Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information for

Novel polyamides with fluorene-based triphenylamine: electrofluorescence and electrochromic properties

List of Contents for supporting Information:

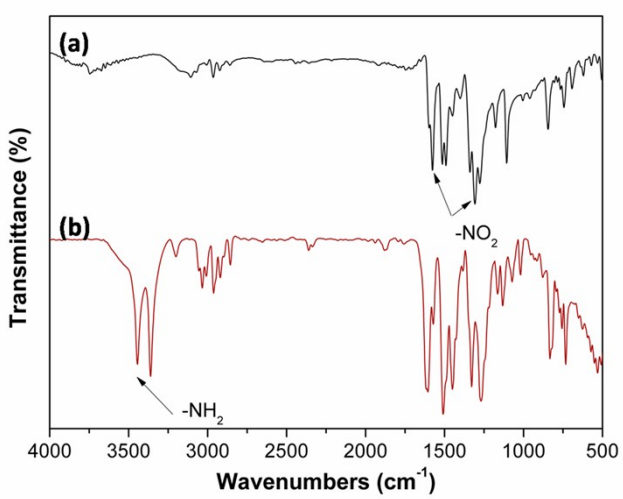

Fig. S1 IR spectra of dinitro intermediate compound (a) and diamine monomer (b).

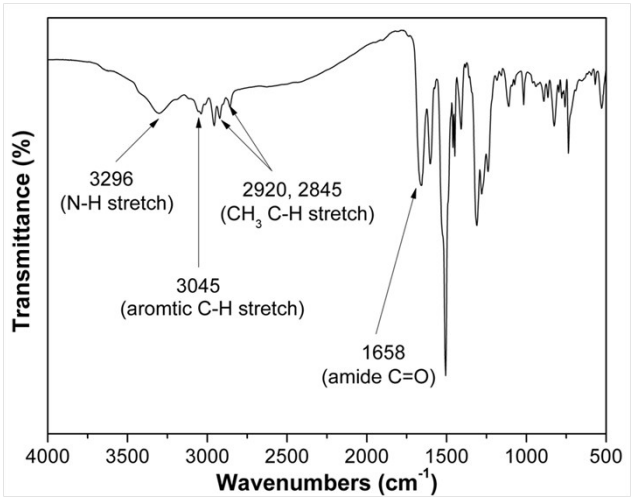

Fig. S2 IR spectrum of polyamide 4a.

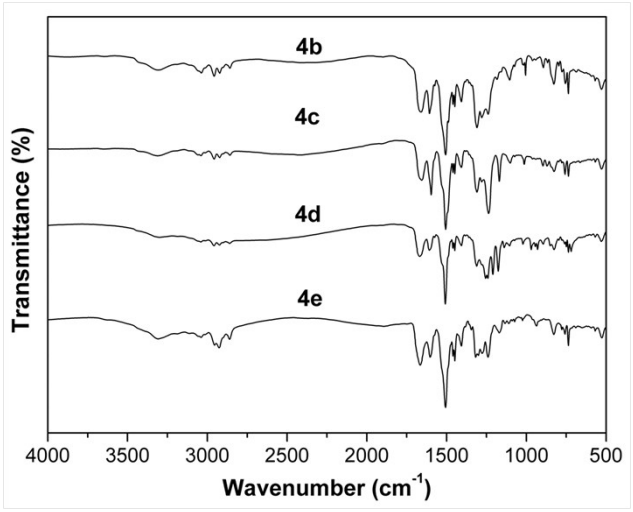

Fig. S3 IR spectra of polyamide 4b, 4c, 4d, 4e.

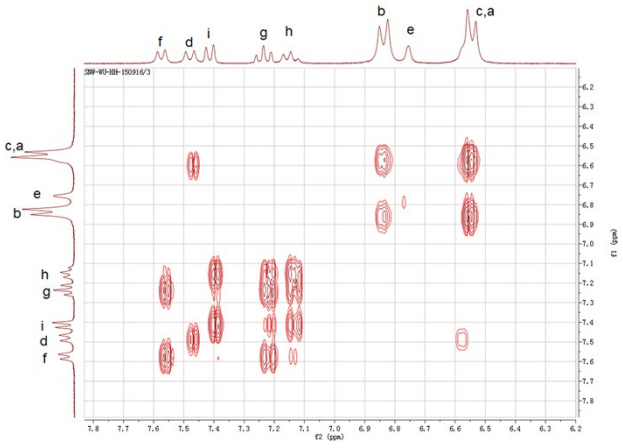

Fig. S4 H-H COSY spectra of diamine 2 in DMSO-d_6.

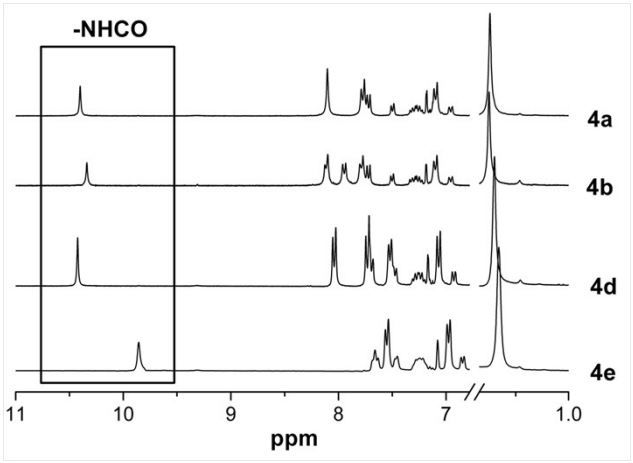

Fig. S5 ^{1}H NMR spectra of the polyamide 4a, 4b, 4d, 4e in DMSO-d_6.

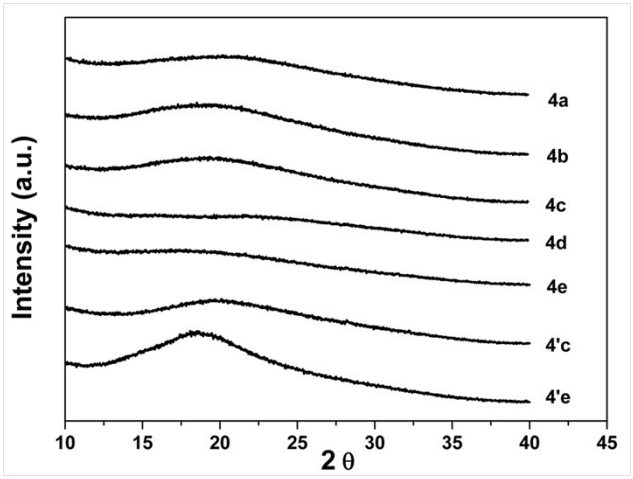

Fig. S6 WAXD pattern of polyamide films.

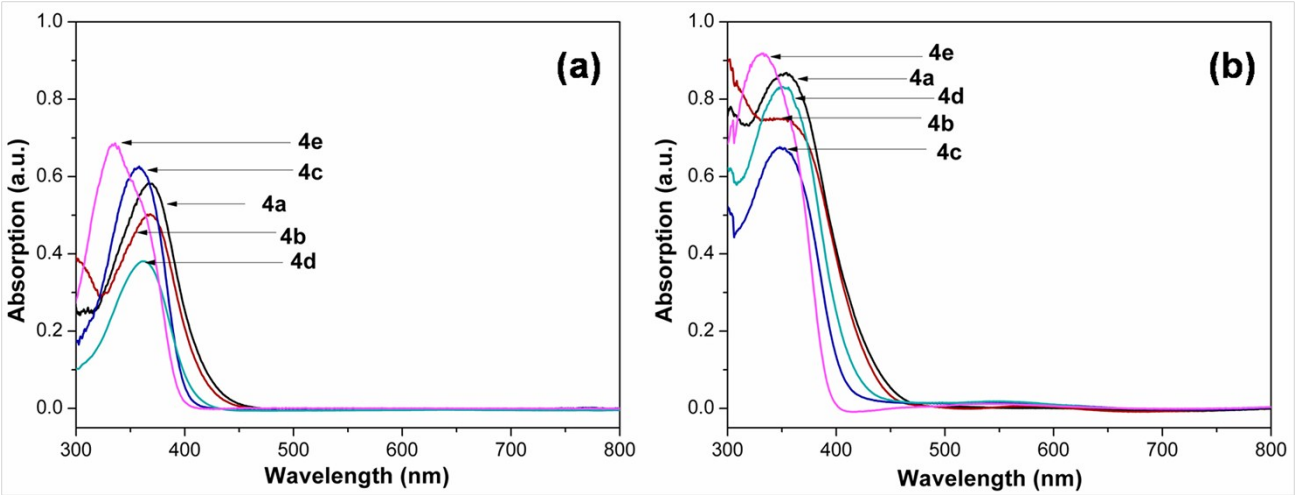

Fig. S7 UV-vis absorption spectra of polyamides (a) solution and (b) film.

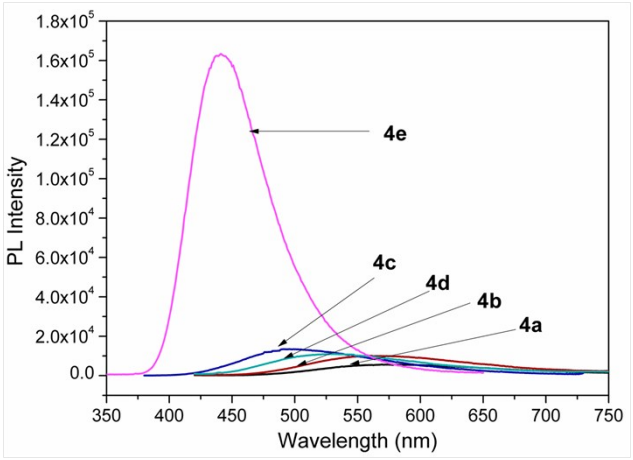

Fig. S8 PL spectra of polyamides in NMP solutions (1×10^{-5} M).

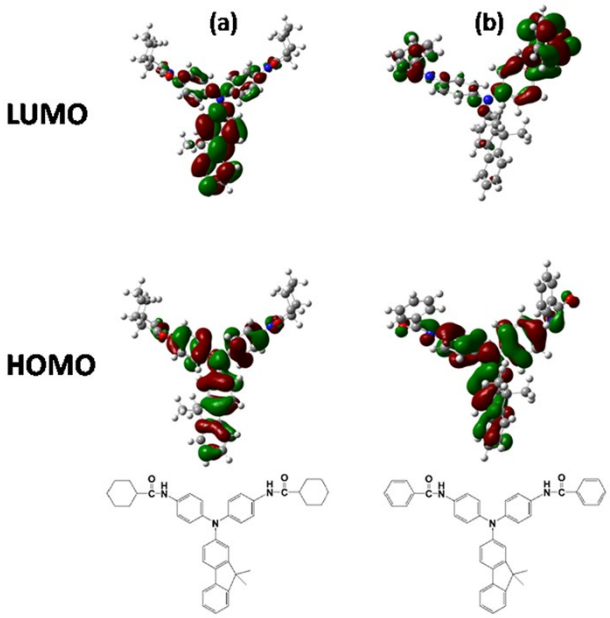

Fig. S9 Calculated molecular orbitals of the model compounds (TD-DFT method at the B3LYP/6-31G (d, p))..

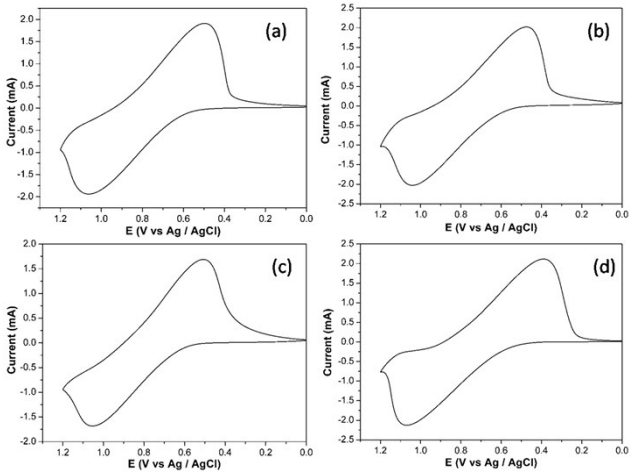

Fig. S10 Cyclic voltammetric diagrams of polyamide (a) 4a, (b) 4b, (c) 4d, (d) 4e in CH_3CN containing 0.1M TBAP at scan rate= 50 mV s^{-1}.

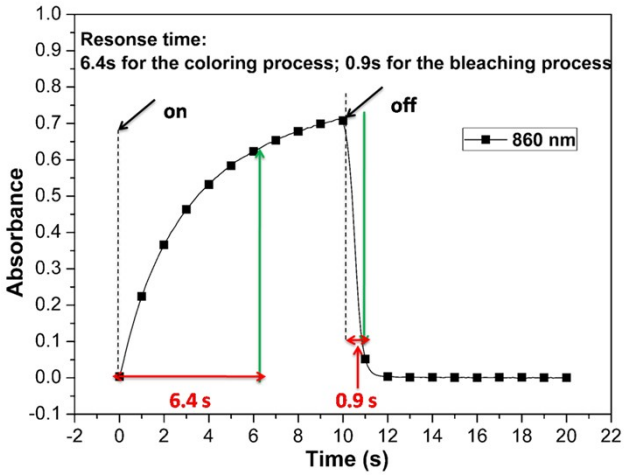

Fig. S11 Calculation of optical switching time at 860nm at the applied potential of polyamide 4c thin film on the ITO-coated glass substrate in 0.1 M TBAP/CH_3CN.