Supplementary Information (SI)

**Scheme S1.** Schematic diagram for the synthesis of electroactive diamine monomer (EDA) and trans-azobenzene-4,4'-dicarbonyl chloride (compound 3).

**Figure S1.** $^1$H NMR spectrum of Azo-PA-S-AT.

**Figure S2.** $^1$H NMR spectra of (a) electroactive diamine monomer (EDA), (b) trans-azobenzene-4,4'-dicarbonyl chloride (compound 3).
Figure S2.