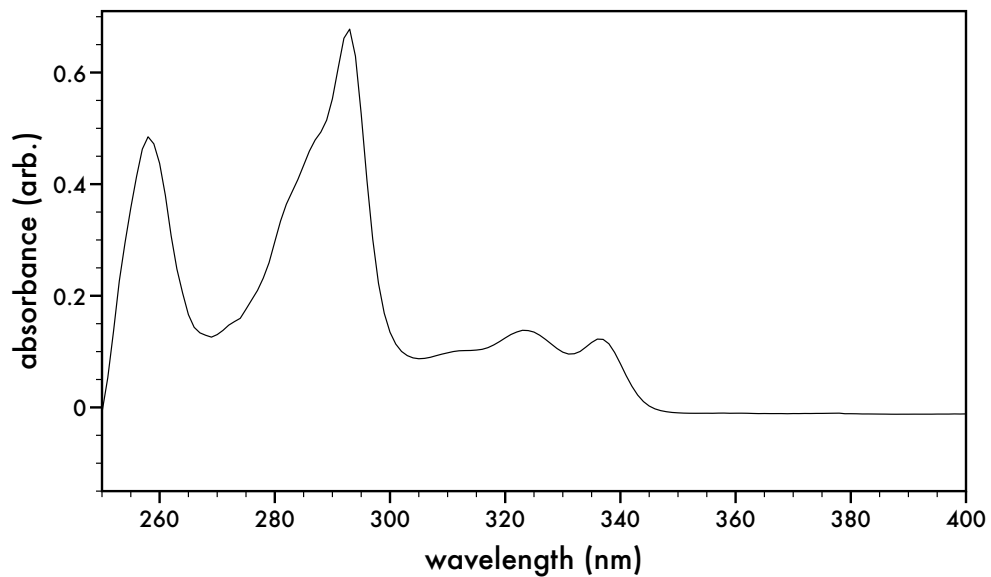


Figure 17: UV-Vis-NIR spectra of 9H-carbazole in $10\mu\text{g/ml}$ THF solution.

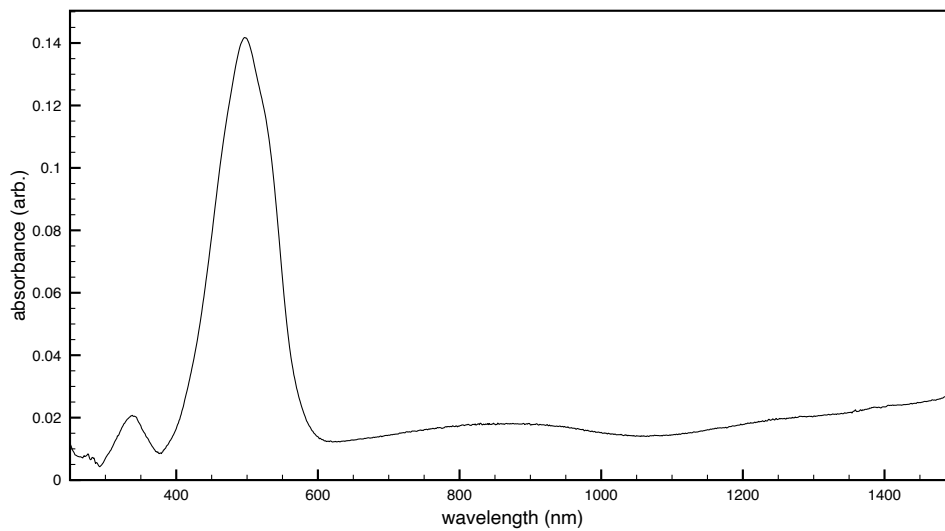


Figure 18: UV-Vis-NIR spectra of p6DPT in $10\mu\text{g/ml}$ THF solution.

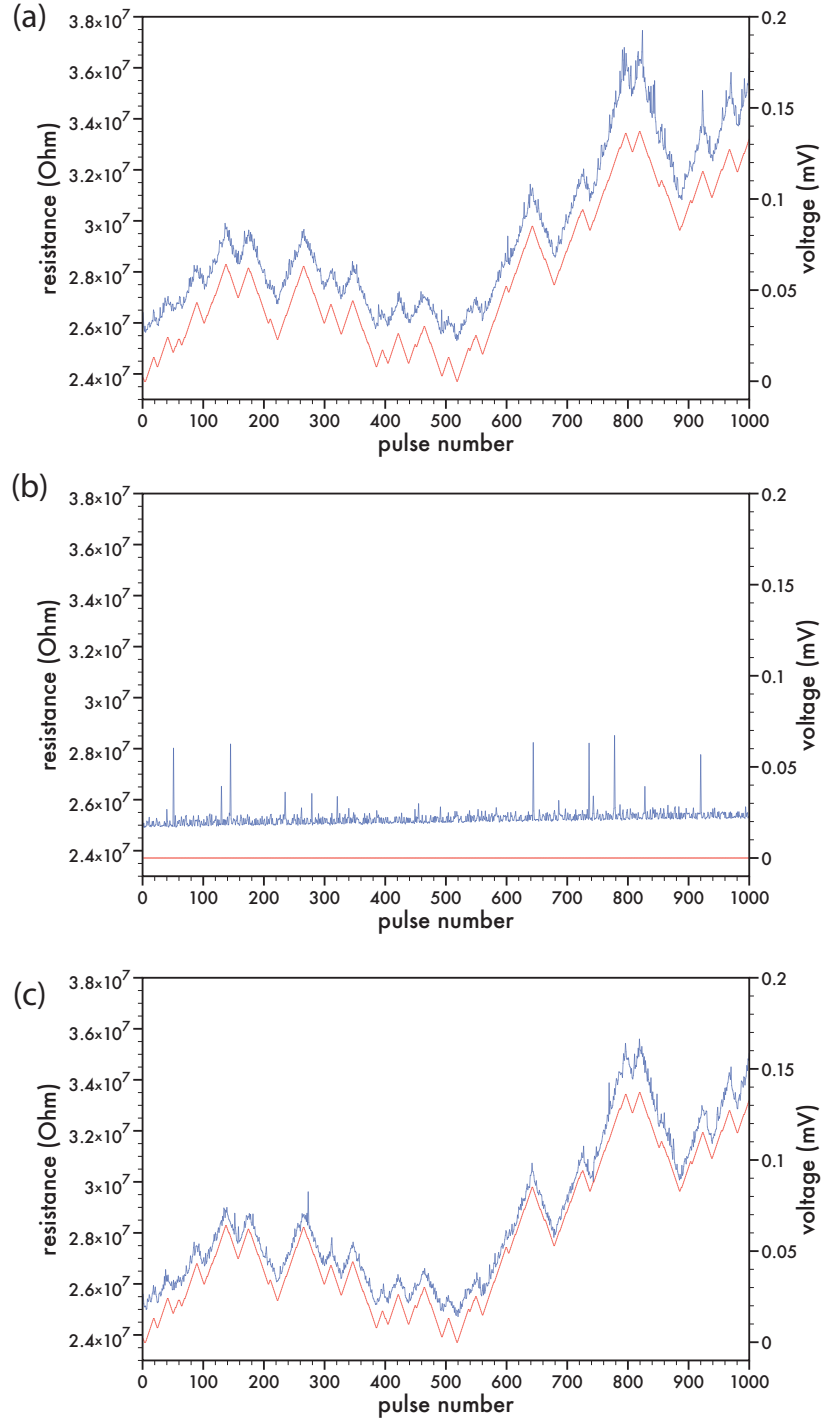


Figure 19: Cycled voltage profile (red) and resistance change (blue) with a “random” voltage profile applied to ITO/pC6DTP_{ox}/Al memristor. **(a)** Cycle N°1: resistance (blue) response (10-cycle average) of device to non-zero (red) voltage profile; **(b)** Cycle N°2: resistance (blue) response (10-cycle average) of device to zeroed (red) voltage profile; and **(c)** Cycle N°3: resistance (blue) response (10-cycle average) of device to non-zero (red) voltage profile. The device was subjected to the potential profile in the form of a 67 ms long square wave pulse with a magnitude corresponding to a value stored in the potential profile, with the pulses being spaced 860 ms apart. A measuring 50 mV square wave pulse with 160 ms width was initiated 127 ms after the potential profile pulse.