Supporting Information

Various Tetraphenylethen-based AIEgens with Four Functional Polymer Arms: Versatile Synthetic Approach and Photophysical Properties

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	$Mn(\times 10^4)$	$Mw(\times 10^4)$	$MP(\times 10^4)$	$Mz(\times 10^4)$	Polydispersity
TPE-AZO	0.39	0.58	0.42	0.83	1.487
TPE-PNIPAM	0.37	0.55	0.45	0.79	1.482
TPE-PS	0.74	1.27	1.26	1.88	1.717
TPE-PMA	0.29	0.40	0.23	0.58	1.400
TPE-PMMA	0.74	1.11	0.96	1.57	1.502
TPE-PVK	0.45	0.72	0.65	1.08	1.607
TPE-PMETAC	1.29	2.23	1.16	7.45	1.720
TPE-PMAA	21.1	32.1	24.4	52.5	1.521
TPE-PVP	7.89	21.4	5.57	46.3	2.716
TPE-PMPEGMA	7.04	8.29	5.10	10.9	1.176

Table S1 GPC data of TPE-AZO and TPE-polymers.

d-DMSO a b 4.5 4.0 δ(ppm) 8.0 6.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 7.5 7.0 6.5 5.5 5.0

Figure S1. ¹H NMR spectra of TPE-AZO in DMSO-*d*₆.



Figure S2. ¹⁵N NMR spectra of TPE-AZO in DMSO-*d*₆.



Figure S3. FTIR spectrum of TPE-OH, ACVA and TPE-AZO.



Figure S4. ¹H NMR spectra of TPE-OH in DMSO-*d*₆.



Figure S5. ¹³C NMR spectra of TPE-OH in DMSO-*d*₆.



Figure S7. ¹H NMR spectra of TPE-PMA in DMSO-*d*₆. (Inset: a larger version of

 ^1H NMR spectra of TPE-PMA with the δ from 6.4 to 6.8).



Figure S8. ¹H NMR spectra of TPE-PMAA in DMSO-d₆. (Inset: a larger version of

¹H NMR spectra of TPE-PMAA with the δ from 6.1 to 6.5).

Figure S9. ¹H NMR spectra of TPE-PMETAC in D₂O. (Inset: a larger version of

 ^1H NMR spectra of TPE-PMETAC with the δ from 6.7 to 7.3).

Figure S10. ¹H NMR spectra of TPE-PMMA in CDCl₃. (Inset: a larger version of

 ^1H NMR spectra of TPE-PMMA with the δ from 6.5 to 6.9).

Figure S11. ¹H NMR spectra of TPE-PMPEGMA in D₂O. (Inset: a larger version of

¹H NMR spectra of TPE-PMPEGMA with the δ from 7.4 to 7.7).

Figure S12. ¹H NMR spectra of TPE-PNIPAM in DMSO- d_6 . (Inset: a larger version of ¹H NMR spectra of TPE-PNIPAM with the δ from 6.4 to 6.8).

Figure S13. ¹H NMR spectra of TPE-PS in CDCl₃.

Figure S14. ¹H NMR spectra of TPE-PVK in CDCl₃.

Figure S15. ¹H NMR spectra of TPE-PVP in D_2O . (Inset: a larger version of ¹H NMR spectra of TPE-PVP with the δ from 7.3 to 7.5).