

Electronic Supplementary Information

for

Synthesis and Characterization of Polyfluorene-based Photoelectric Materials: the Effect of Coil Segment on the Spectral Stability

Jin-Jin Li¹, Jian-Jian Wang², Yin-Ning Zhou¹, Zheng-Hong Luo^{1, 2*}

*¹Department of Chemical Engineering, School of Chemistry and Chemical
Engineering, Shanghai Jiao Tong University, Shanghai 200240, P. R. China*

*²Department of Chemical and Biochemical Engineering, College of Chemistry and
Chemical Engineering, Xiamen University, Xiamen 361005, P. R. China*

* Correspondence to: Prof. Z.H. Luo; e-mail: luozh@sjtu.edu.cn

Tel.: +86-21-54745602

Fax: +86-21-54745602

Figure S1 shows the ^1H NMR spectra of PF-OH (**Figure S1-a**) and PF-Br (**Figure S1-b**). The proton signals from the hydroxyl moiety of PF-OH were clearly observed at 4.77 ppm, indicating the successful incorporation of the end-capper 4-bromobenzyl alcohol. Conversion of the end groups into bromide (PF-Br) was confirmed by the disappearance of the signal at 4.77 ppm and the appearance of peaks at 5.28 ppm.

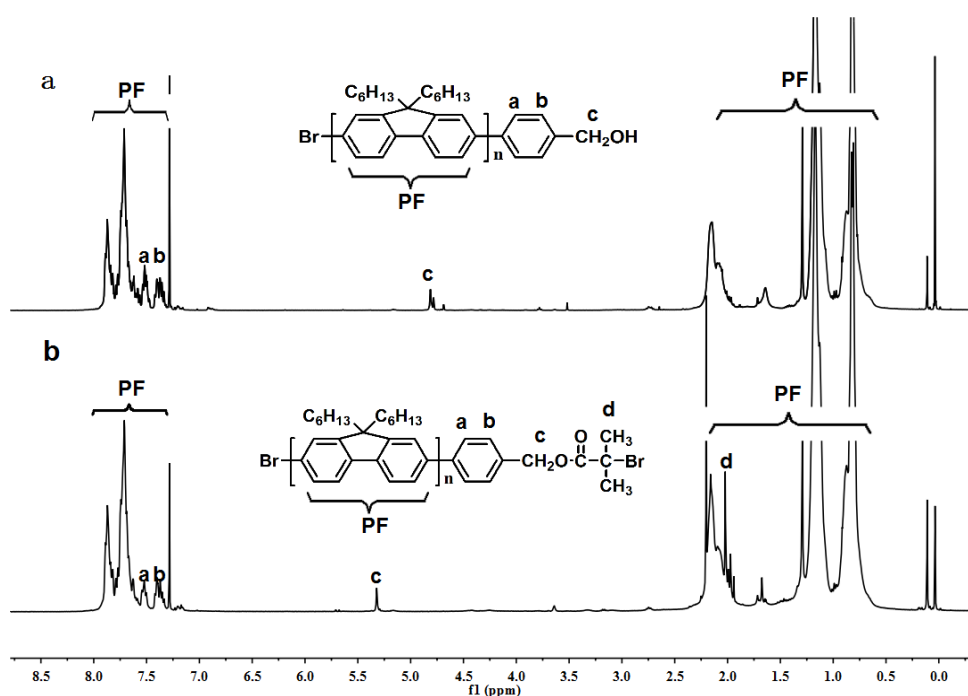


Figure S1. ^1H NMR spectra of (a) PF-OH and (b) PF-Br in CDCl_3 .

The successful synthesis of PF-OH and PF-Br also can be confirmed by the appearance of the adsorption peak at 3435 cm^{-1} in **Figure S2-a** and 1735 cm^{-1} in **Figure S2-b**, which were assigned to the stretching vibrations of the $-\text{OH}$ group in the end-capper 4-bromobenzyl alcohol and the $\text{C}=\text{O}$ group in 2-bromoisobutyryl bromide, respectively.

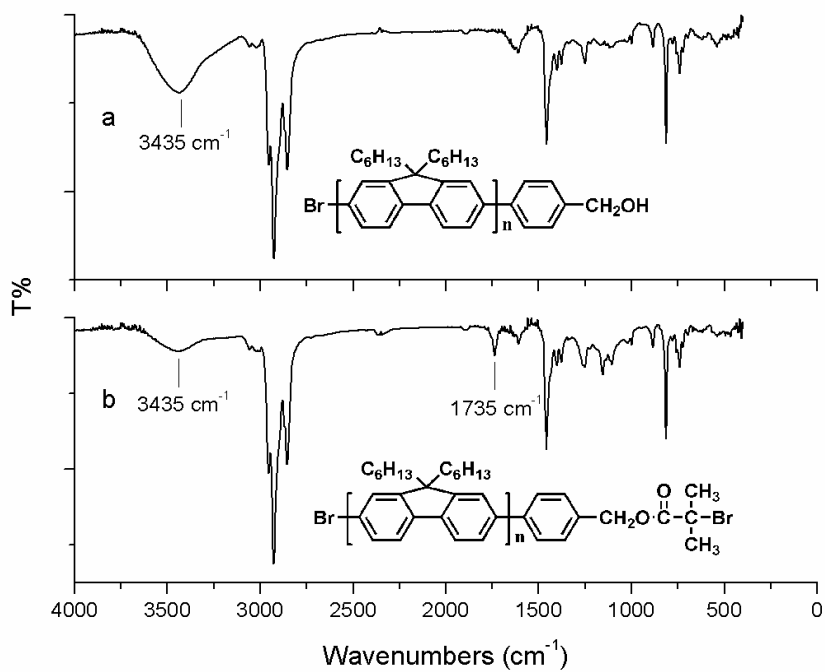


Figure S2. FTIR spectra of (a) PF-OH and (b) PF-Br.