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#### **Electronic Supporting Information for**

# Influence of Catalytic System in Stille Polymerization on the Electrochromic Performance of Diketopyrrolopyrrole-Based Conjugated Polymers

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# 1 NMR of polymers

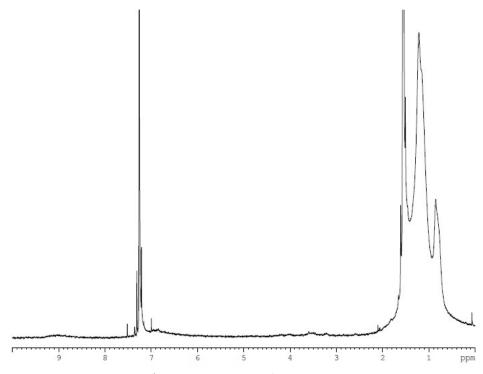


Figure S1  $^1\text{H}$  NMR spectrum of P1 in CDCl $_3$  at 25°C.

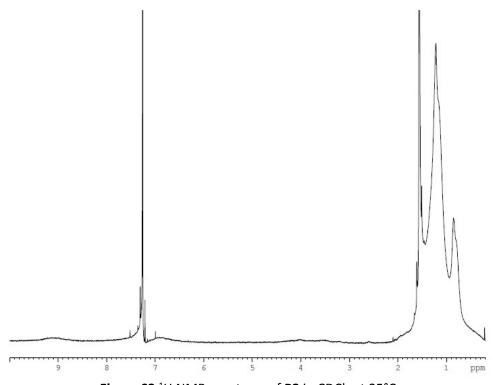
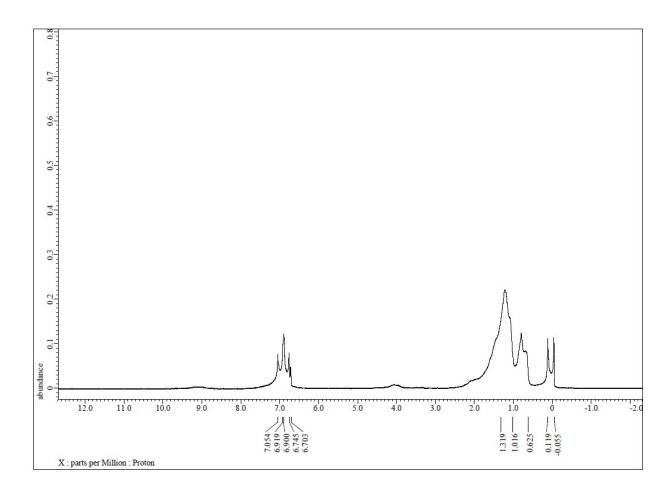


Figure S2  $^1\text{H}$  NMR spectrum of P2 in CDCl $_3$  at 25°C.



**Figure S3.**  $^{1}$ H NMR spectrum of **P2** in  $C_{6}D_{5}Cl$  at 125 $^{\circ}C$ .

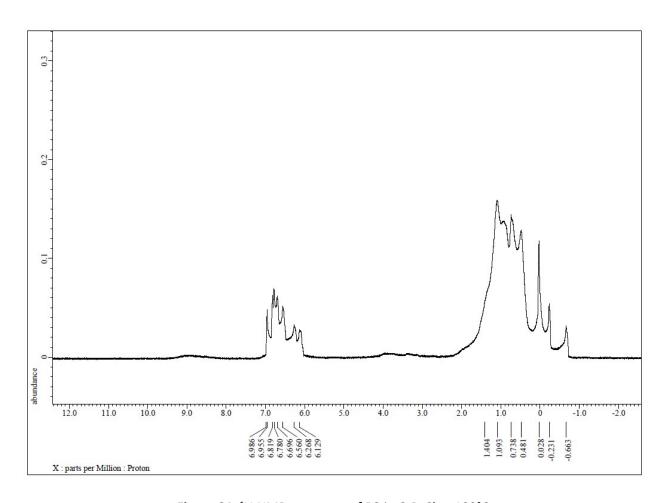
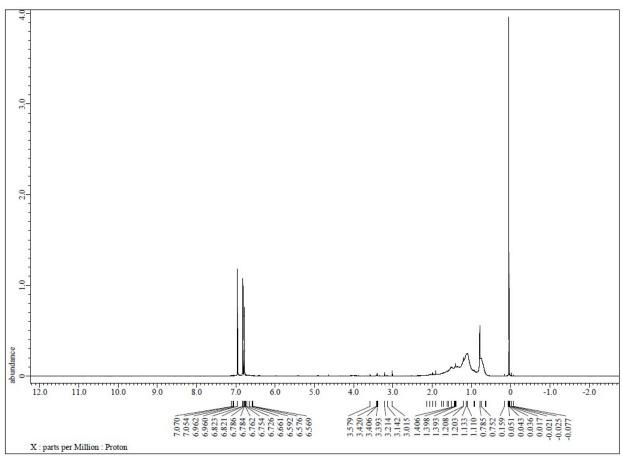


Figure S4.  $^1\text{H}$  NMR spectrum of P2 in C $_6\text{D}_5\text{Cl}$  at 100°C.



**Figure S5.** <sup>1</sup>H NMR spectrum of **P2** in C<sub>6</sub>D<sub>5</sub>Cl at 75°C.

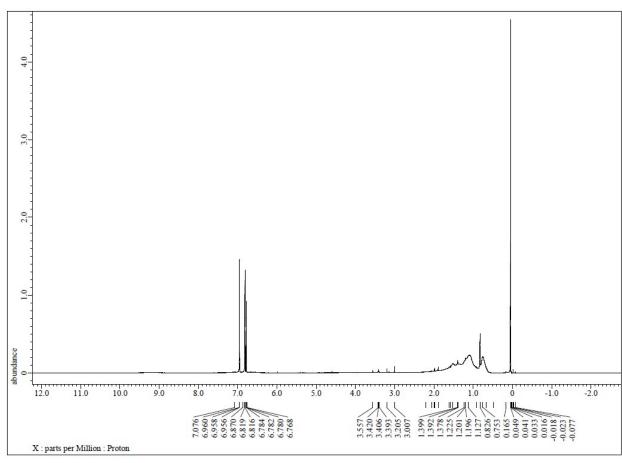
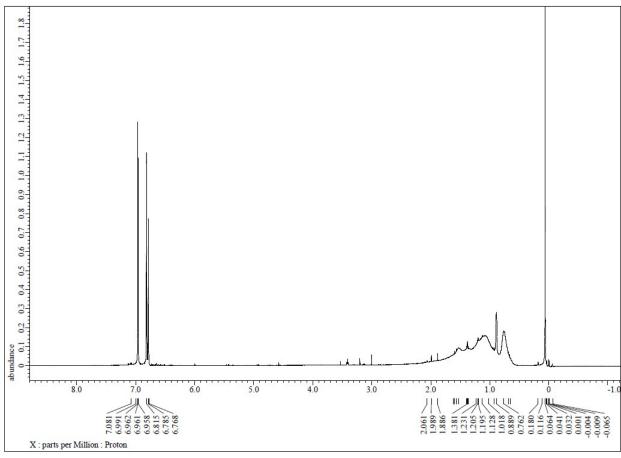


Figure S6.  $^1\text{H}$  NMR spectrum of P2 in  $\text{C}_6\text{D}_5\text{Cl}$  at 50°C.



**Figure S7.**  $^{1}$ H NMR spectrum of **P2** in  $C_{6}D_{5}Cl$  at 25°C.

# 2 GPC of polymers

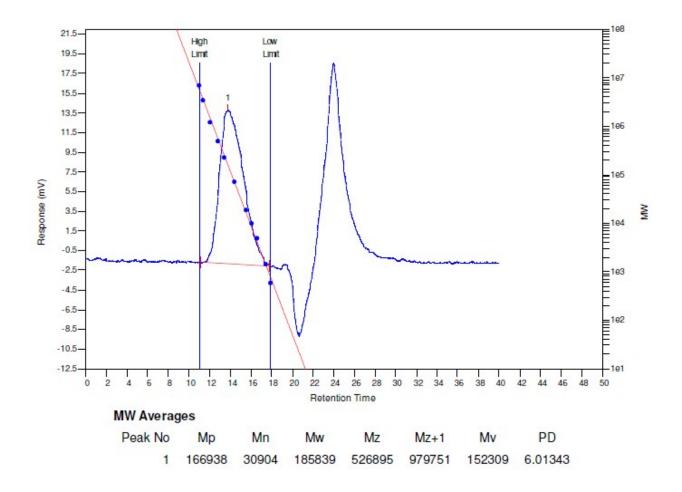


Figure S3 GPC plot and data of P1.

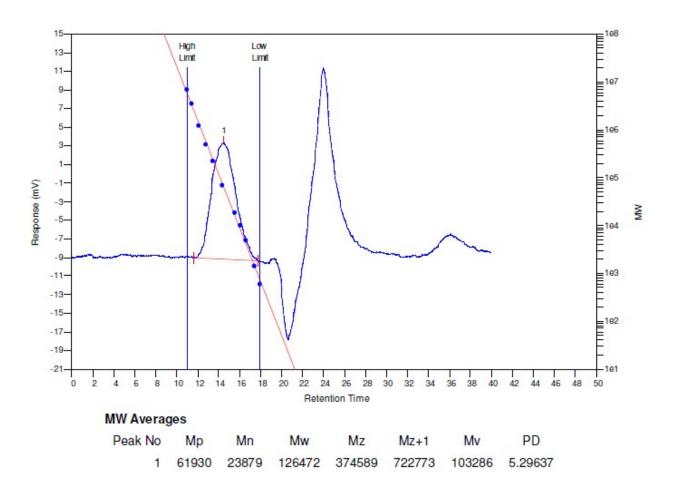
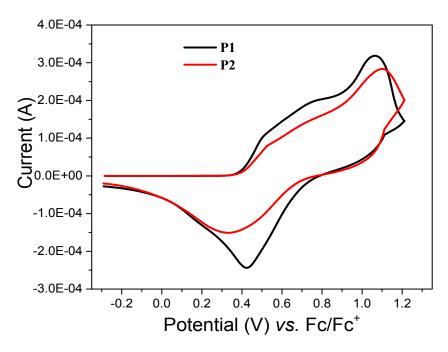


Figure S4 GPC plot and data of P2.

### 3 Cyclic voltammograms of polymers



**Figure S5** Cyclic voltammograms of **P1** and **P2** thin films in 0.1M LiClO<sub>4</sub>/ACN electrolyte/solvent couple at a scan rate of 50 mV/s calibrated vs. ferrocene/ferrocenium couple.

#### 4 XRD spectra of polymer thin films

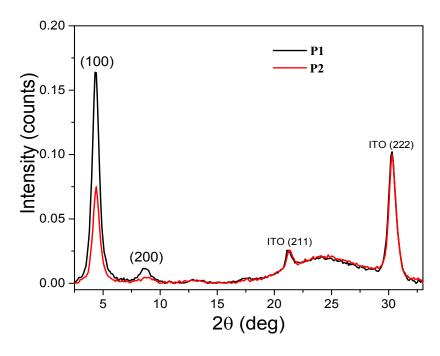
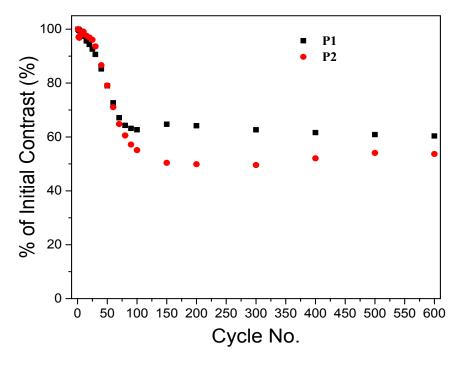


Figure S6 XRD spectra of P1 and P2 thin films drop-cast on ITO/glass substrates.

## 5 Redox stability of ECDs



**Figure S7** Degradation profiles of **P1** and **P2** ECDs cycled between +1.6 and -1.6 V at a residence time of 20 s at 1285 nm.