

Effect of Terminal Groups on Properties of Poly(9,9-dioctylfluorene): A  
Study with Hexadecylfluorenes as Model Polymers

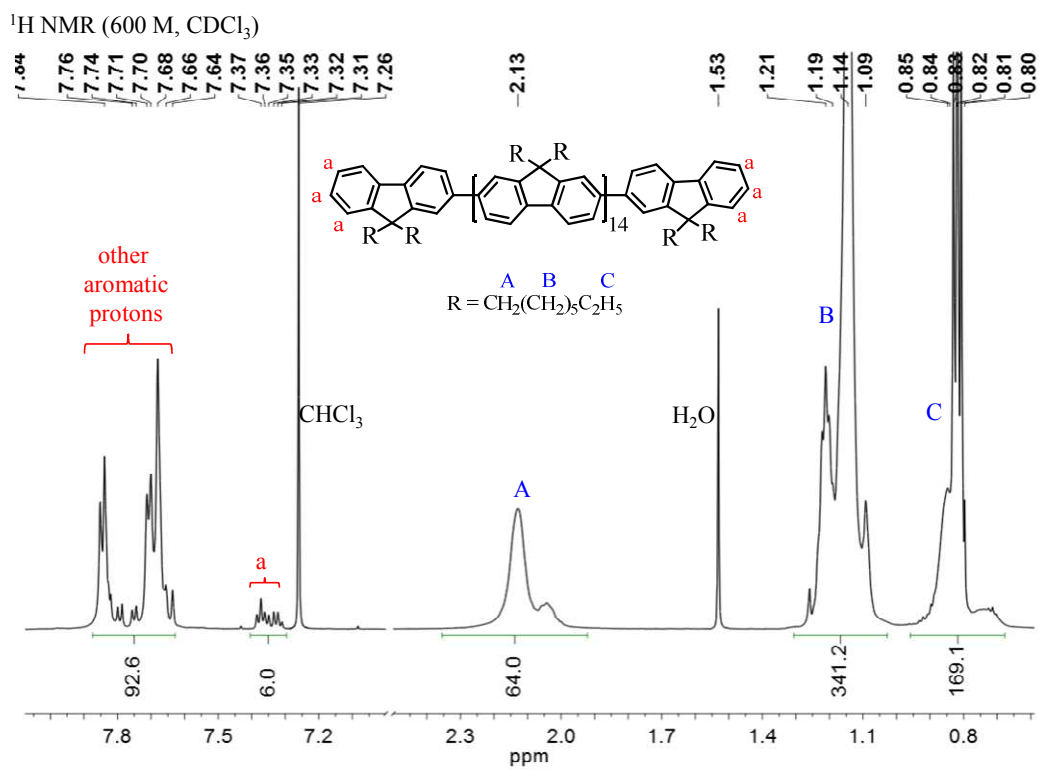
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sample		other aromatic protons	H (a)	CH <sub>2</sub> (A)	C <sub>3</sub> H <sub>10</sub> (B)	C <sub>2</sub> H <sub>5</sub> (C)
F16	calcd	92.0	6.0	64.0	320.0	160.0
	obsd	92.6	6.0	64.0	341.2	169.1

Figure S1. <sup>1</sup>H NMR spectra of F16.

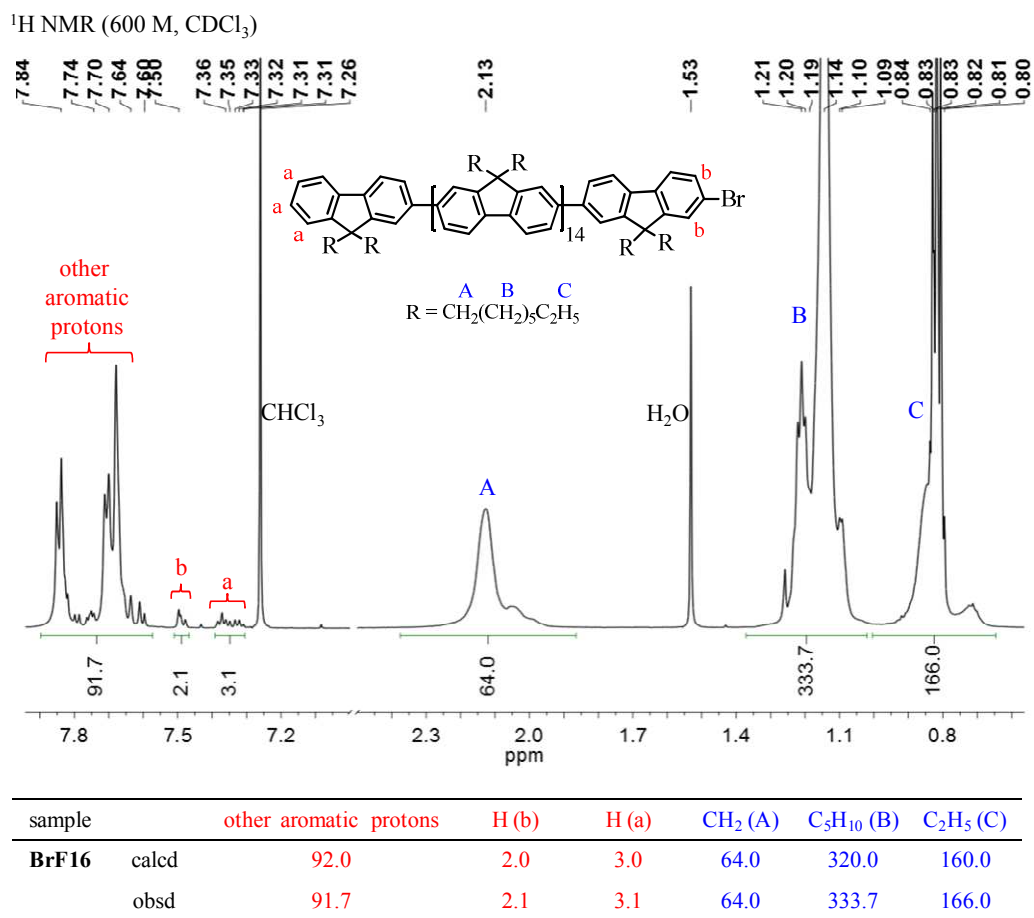
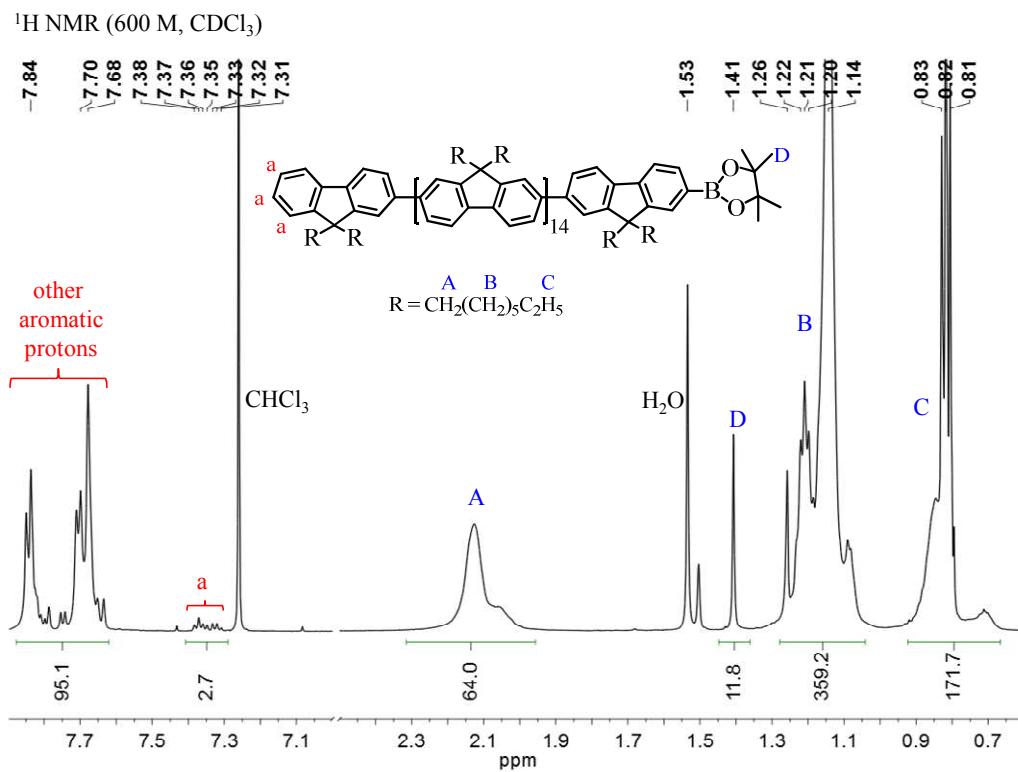
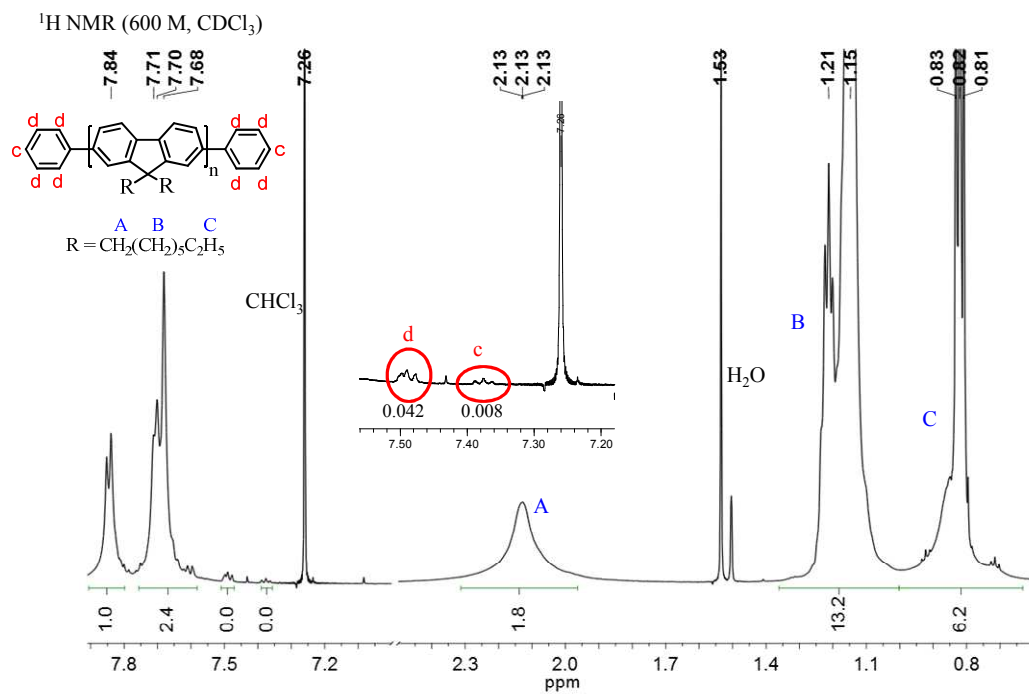


Figure S2.  $^1\text{H NMR}$  spectra of BrF16.

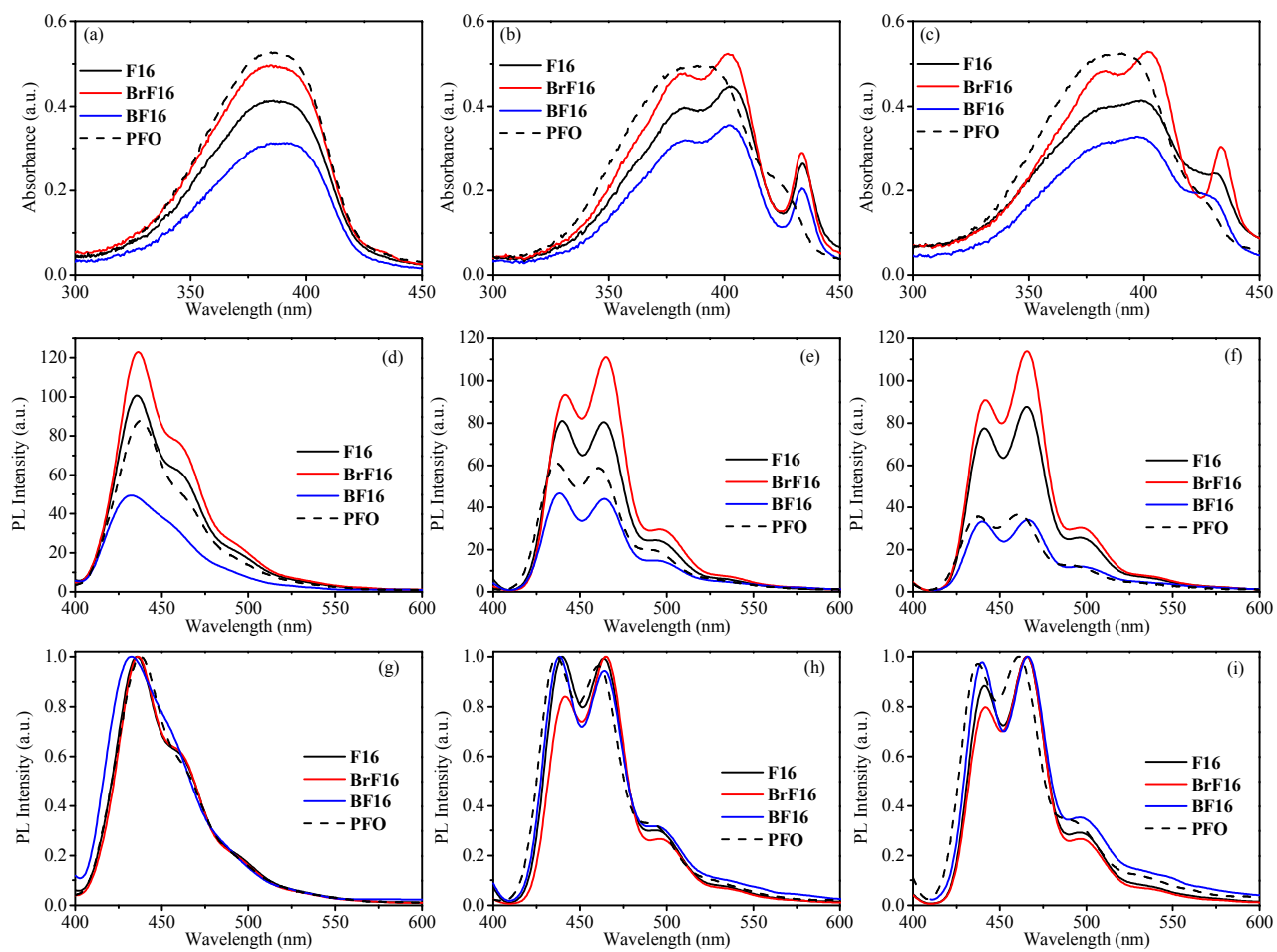


sample		other aromatic protons	H (a)	$\text{CH}_2$ (A)	$\text{C}_5\text{H}_{10}$ (B)	$\text{C}_2\text{H}_5$ (C)	$\text{C}_2\text{H}_5$ (D)
BF16	calcd	94.0	3.0	64.0	320.0	160.0	12.0
	obsd	95.1	2.7	64.0	359.2	171.7	11.8

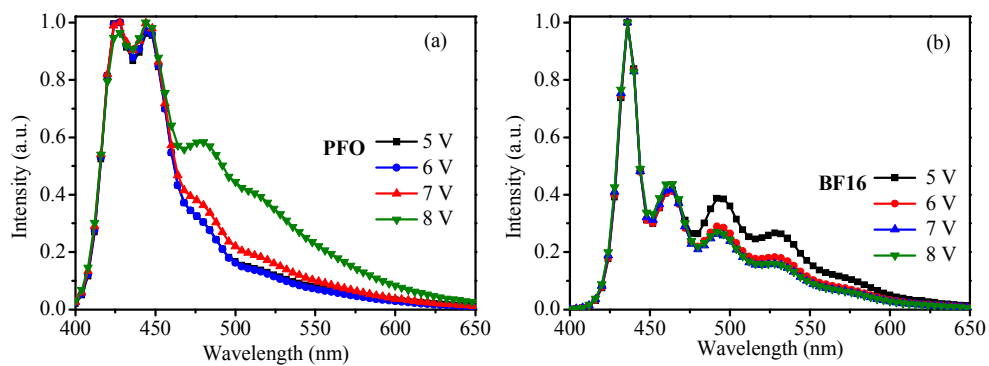
**Figure S3.**  $^1\text{H NMR}$  spectra of BF16.



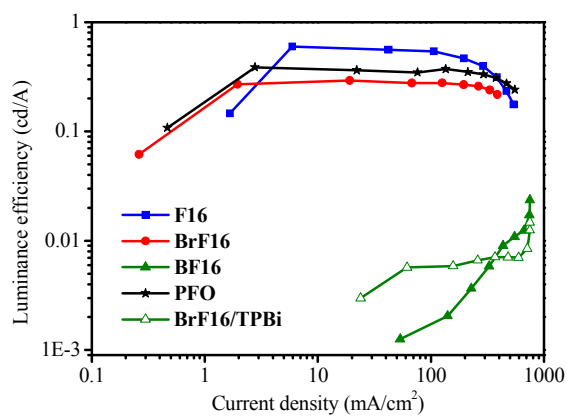
**Figure S4.**  $^1\text{H}$  NMR spectra of PFO.



**Figure S5.** Film absorption (a, b, c), PL (d, e, f) and normalized PL (g, h, i) emission spectra of the films of hexadecylfluorenes: pristine (a, d, g), annealed in argon (b, e, h) and annealed in air (c, f, i).



**Figure S6.** Driving voltage-dependant EL spectra of PFO (a) and BF16 (b).



**Figure S7.** Luminance efficiency-current density ( $\eta_{LE}$ - $J$ ) characteristics of PLEDs based on F16, BrF16, BF16 and PFO.