

Supporting Information

Synthesis of Well-defined Carboxyl Poly(ϵ -caprolactone) by Fine-tuning the Protection Group

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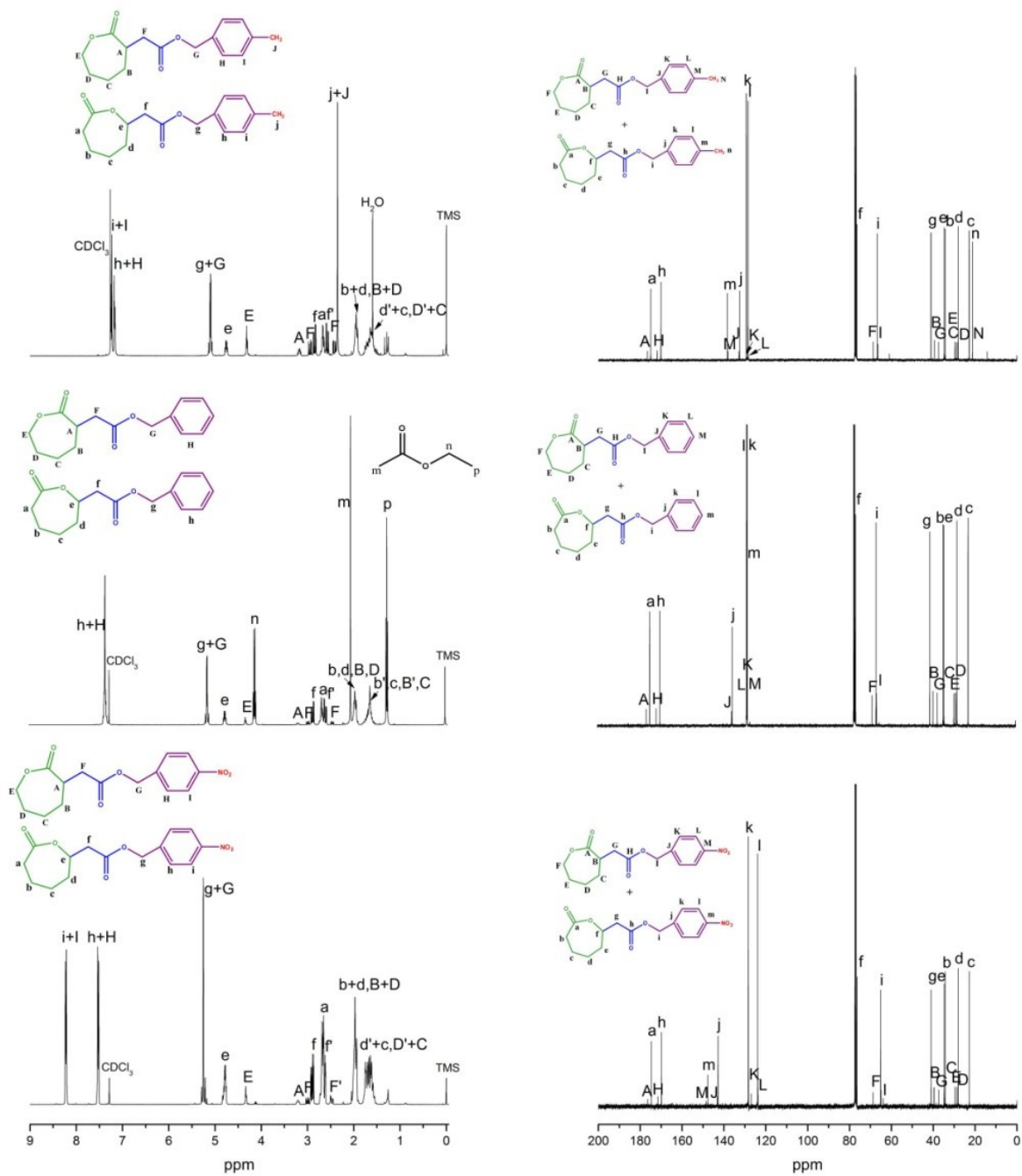


Fig. S1 ^1H NMR and ^{13}C NMR spectra of 2,6-(CH_3)BCL, 2,6-(H)BCL, 2,6-(NO_2)BCL in CDCl_3 .

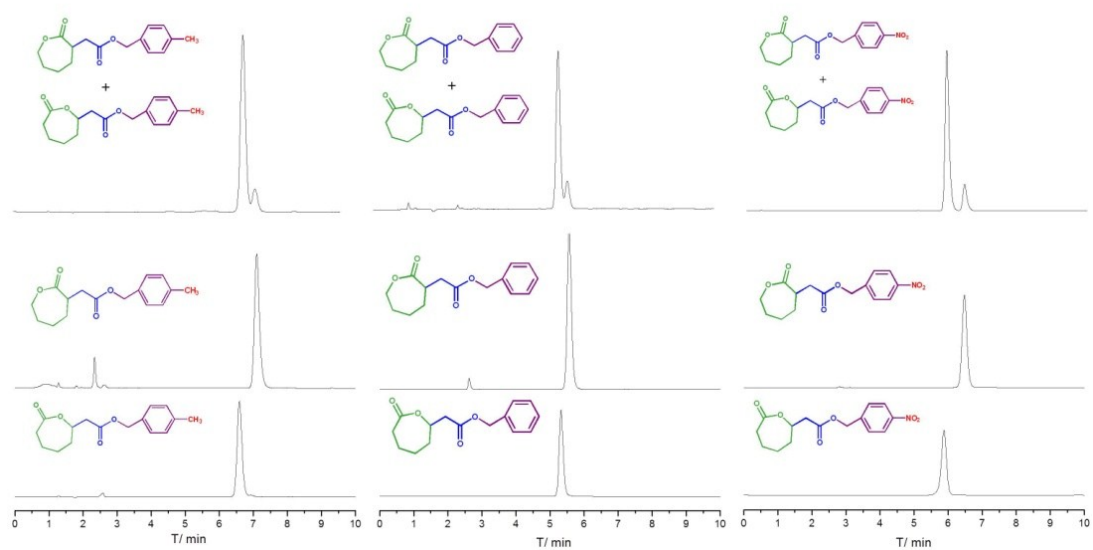


Fig. S2 HPLC analysis on isomer mixtures of 2,6-(CH₃)BCL, 2,6-(H)BCL and 2,6-(NO₂)BCL and purified monomers of 1,2,3,4,5 and 6.

Table S1 The ratios of 2-BCL and 6-BCL with different substitutions by HPLC analysis.

Entry	R	2-BCL : 6-BCL
1	CH ₃	1 : 7
2	H	1 : 5
3	NO ₂	1 : 6

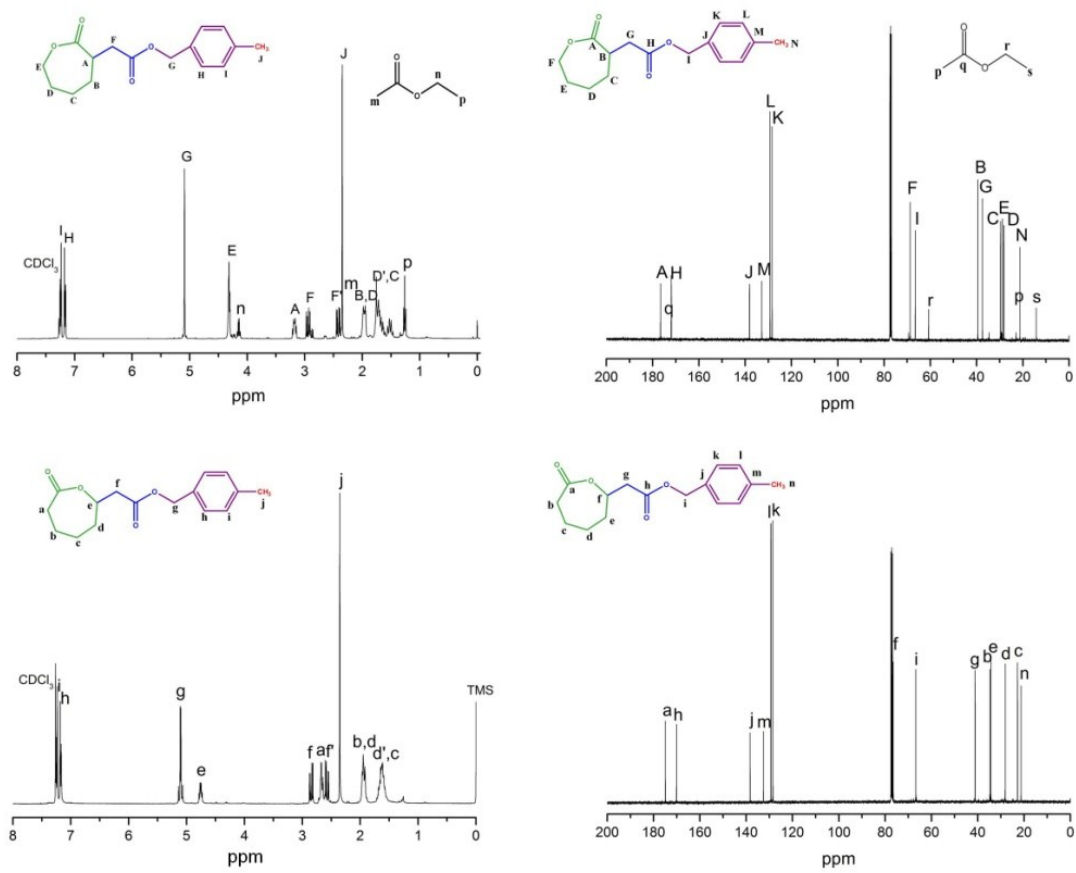


Fig. S3 ¹H NMR and ¹³C NMR spectra of 2-(CH₃)BCL and 6-(CH₃)BCL in CDCl₃.

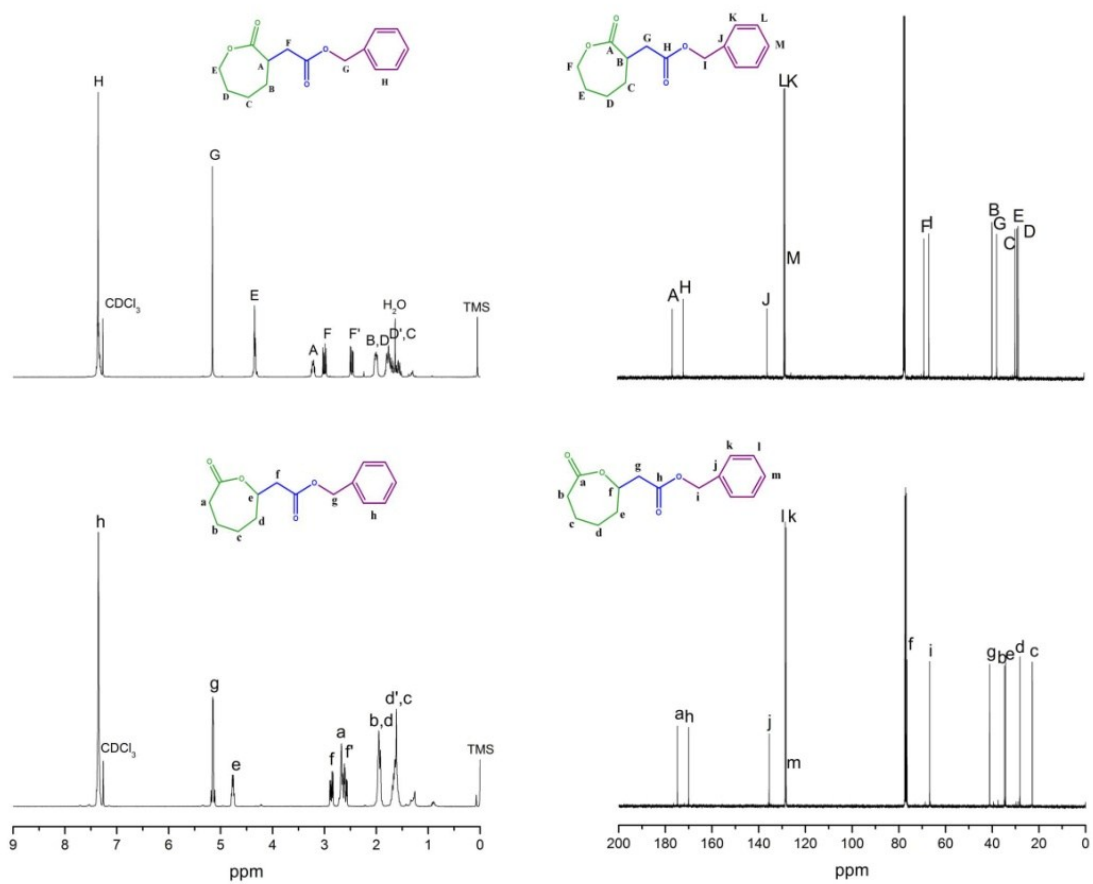


Fig. S4 ¹H NMR and ¹³C NMR spectra of 2-(H)BCL and 6-(H)BCL in CDCl₃.

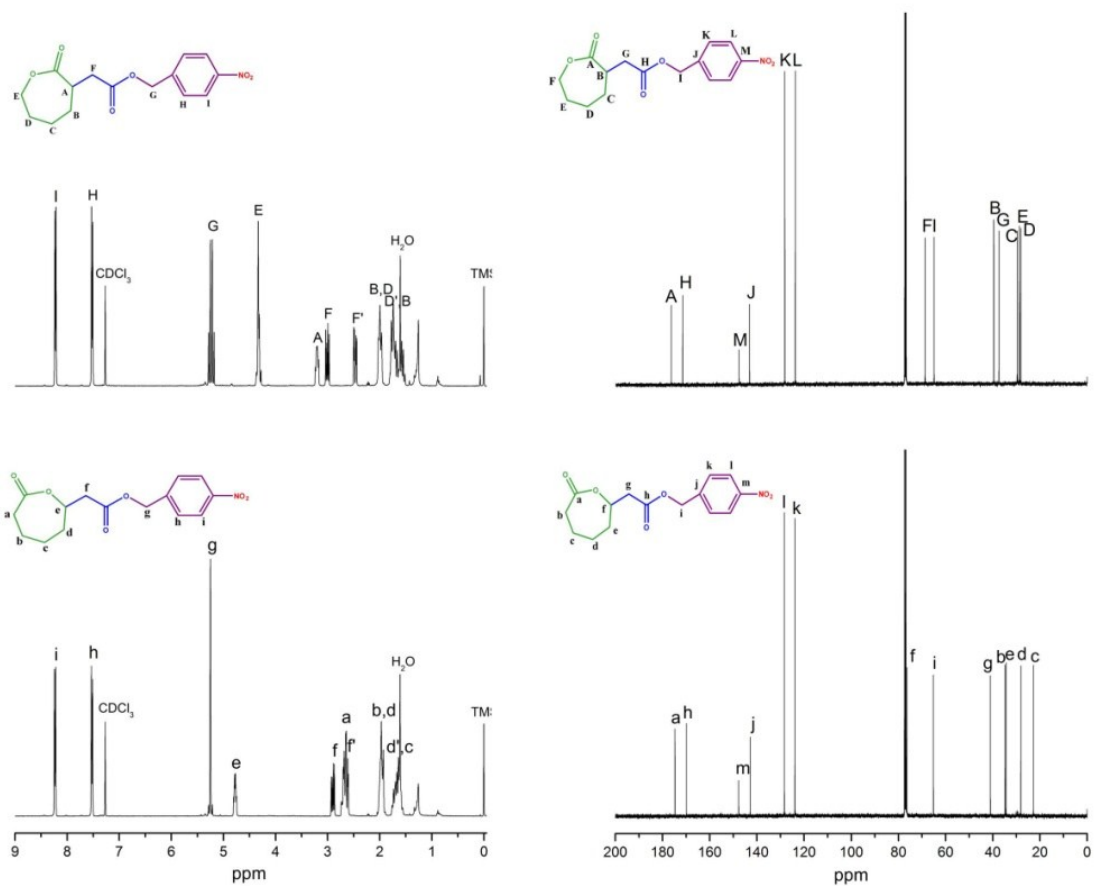


Fig S5 ^1H NMR and ^{13}C NMR spectra of 2-(NO₂)BCL and 6-(NO₂)BCL in CDCl₃.

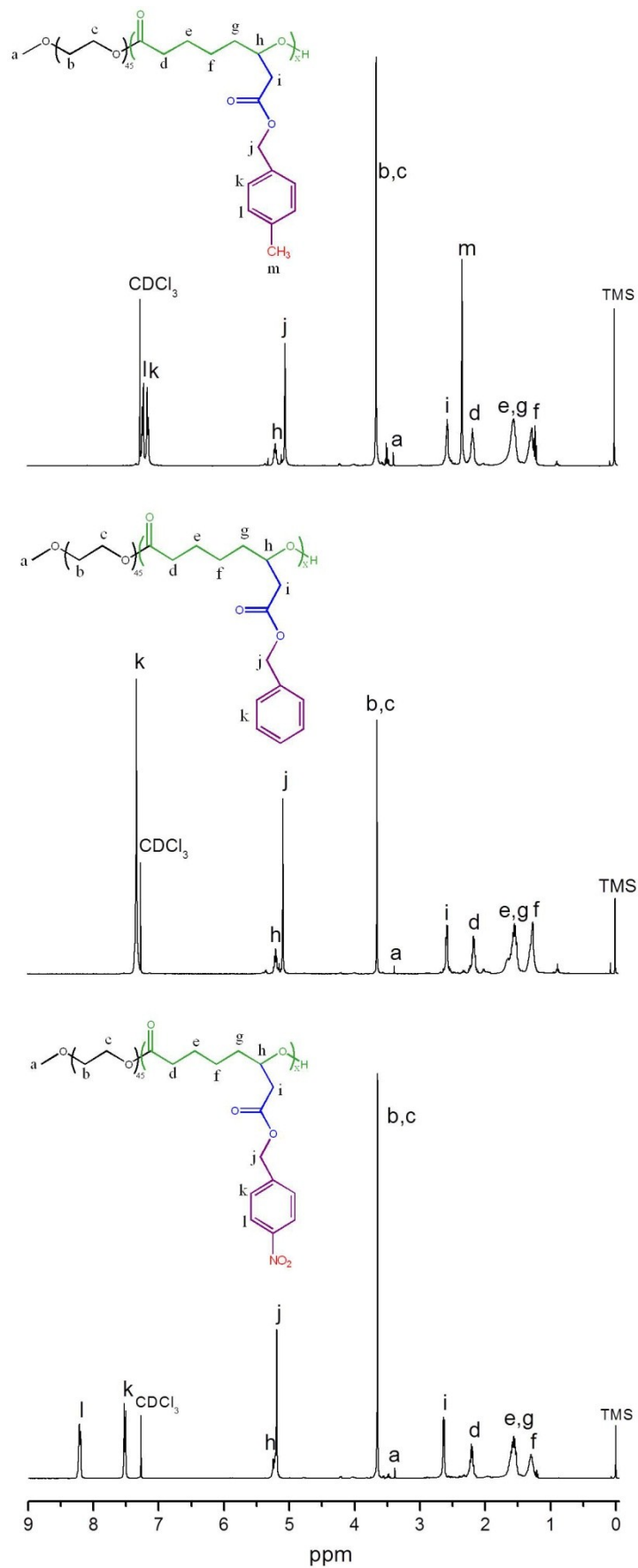


Fig. S6 ¹H NMR spectra of P(CH₃)BCL, P(H)BCL and P(NO₂)BCL in CDCl₃.

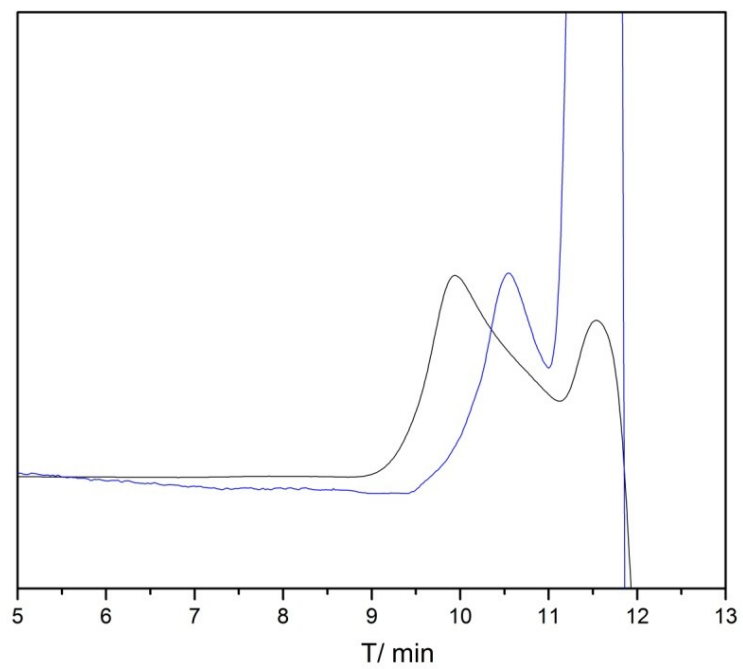


Fig. S7 Size exclusion chromatogram of P(6-CH₃)BCL (black curve) and PCCL (blue curve) both acquired in DMF.

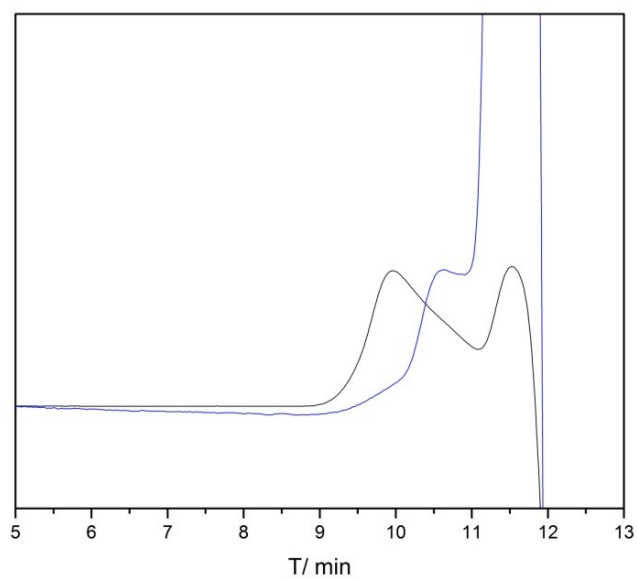


Fig. S8 Size exclusion chromatogram of P(6-H)BCL (black curve) and PCCL (blue curve) both acquired in DMF.

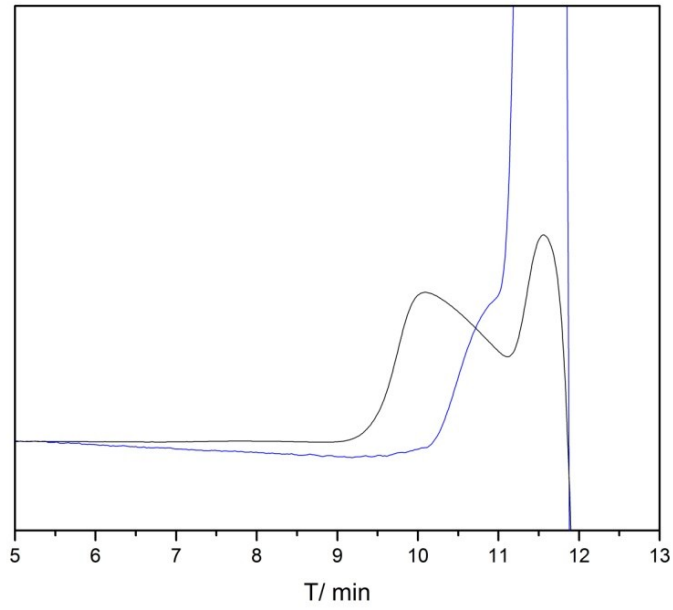


Fig. S9 Size exclusion chromatogram of P(6-NO₂)BCL (black curve) and PCCL (blue curve) both acquired in DMF.

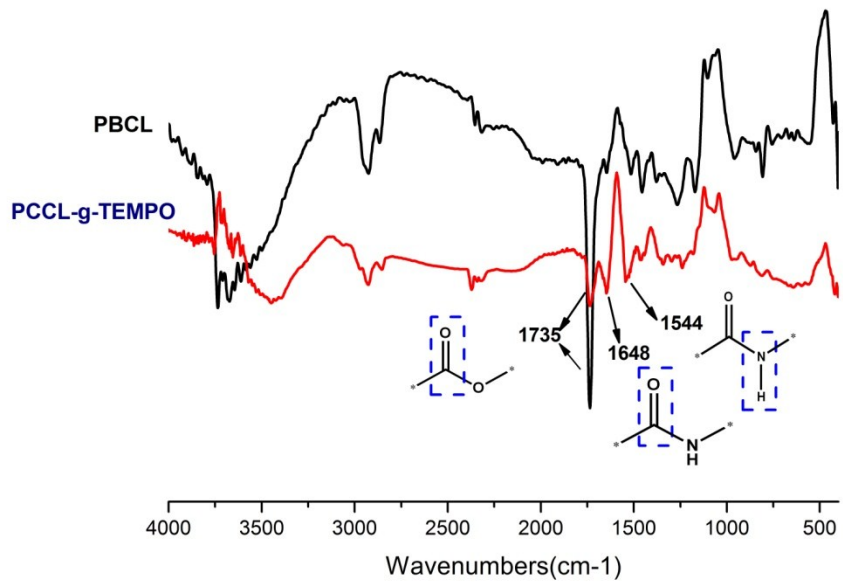


Fig. S10 FTIR spectra of P(CH₃)BCL₄₀ and PCCL₄₀-g-TEMPO.

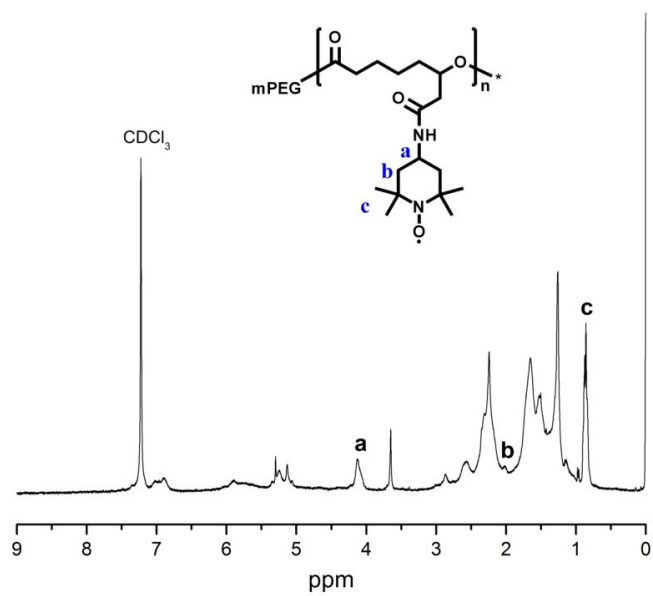


Fig. S11 ¹H NMR spectrum of PCCL₄₀-g-TEMPO in CDCl₃.