Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supplementary Information for

Synthesis and properties of polyesters derived from renewable eugenol and α,ω-diols via a continuous overheating method

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Table S1 Polymerization strategies for the synthesis of **PM2-ωs** with α,ω-diols

Reaction time (h) / α,ω-diols	Transesterification temperature (℃)				Polycondensation temperature (℃)		
	100	120	140	160	160	180	200
1,2-ethylene glycol	0.5	1	1	2	2	2	1
1,3-propanediol	0.5	1	1	2	2	2	1
1,4-butanediol	0.5	1	1	2	2	2	1
1,6-hexanediol	0.5	1	1	2	1	2	1
1,10-decanediol	0.5	0.5	1	2	1	2	1
1,12-dodecanediol	0.5	0.5	1	2	1	2	1

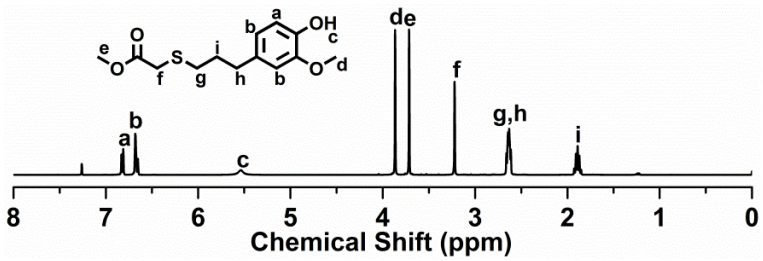

Fig. S1 ^{1}H NMR spectrum of **P1**

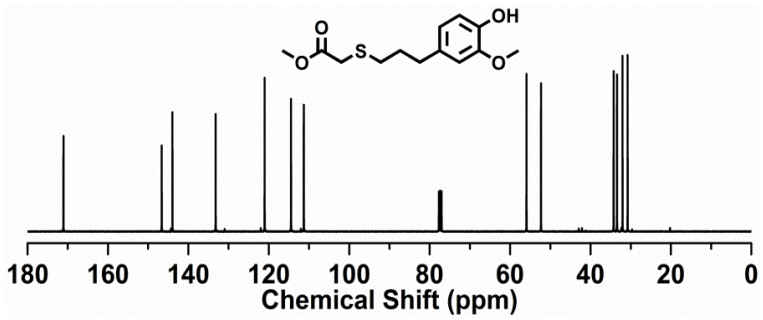

Fig. S2 ^{13}C NMR spectrum of **P1**

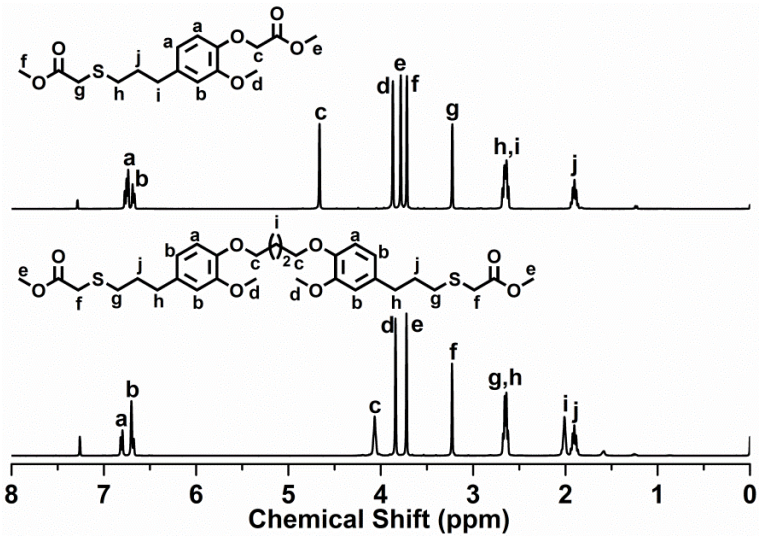

Fig. S3 ^{1}H NMR spectra of **M1** and **M2**

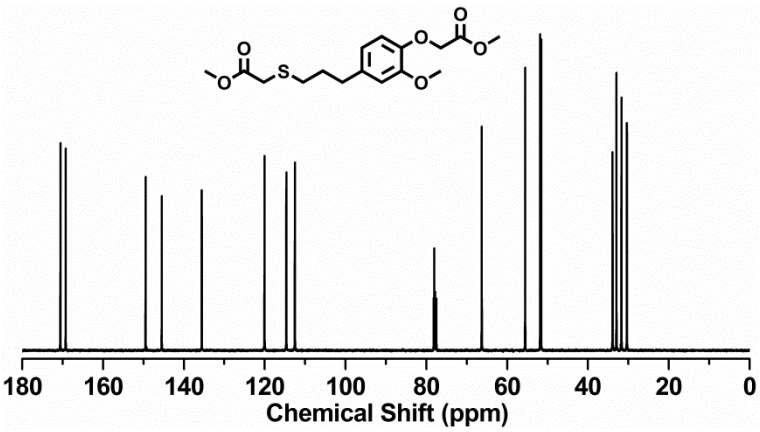

Fig. S4 ^{13}C NMR spectrum of **M1**

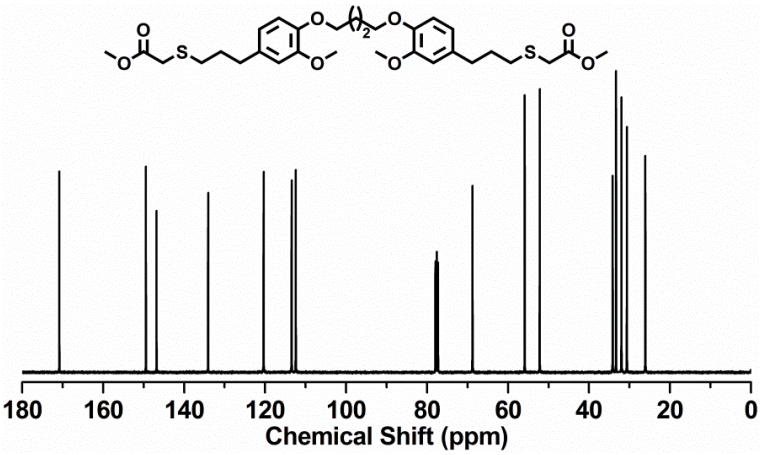

Fig. S5 ^{13}C NMR spectrum of **M2**

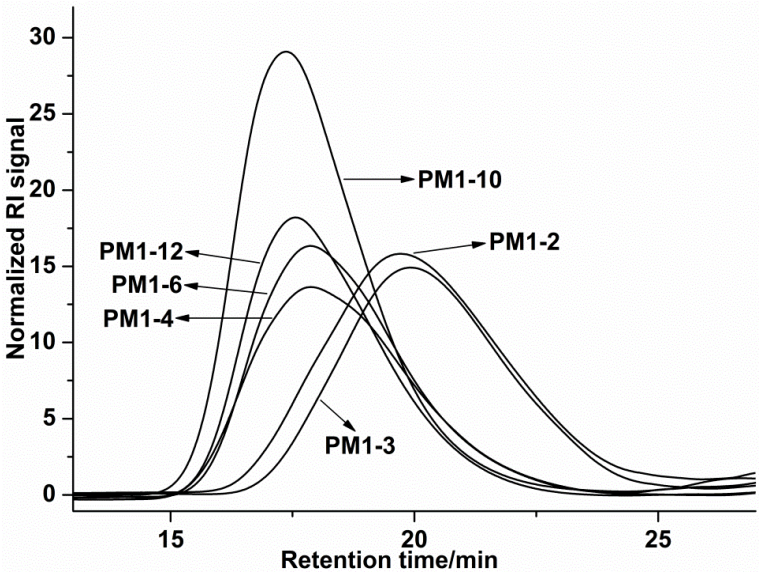

Fig. S6 SEC traces of **PM1-ωs**

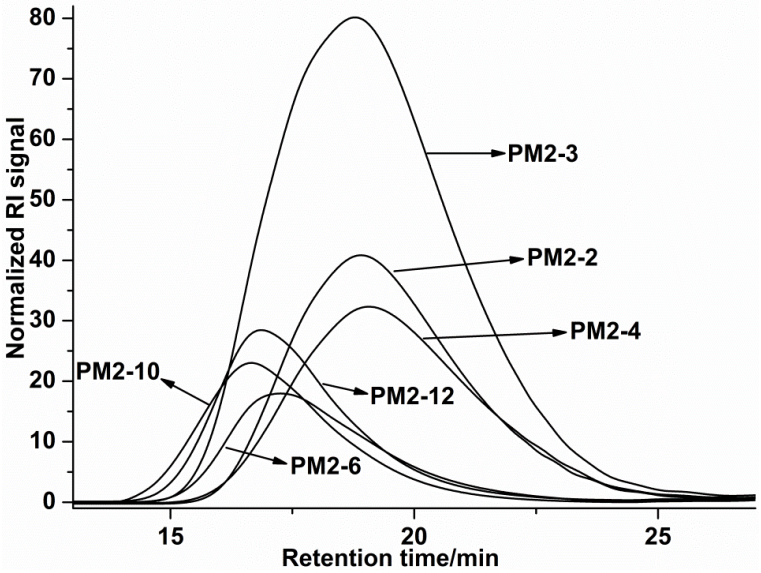

Fig. S7 SEC traces of **PM2-ωs**

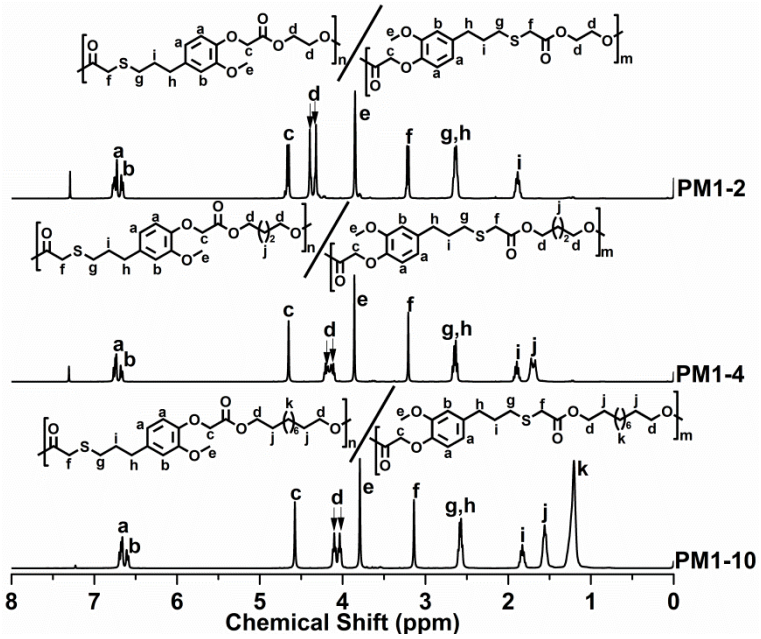

Fig. S8 ^{1}H NMR spectra of **PM1-2**, **PM1-4** and **PM1-10**

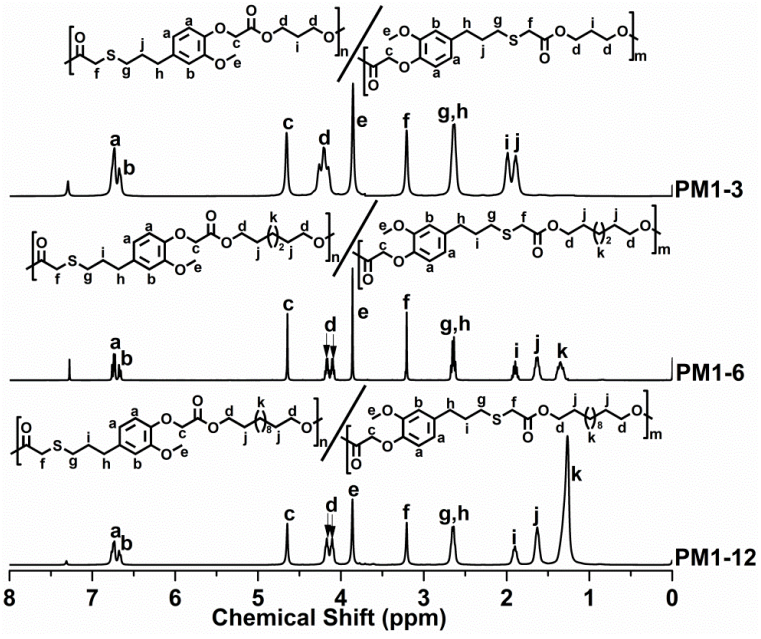

Fig. S9 ^{1}H NMR spectra of **PM1-3**, **PM1-6** and **PM1-12**

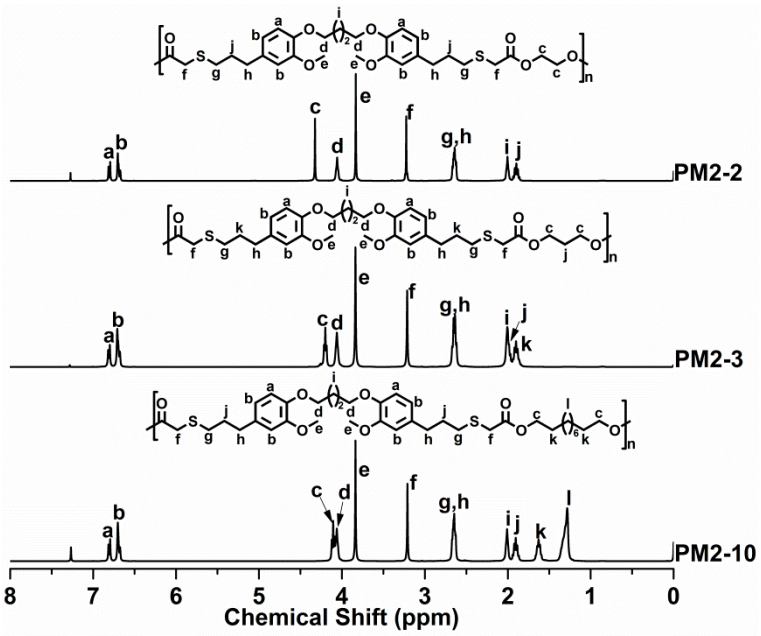

Fig. S10 ^{1}H NMR spectra of **PM2-2**, **PM2-3** and **PM2-10**

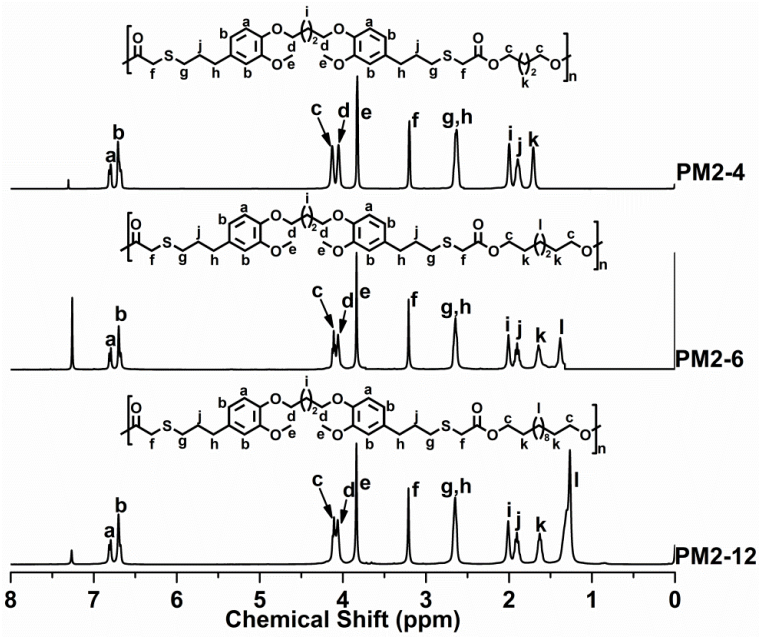

Fig. S11 ^{1}H NMR spectra of **PM2-4**, **PM2-6** and **PM2-12**

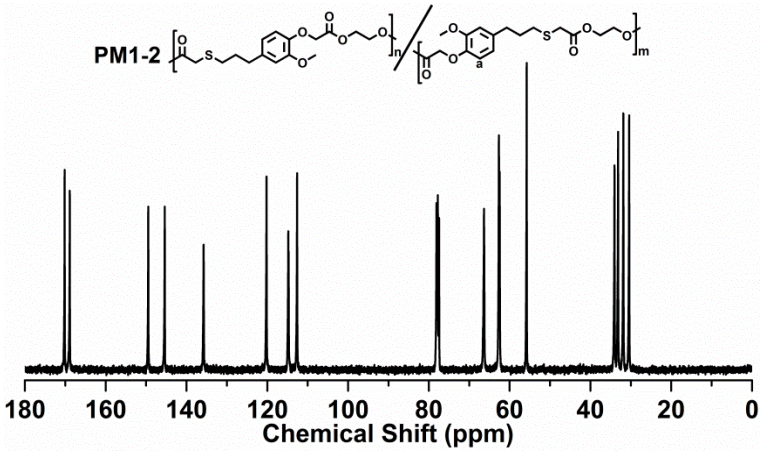

Fig. S12 ^{13}C NMR spectrum of **PM1-2**

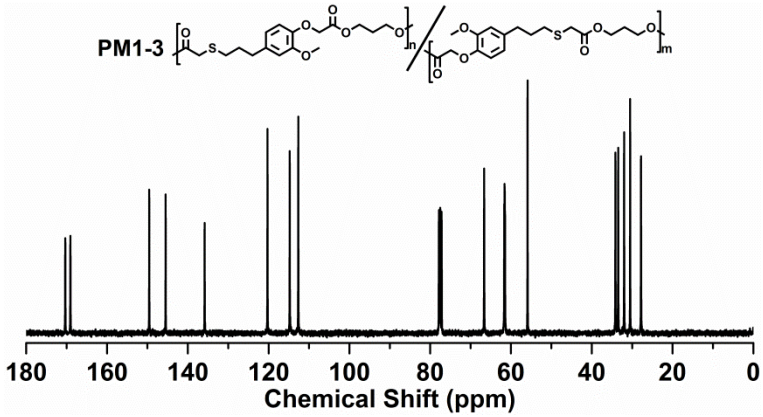

Fig. S13 ^{13}C NMR spectrum of **PM1-3**

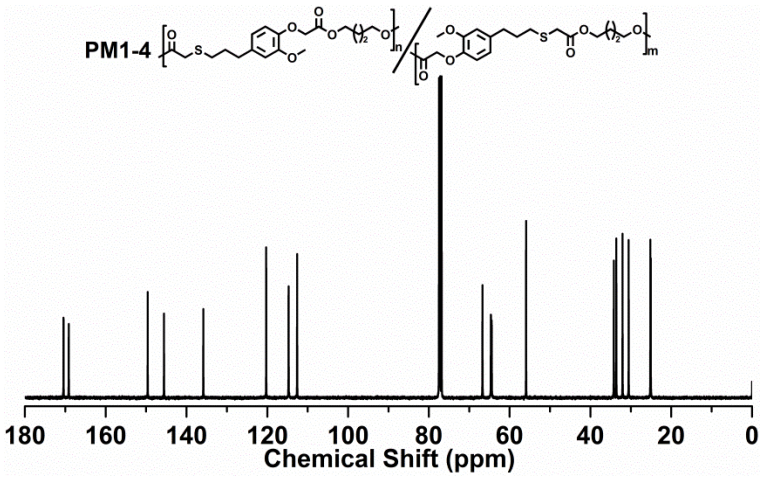

Fig. S14 ^{13}C NMR spectrum of **PM1-4**

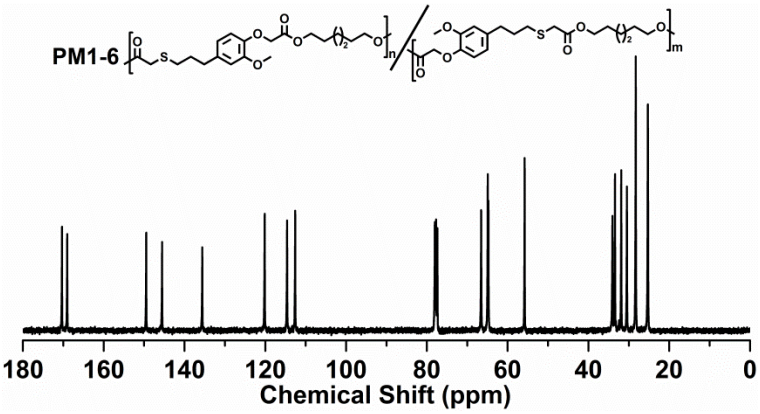

Fig. S15 ^{13}C NMR spectrum of **PM1-6**

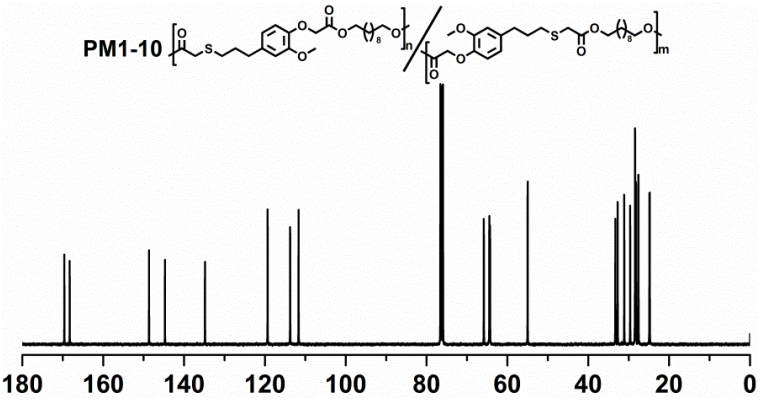

Fig. S16 ^{13}C NMR spectrum of **PM1-10**

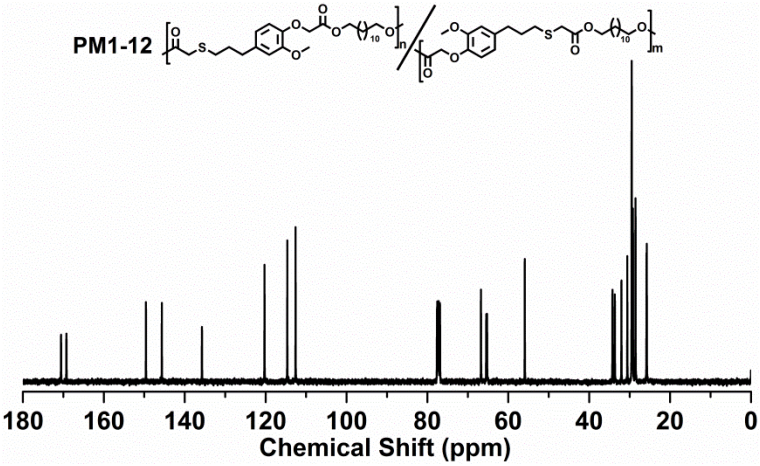

Fig. S17 ^{13}C NMR spectrum of **PM1-12**

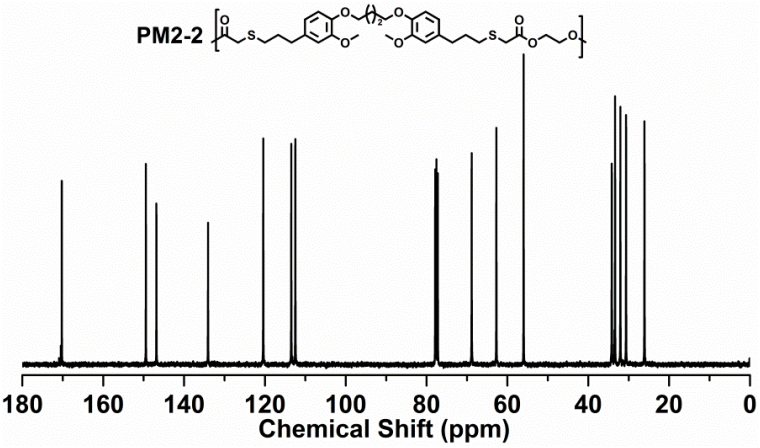

Fig. S18 ^{13}C NMR spectrum of **PM2-2**

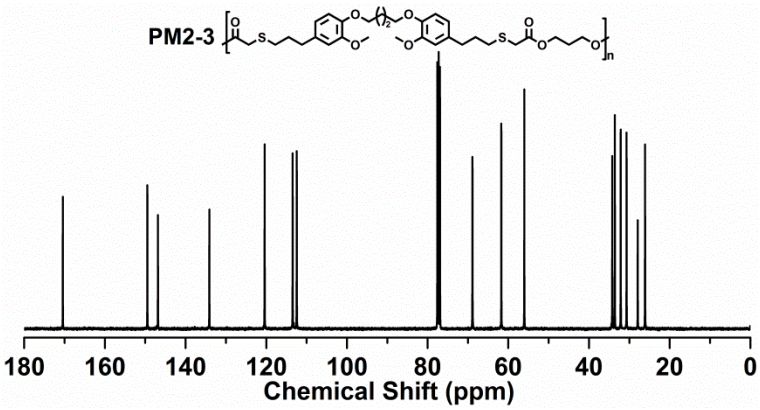

Fig. S19 ^{13}C NMR spectrum of **PM2-3**

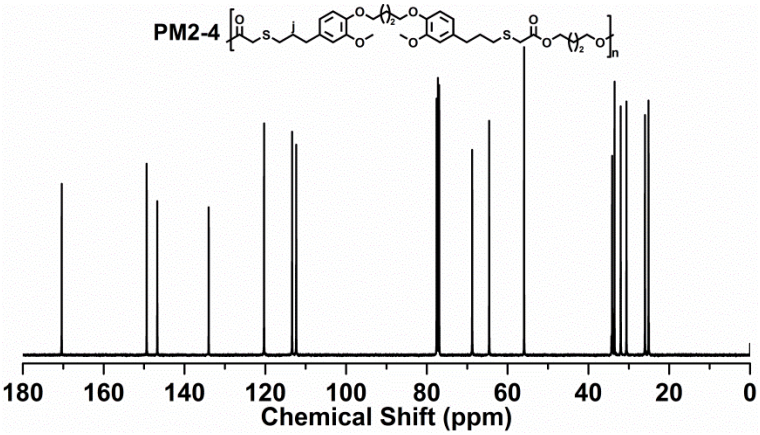

Fig. S20 ^{13}C NMR spectrum of **PM2-4**

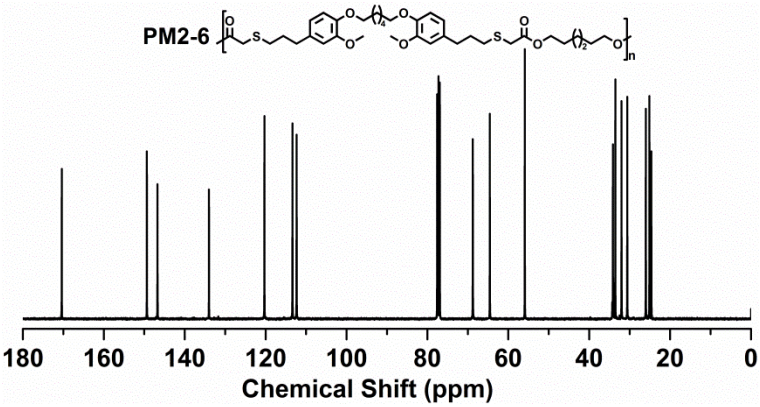

Fig. S21 ^{13}C NMR spectrum of **PM2-6**

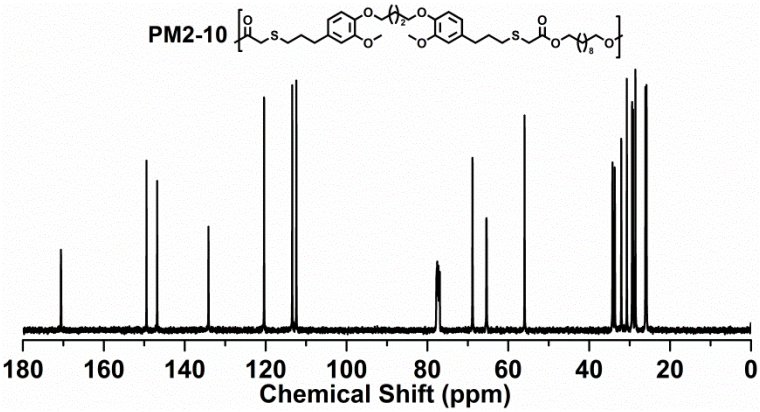

Fig. S22 ^{13}C NMR spectrum of **PM2-10**

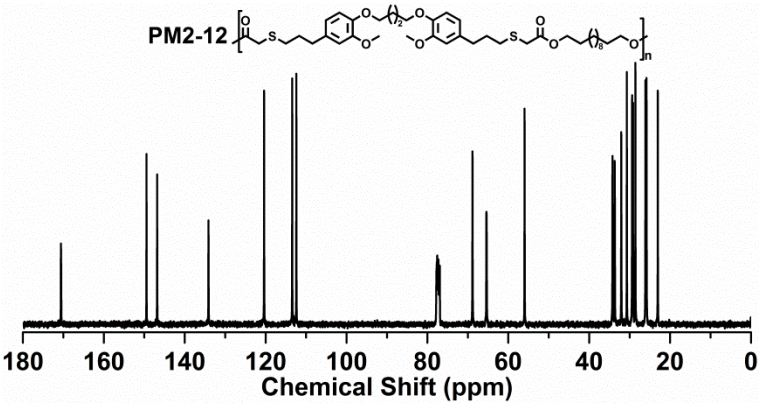

Fig. S23 ^{13}C NMR spectrum of **PM2-12**

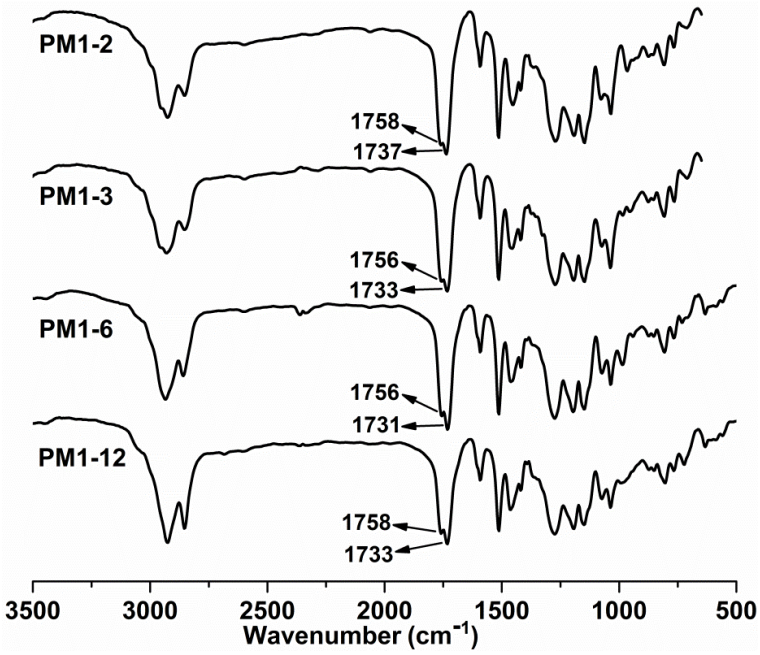

Fig. S24 FTIR spectra of **PM1-2**, **PM1-3**, **PM1-6** and **PM1-12**

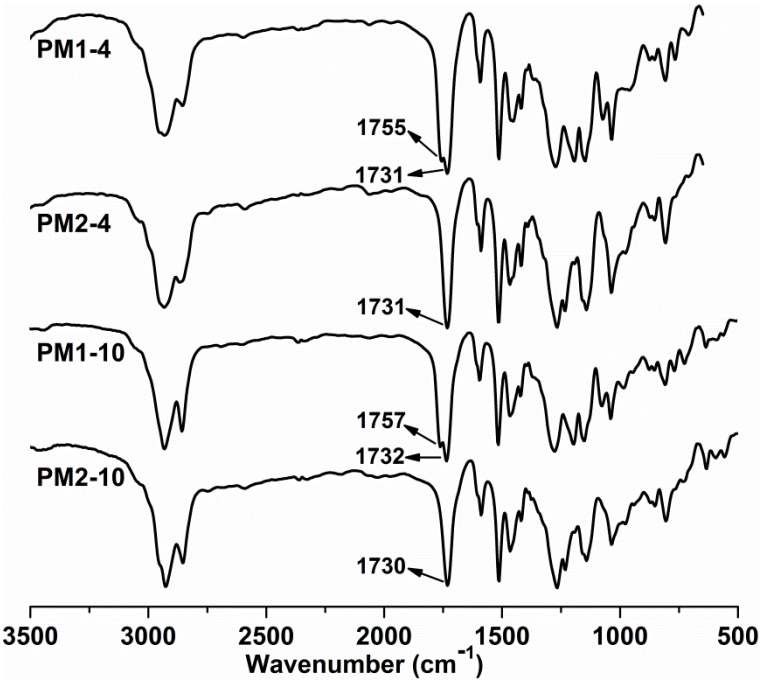

Fig. S25 FTIR spectra of **PM1-4**, **PM2-4**, **PM1-10** and **PM2-10**

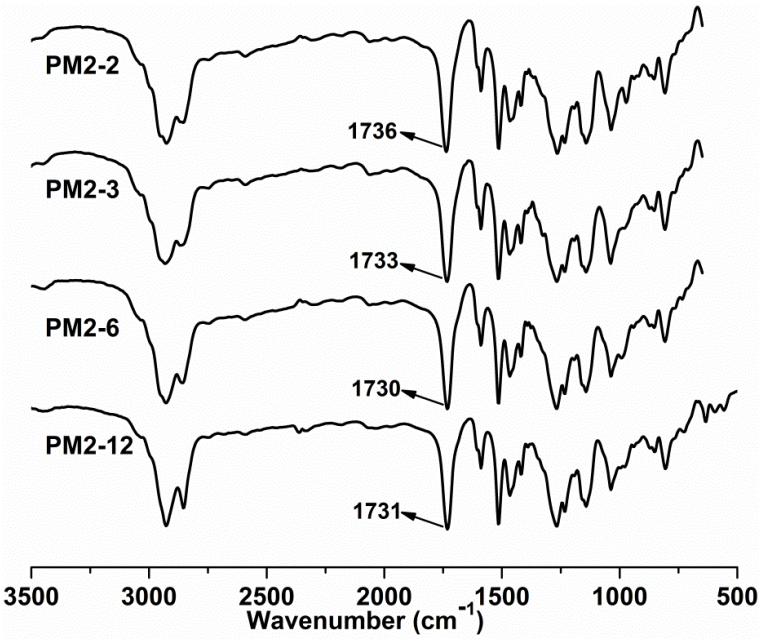

Fig. S26 FTIR spectra of **PM2-2**, **PM2-3**, **PM2-6** and **PM2-12**

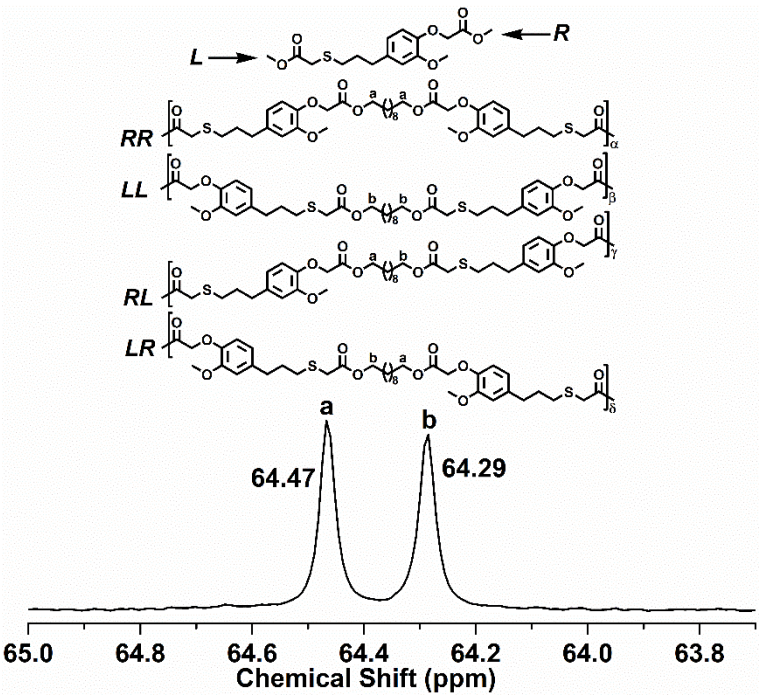

Fig. S27 ^{13}C NMR signals used for the microstructure analysis of **PM1-10** with schematic representation of dyads to which they are assigned.

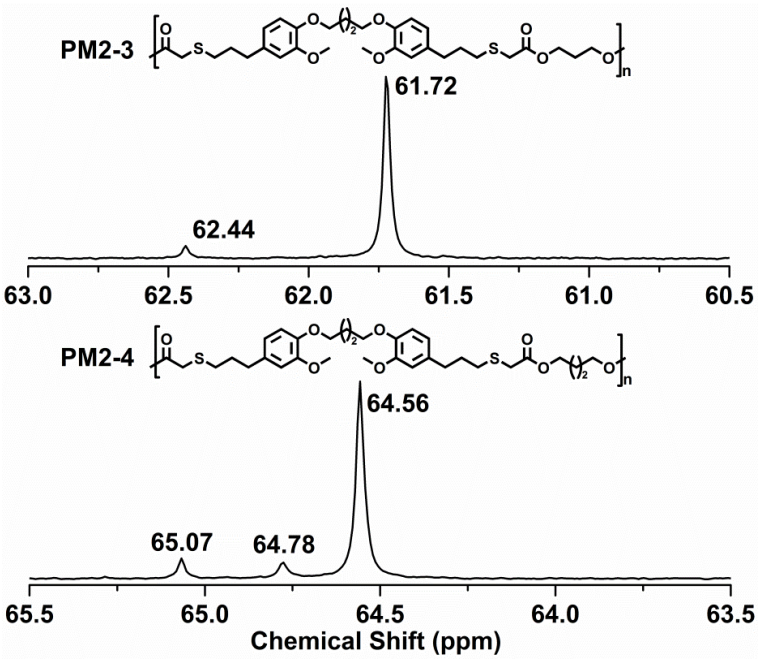

Fig. S28 ^{13}C NMR signal of **PM2-3** and **PM2-4** for microstructure analysis

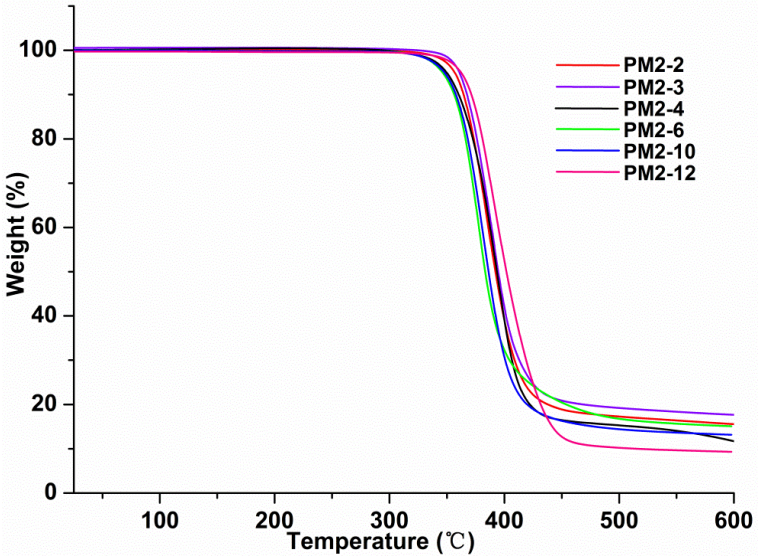

Fig. S29 TGA curves of **PM2-ωs** at a heating rate of 10 ℃ min^{-1}

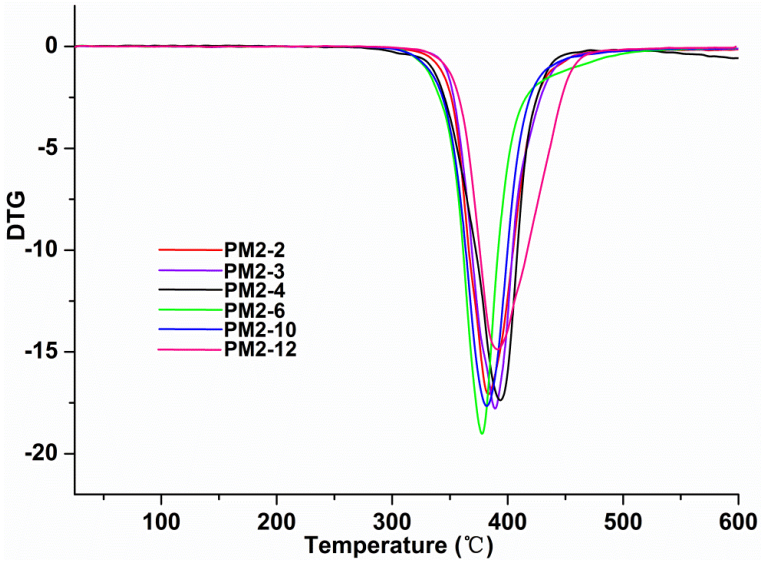

Fig. S30 TGA derivative curves of **PM2-ωs** at a heating rate of 10 ℃ min^{-1}