

**Electronic Supplementary Information**

**Synthesis and characterization of transparent polyimides derived from ester-containing dianhydrides with different electron affinities**

Yu Zhou<sup>a,b</sup>, Guofei Chen<sup>a\*</sup>, Wei Wang<sup>a</sup>, Lihong Wei<sup>a</sup>, Qiuju Zhang<sup>a</sup>, Liping Song<sup>b</sup>,  
Xingzhong Fang<sup>a\*</sup>

**Fig. S1** FT-IR spectrum of 4-hydroxyphthalonitrile.

**Fig. S2** FT-IR spectrum of 4-hydroxyphthalic acid.

**Fig. S3** FT-IR spectrum of 4-hydroxyphthalic anhydride.

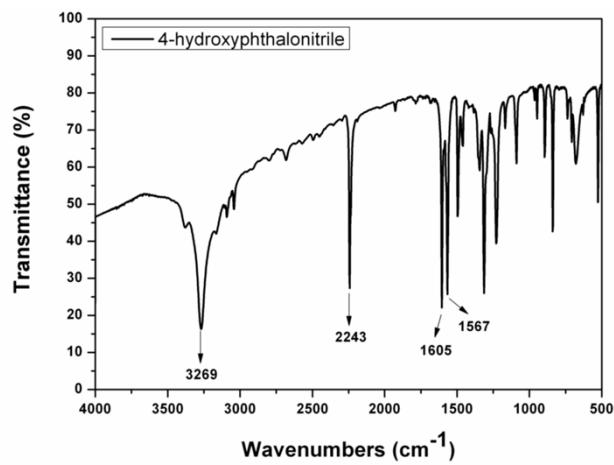
**Fig. S4** COSY spectrum of **PI-1b-C** in DMSO-*d*<sub>6</sub>.

**Fig. S5** COSY spectrum of **PI-2b-C** in DMSO-*d*<sub>6</sub>.

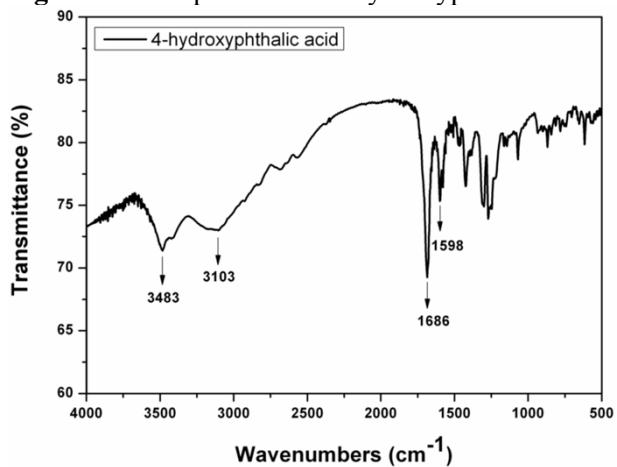
**Fig. S6** COSY spectrum of **PI-3b-C** in DMSO-*d*<sub>6</sub>.

**Fig. S7** UV-vis spectra of polyimide films in terms of transmittance.

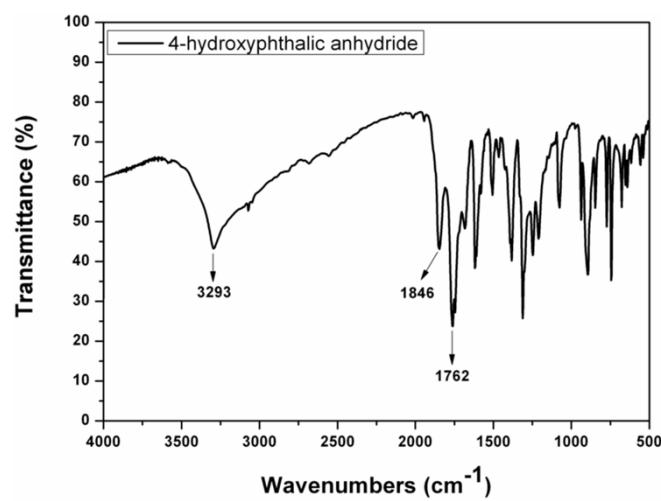
**Fig. S8** Plots of absorption coefficient ( $\alpha$ ) vs. wavelength.



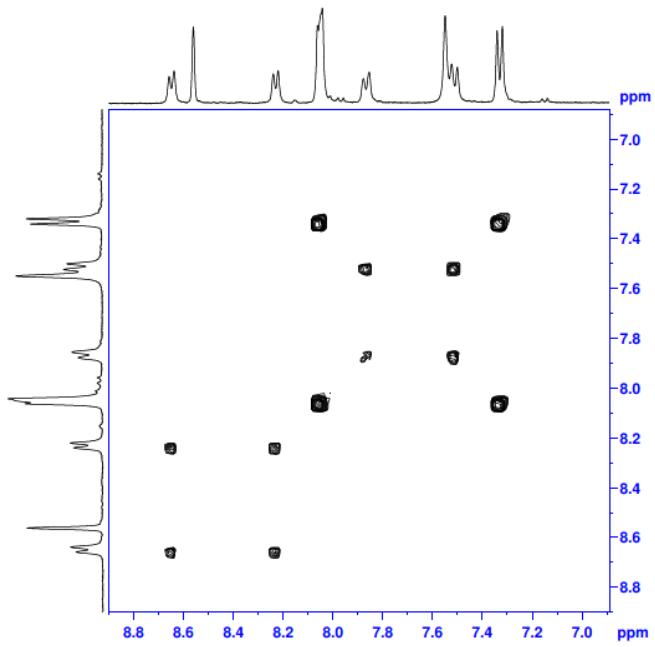
**Fig. S1** FT-IR spectrum of 4-hydroxyphthalonitrile.



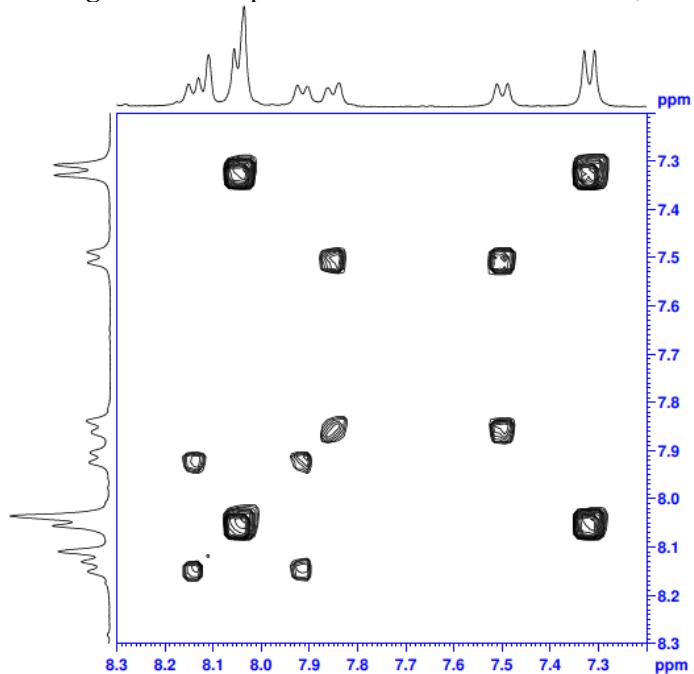
**Fig. S2** FT-IR spectrum of 4-hydroxyphthalic acid.



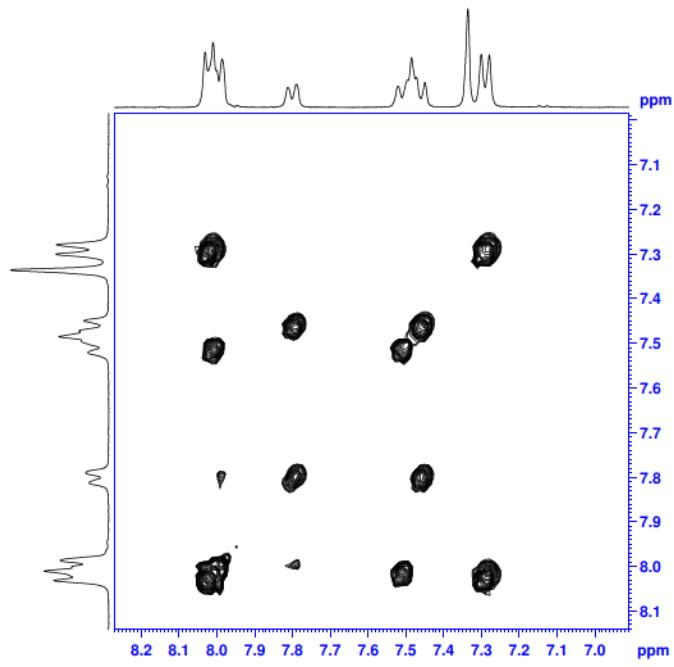
**Fig. S3** FT-IR spectrum of 4-hydroxyphthalic anhydride.



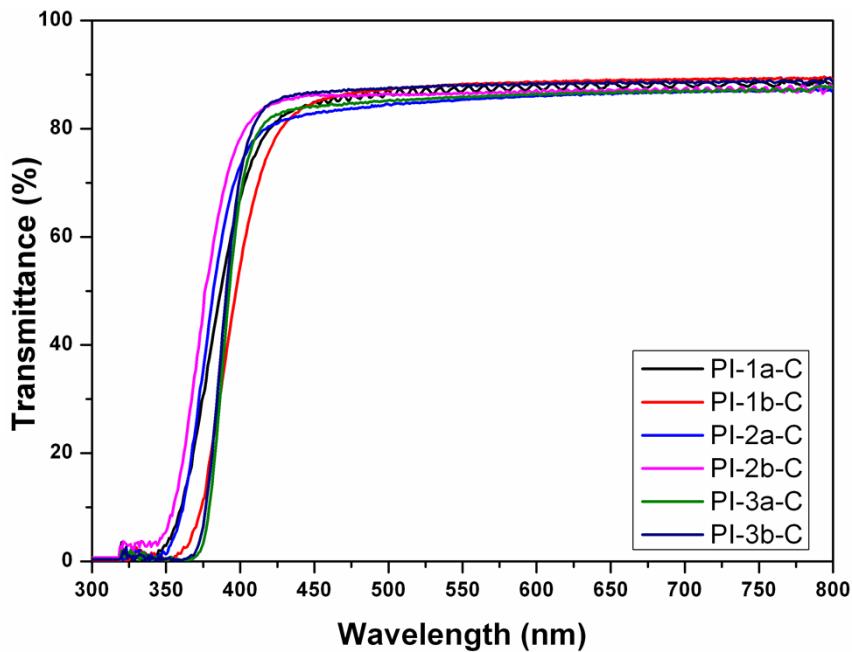
**Fig. S4** COSY spectrum of **PI-1b-C** in  $\text{DMSO}-d_6$ .



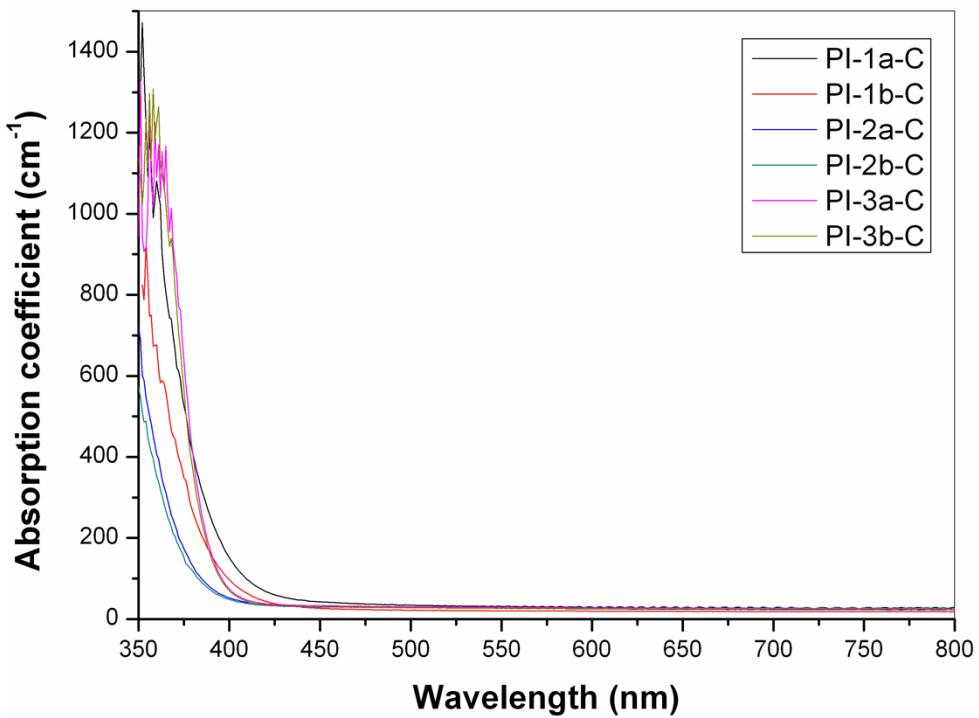
**Fig. S5** COSY spectrum of **PI-2b-C** in  $\text{DMSO}-d_6$ .



**Fig. S6** COSY spectrum of PI-3b-C in  $\text{DMSO}-d_6$ .



**Fig. S7** UV-vis spectra of polyimide films in terms of transmittance.



**Fig. S8** Plots of absorption coefficient ( $\alpha$ ) vs. wavelength.