Electronic Supplementary Material (ESI) for Polymer Chemistry

Thiourea-Functionalized Poly(phenyleneethynylene): Fluorescent Chemosensors for Anions and Cations

Xue Yong, Wen Wan, Mingjian Su, Wenwei You, Xinwei Lu, Yichen Yan, Jinqing Qu, Ruiyuan Liu,Toshio Masuda

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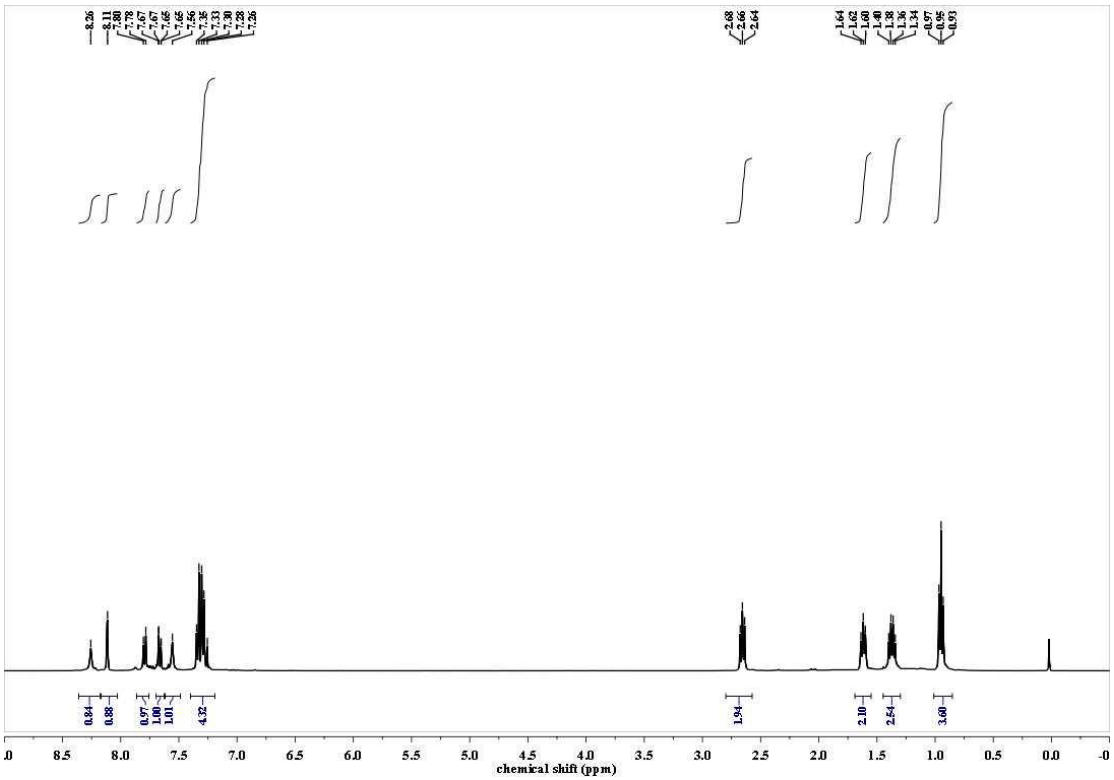

Figure S1. ^{1}H NMR spectrum of **1** in $CDCl_3$.

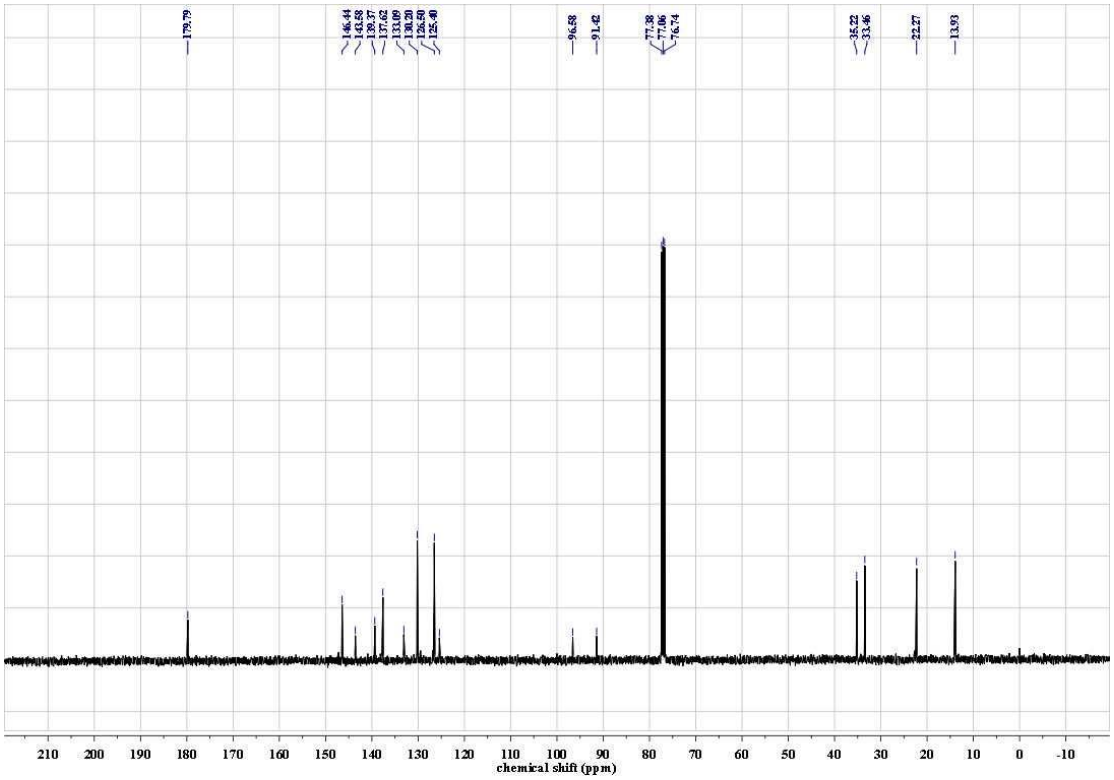

Figure S2. ^{13}C NMR spectrum of **1** in $CDCl_3$.

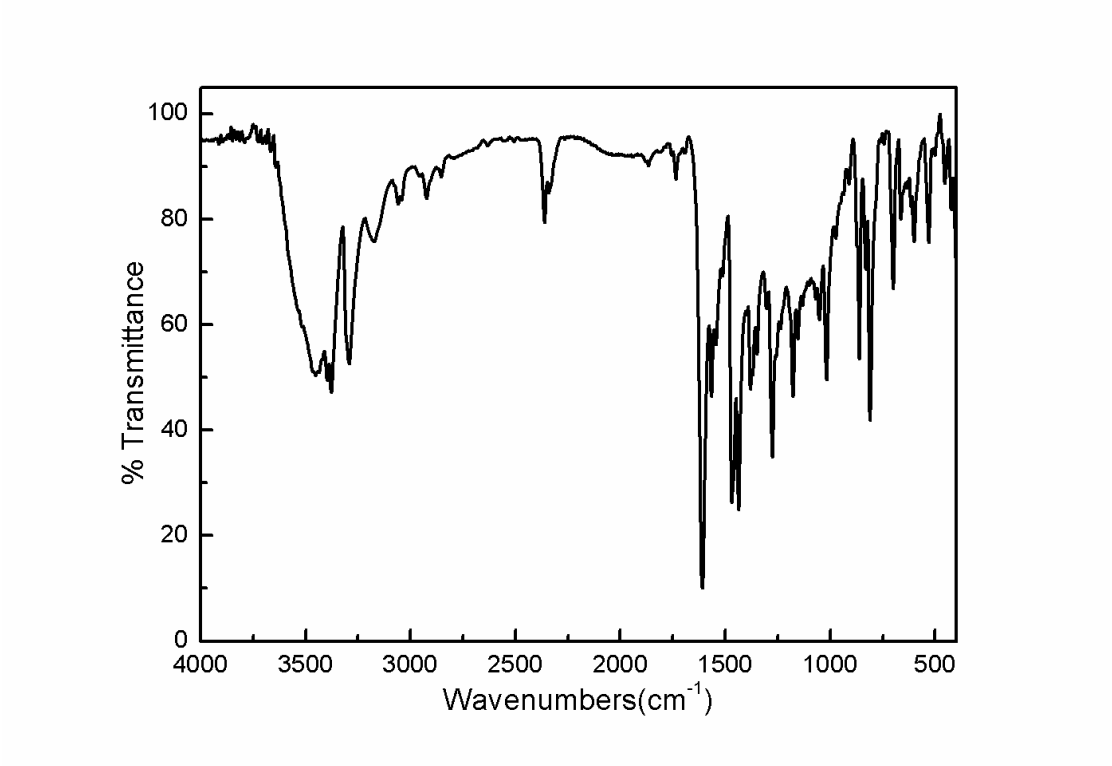

Figure S3. IR spectrum of **1**

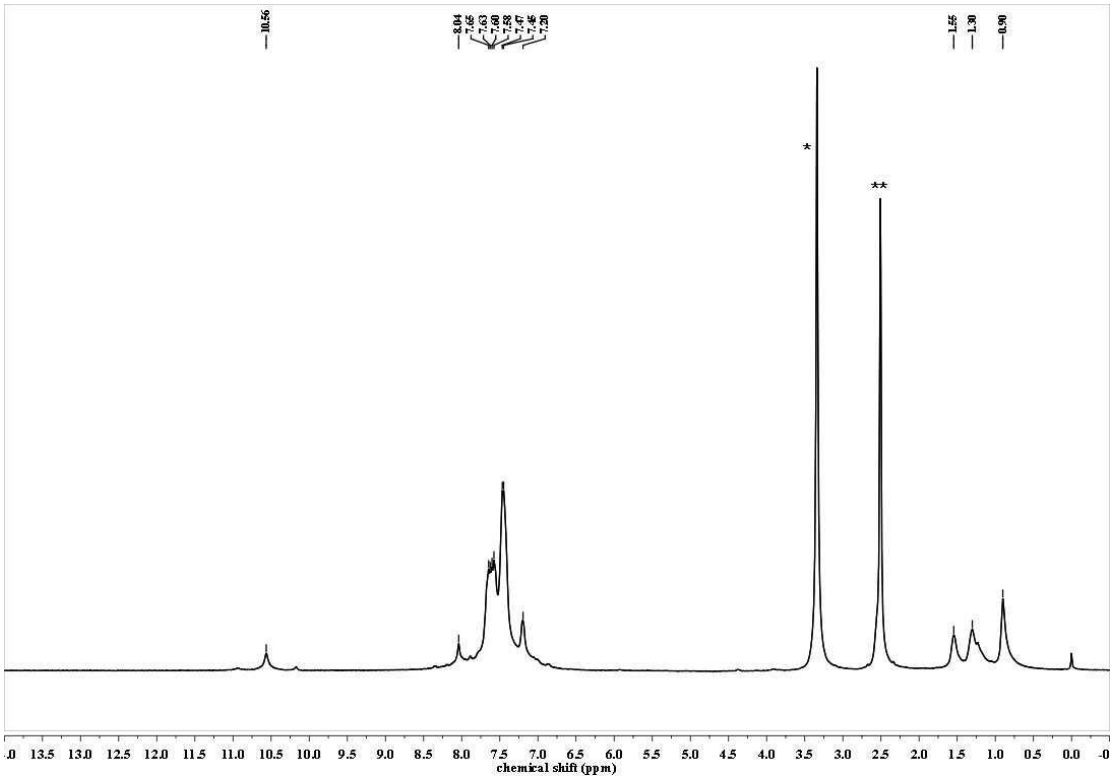

Figure S4. ^{1}HNMR spectrum of poly(**1**) in DMSO-d_6. * indicates H_2O, ** indicates solvent.

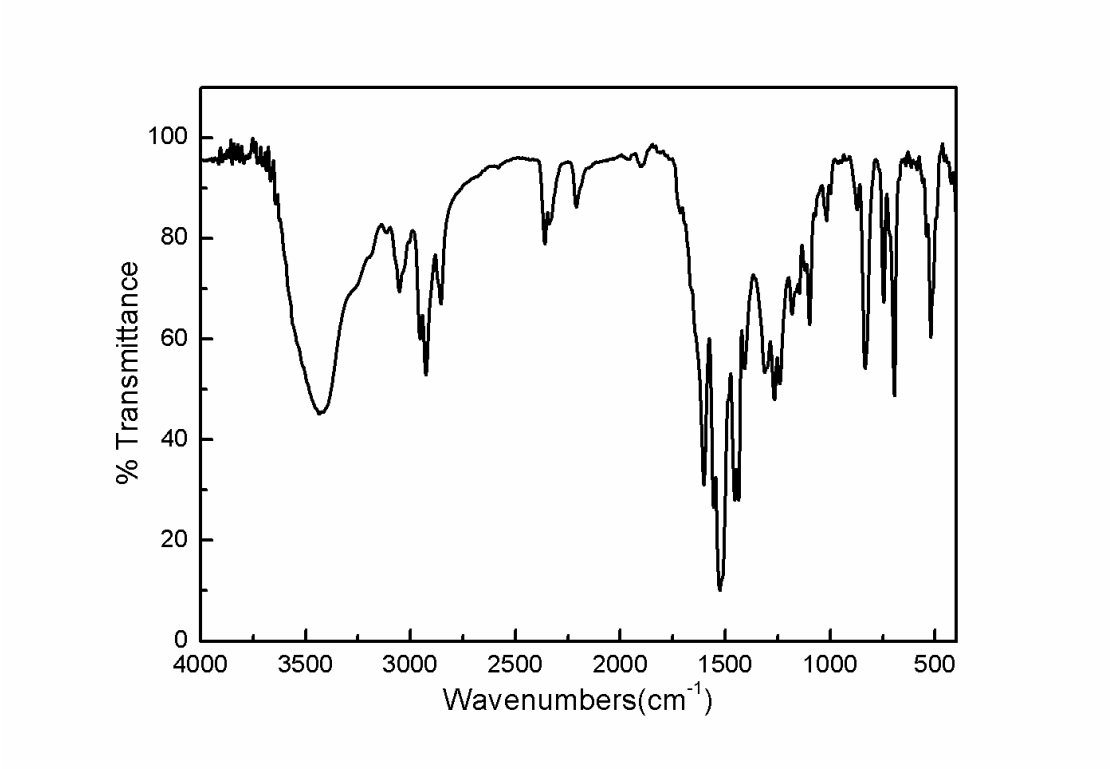

Figure S5. IR spectrum of poly(**1**).

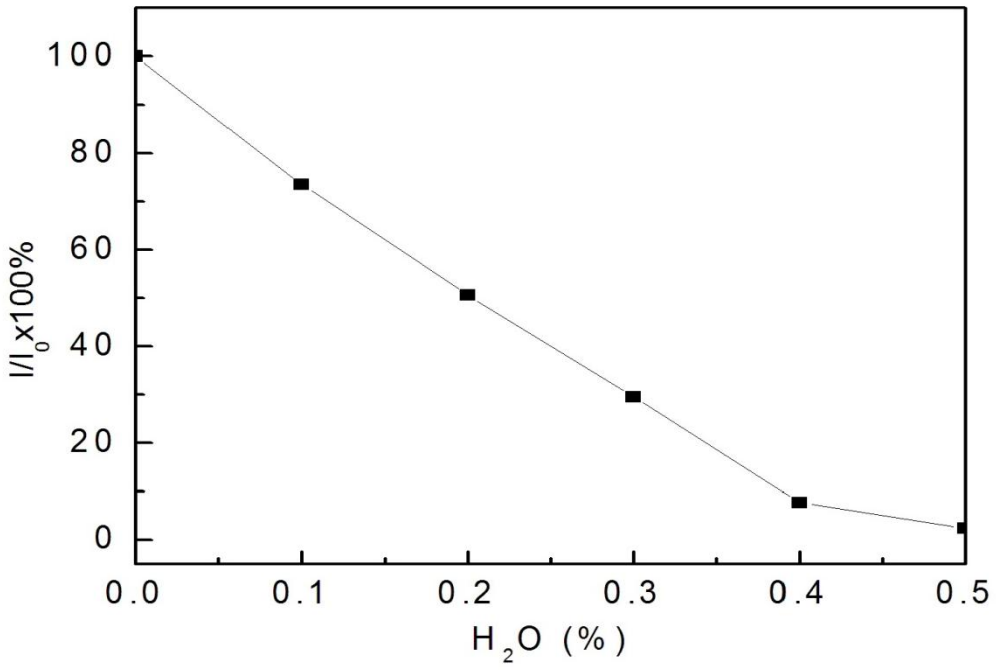

Figure S6. Relative intensity (I/I_0) of fluorescence at 452 nm of poly(**1**) in DMF/water ([PRU] = 23.8μM). Excitation at 380 nm.

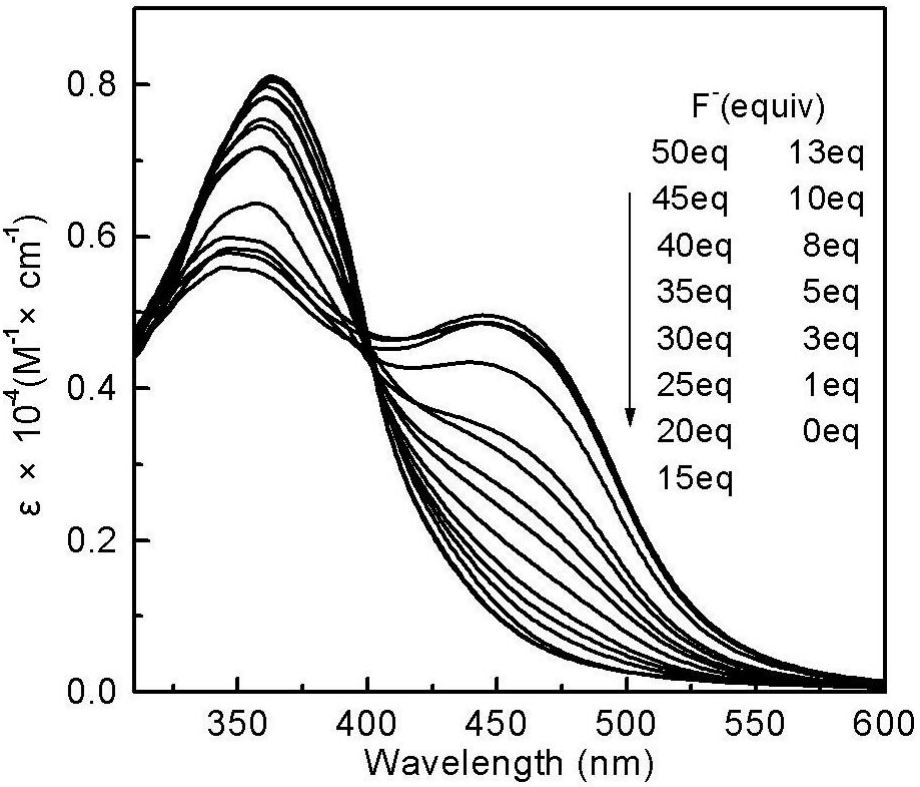

Figure S7. UV-vis spectra of poly(**1**) in DMF/H_2O (99:1 v/v) ([PRU] = 23.8μM) upon titration with F^- (0–50 equivalents).

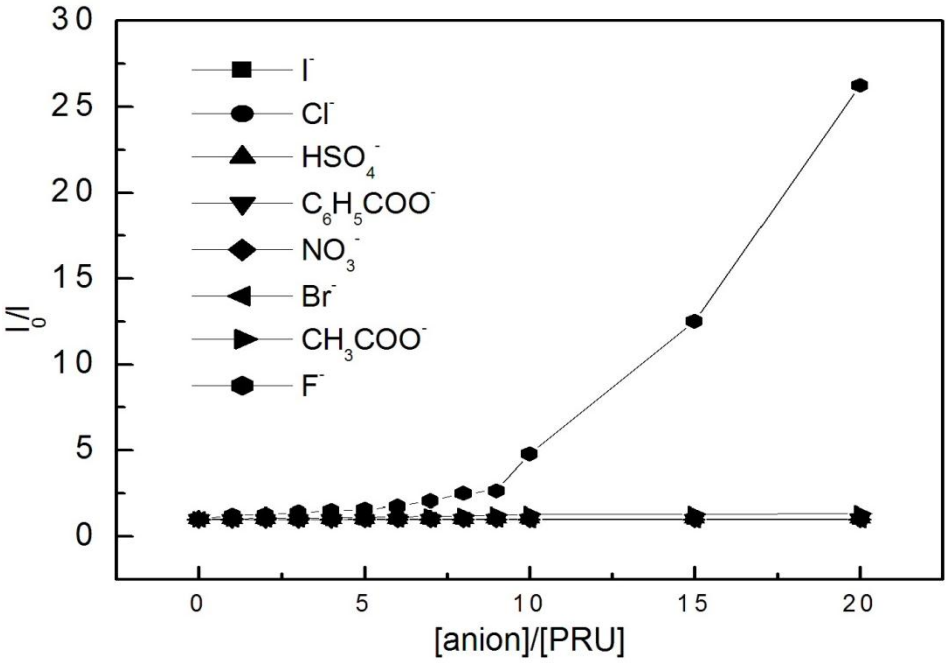

Figure S8. Stern-Volmer plots of poly(**1**) emission quenching by different anions in DMF.

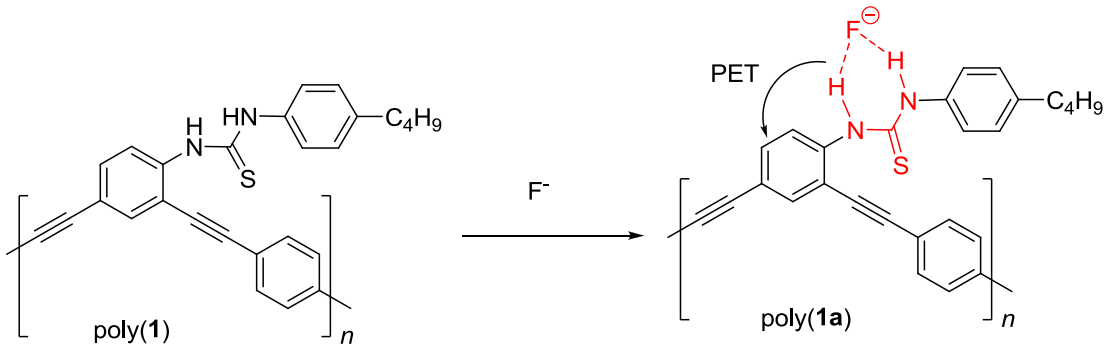

Figure S9. Schematic map of the interaction between poly(**1**) and fluoride ion.

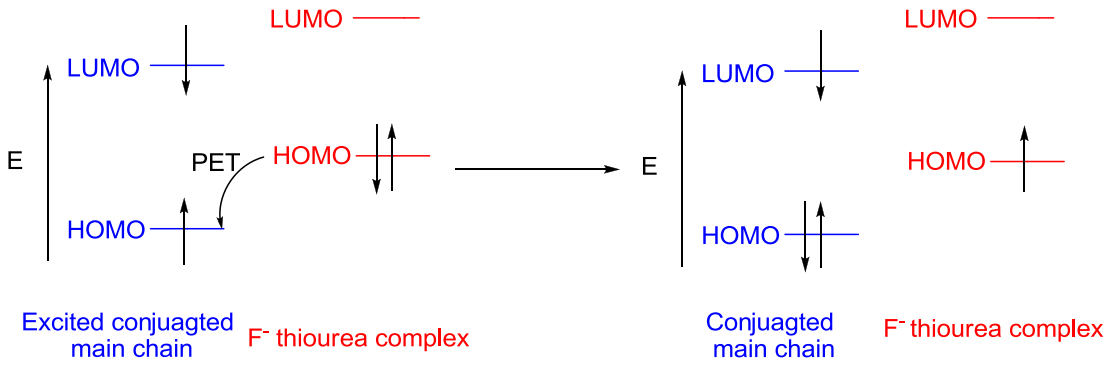

Figure S10. Relative energy alignments about PET between poly(**1**) and fluoride ion.

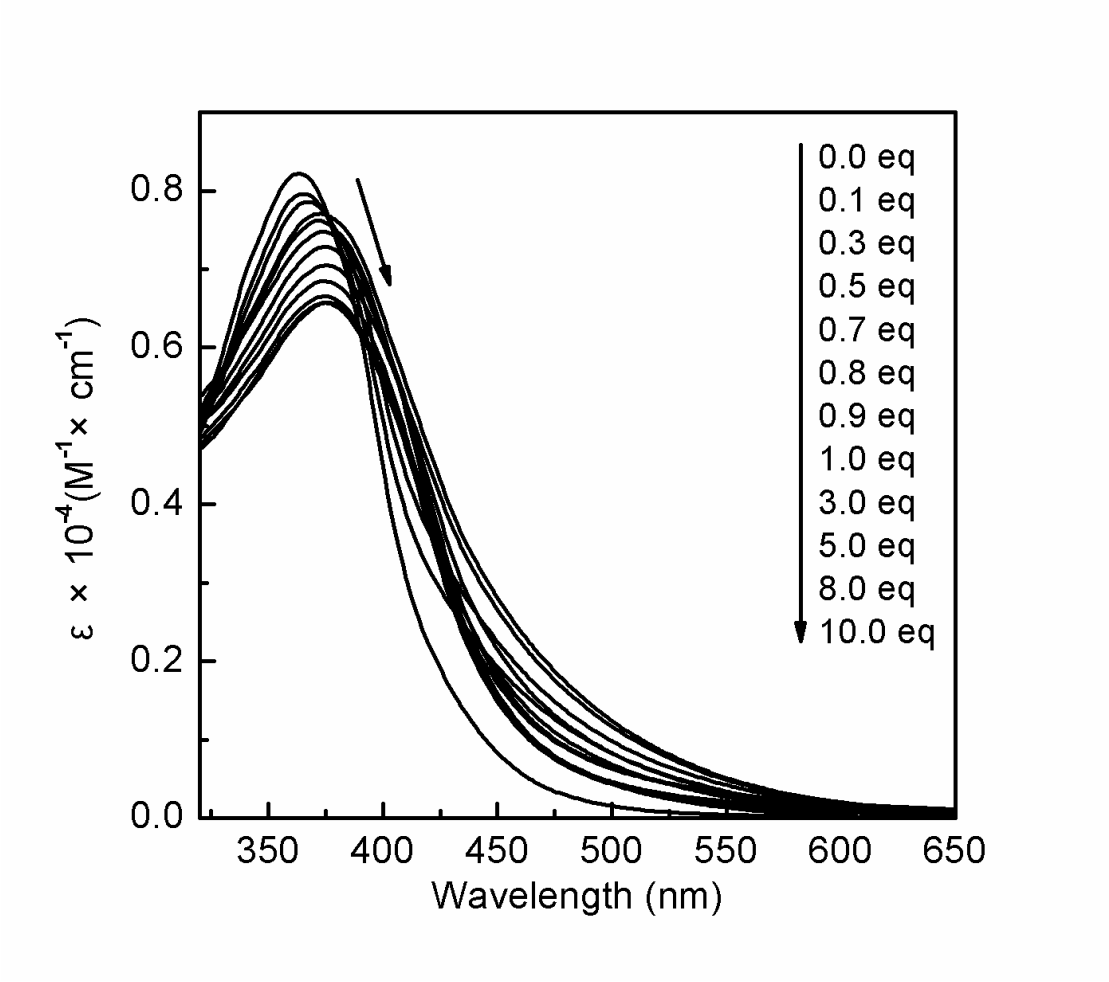

Figure S11. UV-vis spectra of poly(**1**) in DMF/H_2O (99:1 v/v) ([PRU] = 23.8 μM) upon titration with Ag^+ (0–10 equivalents).

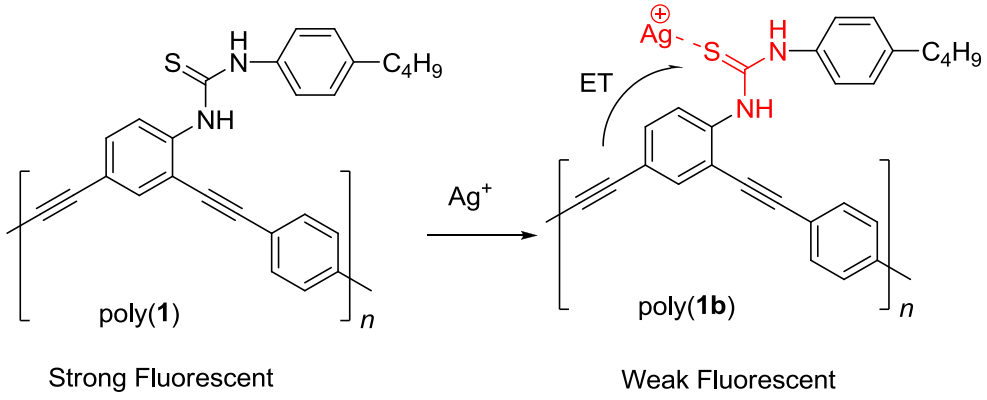

Figure S12. Schematic map of the interaction between poly(**1**) and silver ion.

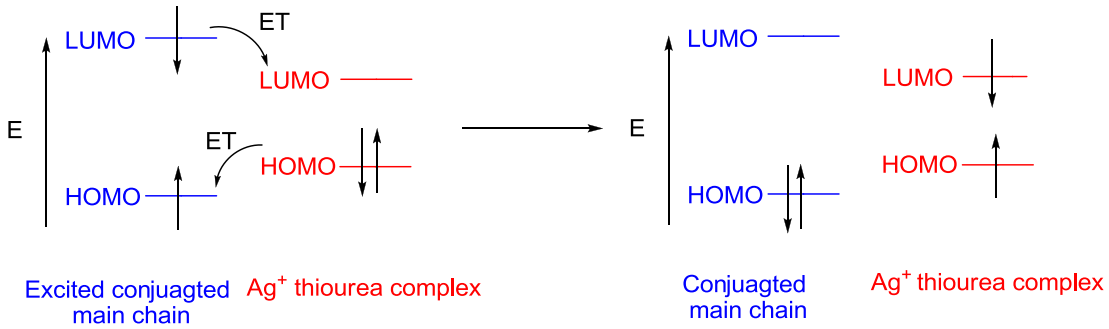

Figure S13. Relative energy alignments about ET between poly(**1**) and silver ion.

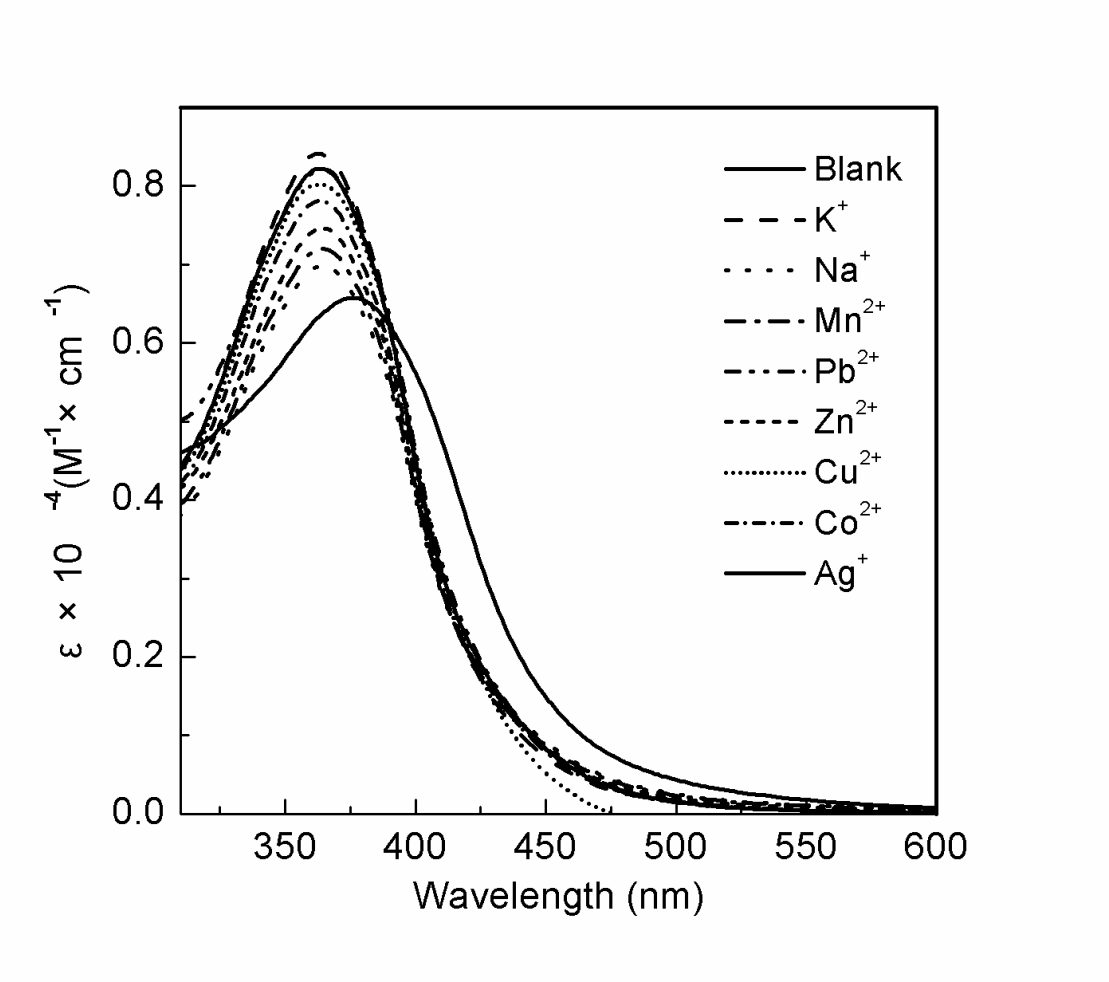

Figure S14. Absorption spectra of poly(**1**) in DMF/H_2O (99:1 v/v) ([PRU] = 23.8 μM) upon the addition of various cations ([cation]/[PRU] = 2).

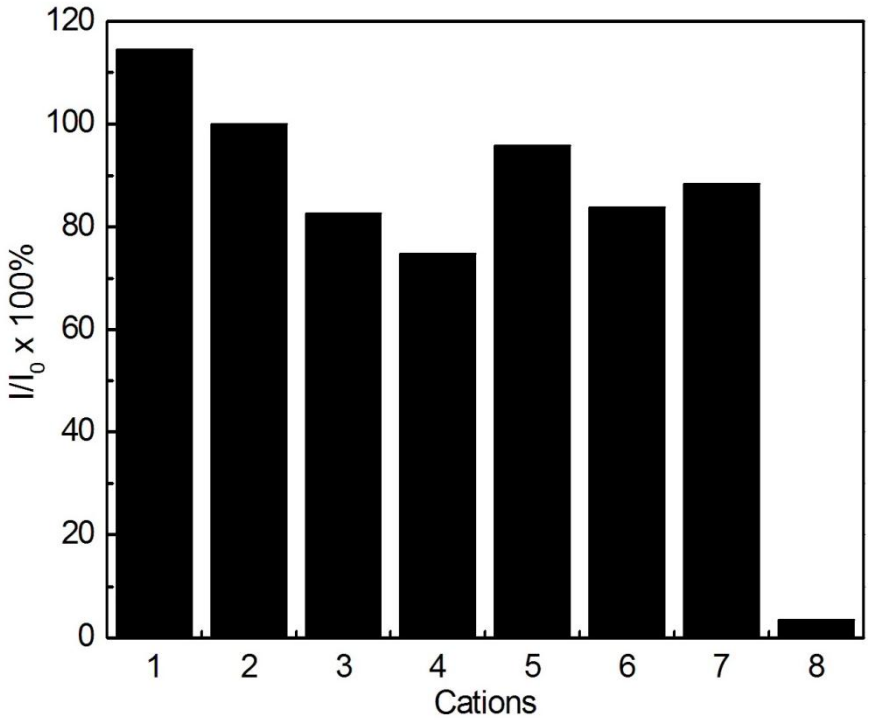

Figure S15. Fluorescence quenching (I/I_0) by different cations at the maximum emission wavelength (I: fluorescence intensity upon addition of a cation; I_0: initial fluorescence intensity). [PRU] = 23.8μM, [cation]/[PRU] =2. 1: Mn^{2+}, 2: Na^{+}. 3: Pb^{2+}, 4: Cu^{2+}, 5: K^{+}, 6:Zn^{2+}, 7: Co^{2+}, 8: Ag^{+}.

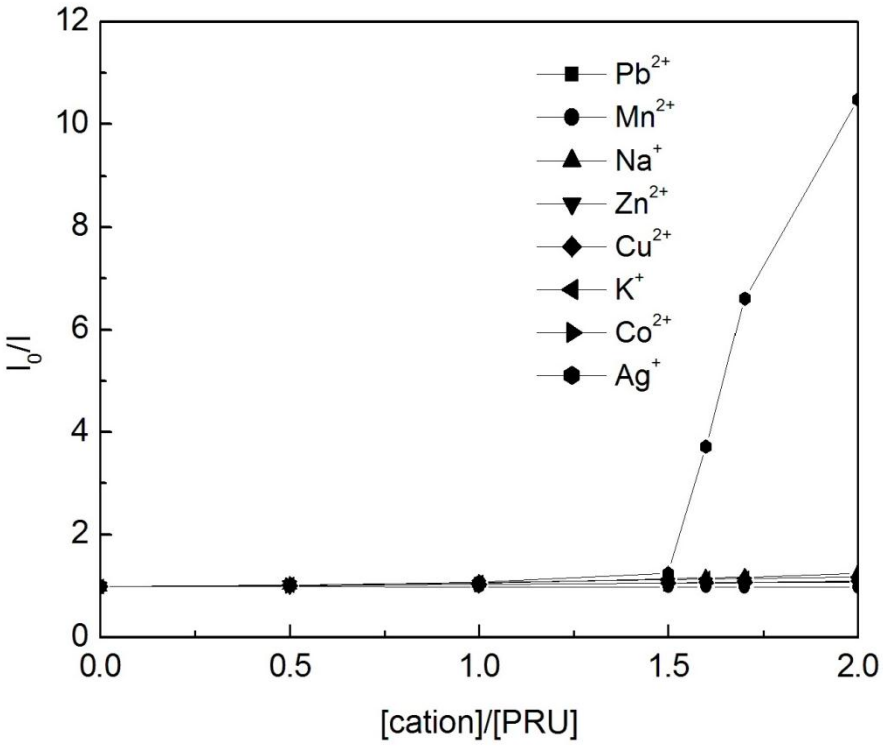

Figure S16. Stern-Volmer plots of poly(**1**) emission quenching by different cations in DMF/H_2O (99:1 v/v).

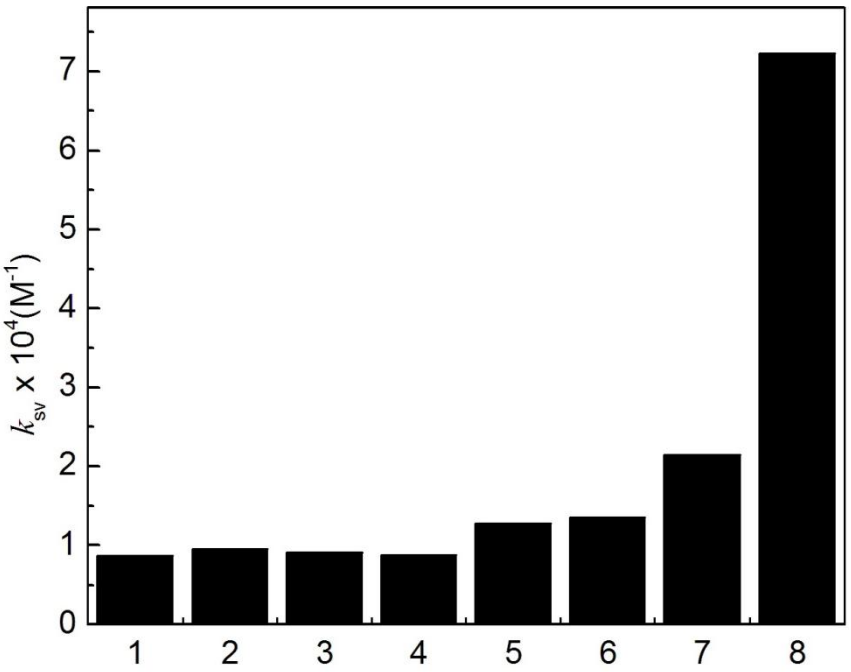

Figure S17. *ksv* values for different cations. 1: Co^{2+}, 2: Na^{+}, 3: Pb^{2+}, 4: K^{+}, 5: Mn^{2+}, 6:Zn^{2+}, 7: Cu^{2+}, 8: Ag^{+}.