

# Effects of Fluoro Substitution on the Electrochromic Performance of Alternating Benzotriazole and Benzothiadiazole-Based Donor–Acceptor Type Copolymers

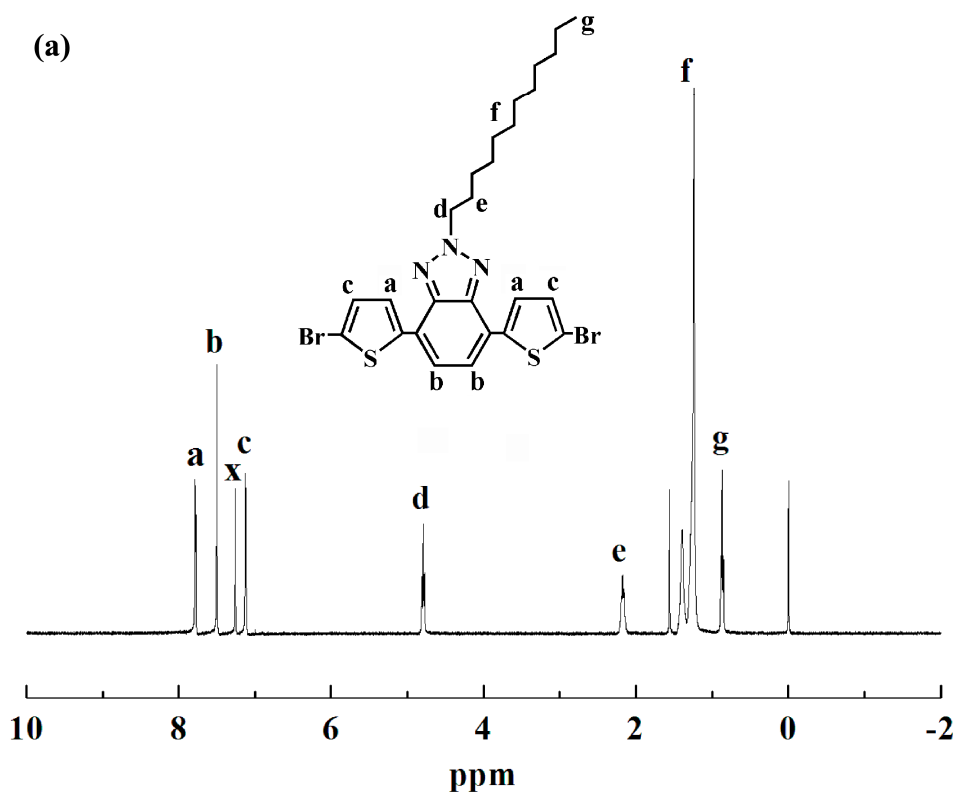
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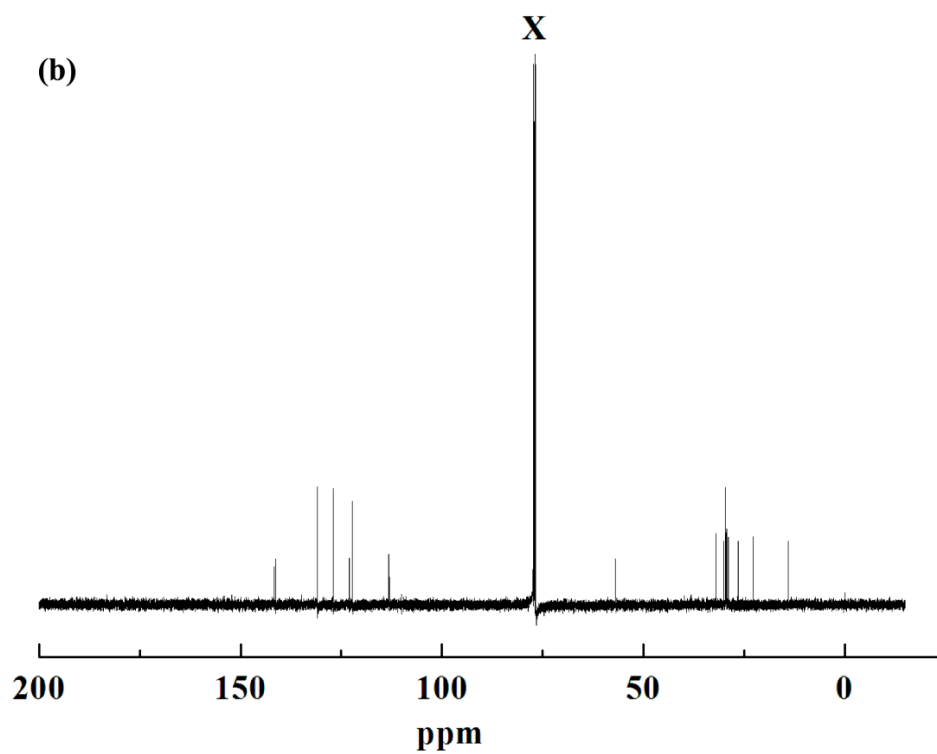
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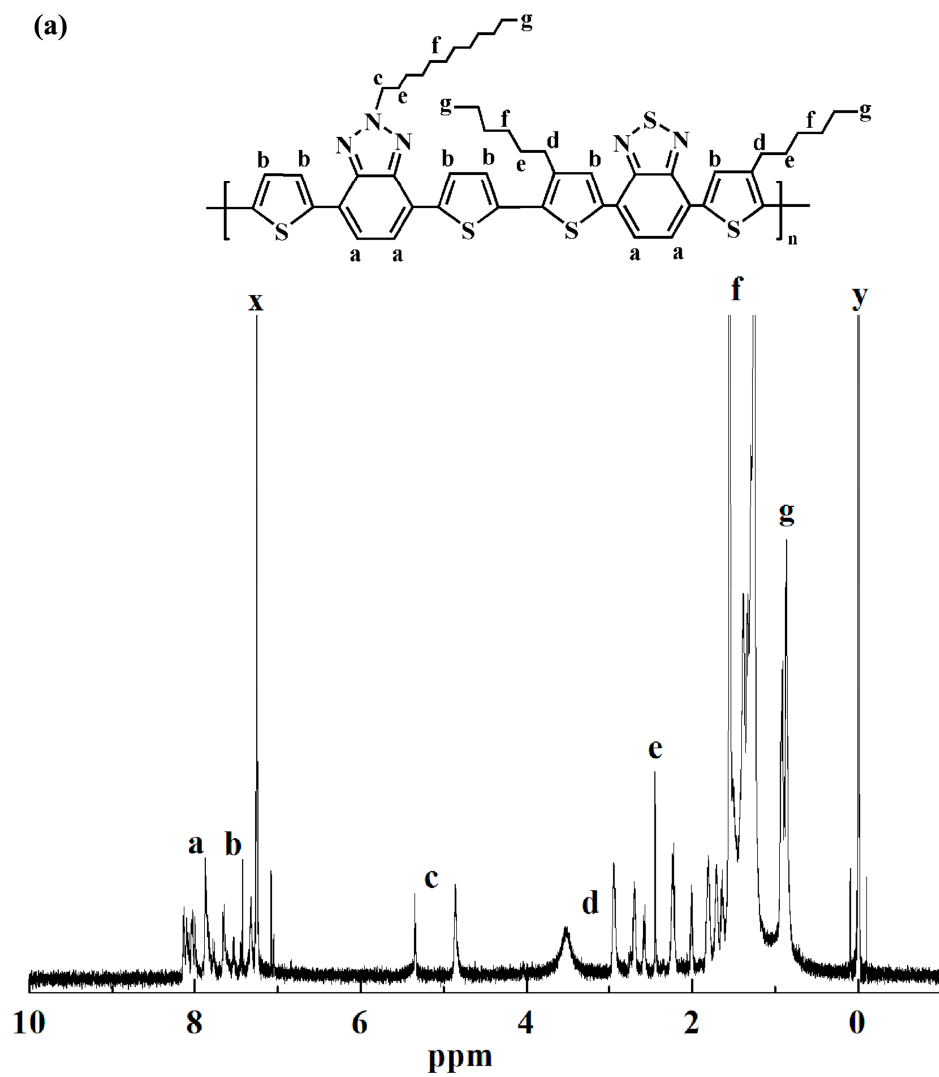
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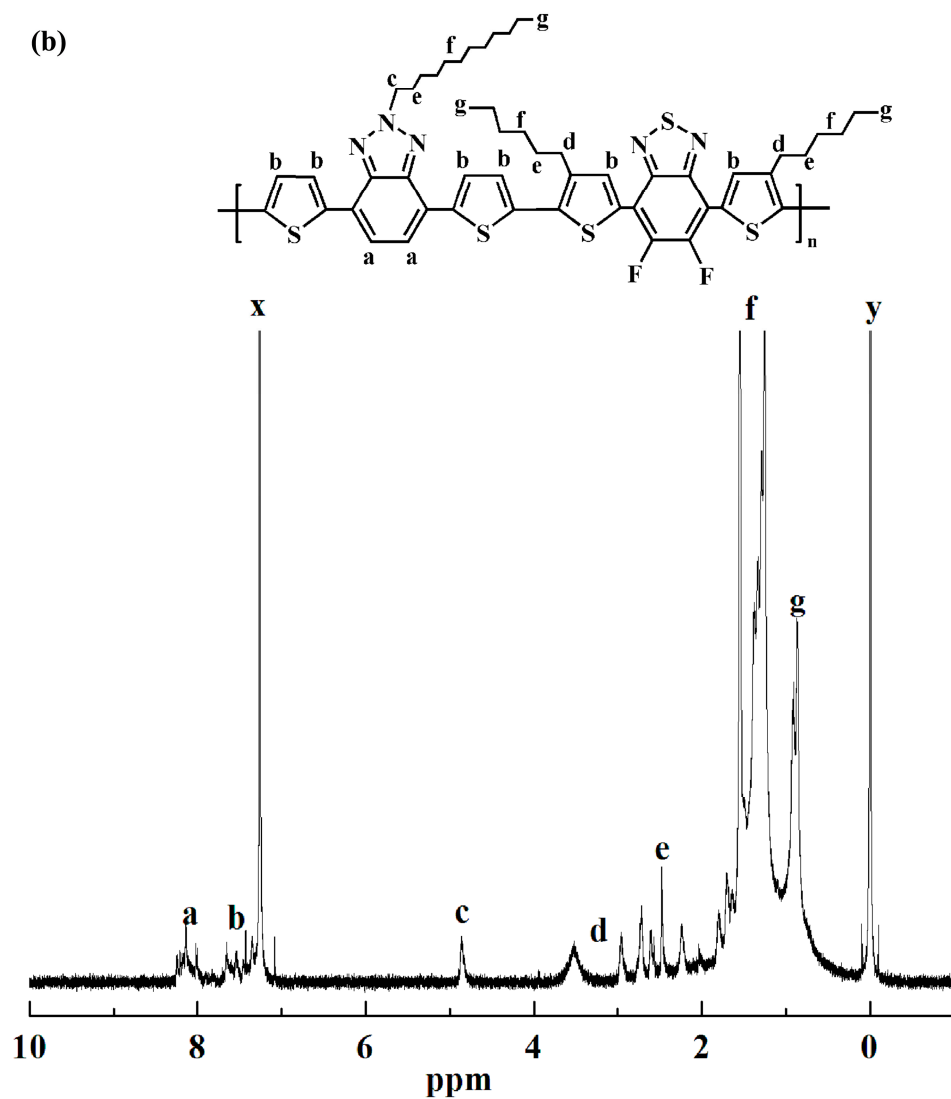


**Figure S1.**  $^1\text{H}$  NMR spectrum and  $^{13}\text{C}$  NMR spectrum of 2-dodecyl-4,7-di(5-bromo-thiophen-2-yl)-2H-benzo[d][1,2,3]triazol in  $\text{CDCl}_3$ : (a)  $^1\text{H}$  NMR, solvent peak at  $\delta = 7.26$  ppm was marked by “x”. (b)  $^{13}\text{C}$  NMR, solvent peak at  $\delta = 77.01$  ppm was marked by “X”.

(a)



(b)



**Figure S2.**  $^1\text{H}$  NMR spectra of the polymers in  $\text{CDCl}_3$ : (a) P(TBT-TBTh); (b) P(TBT-F-TBTh).

Solvent and tetramethylsilane peaks were marked by “x”, “y” respectively.