Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Schizophrenic poly(ε-caprolactone)s: synthesis, self-assembly and fluorescent decoration

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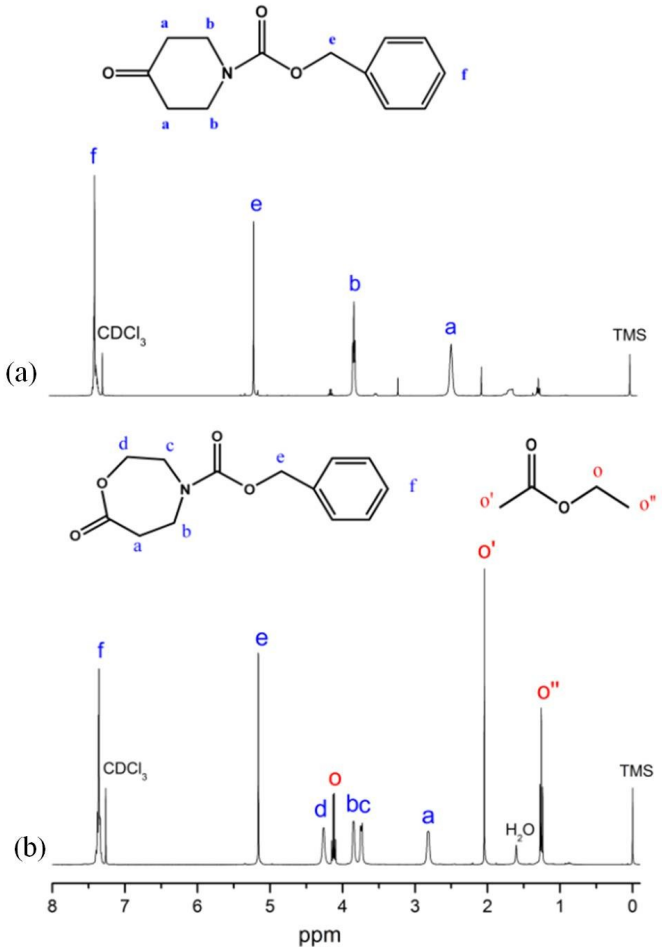

Fig. S1 ^{1}H NMR spectra of (a) 4-*N*-benzyl formate-piperidone and (b) 4-*N*-benzyl formate-piperilactone (NPIL) in $CDCl_3$.

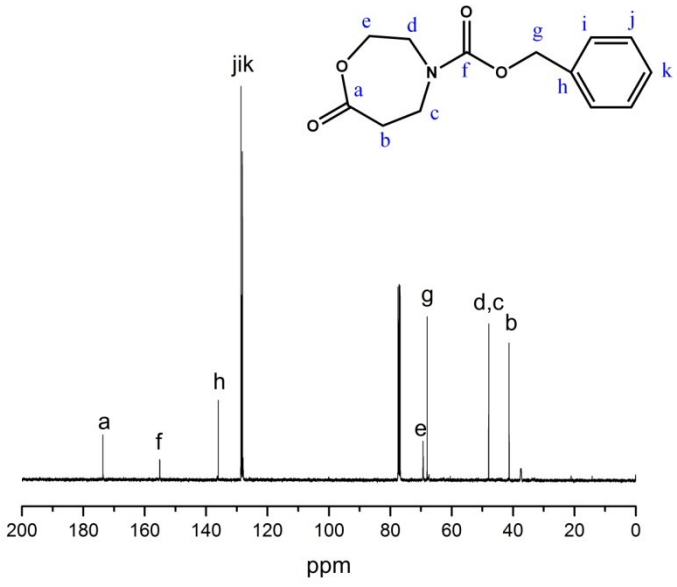

Fig. S2 ^{13}C NMR spectrum of monomer NPIL.

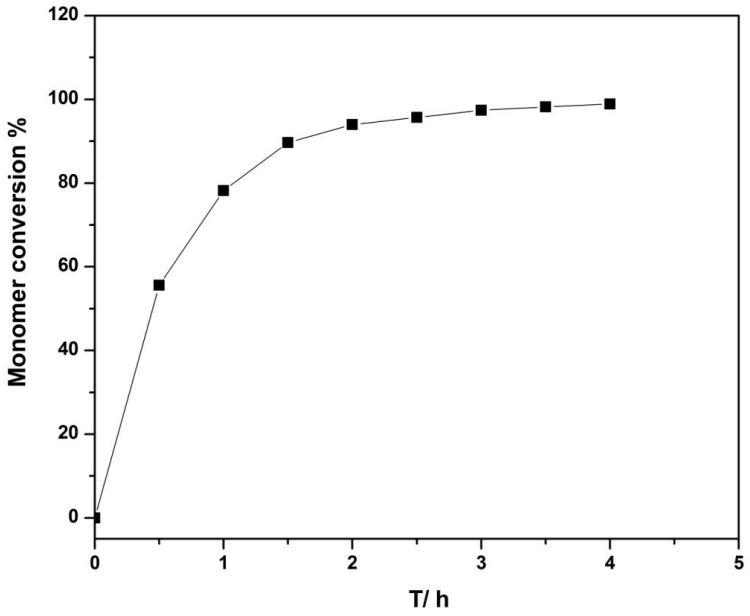

Fig. S3 Conversion *vs* time for the ring-opening polymerization of the cyclic lactone NPIL.

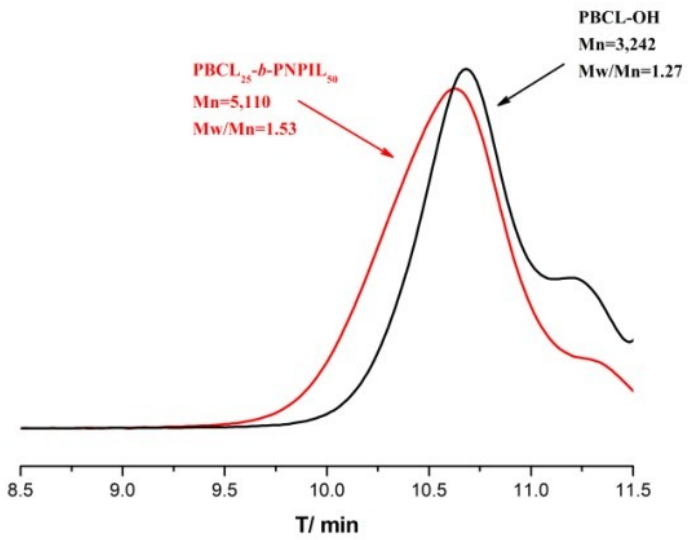

Fig. S4 SEC traces of macro-initiator $PBCL_{25}$ and copolymer $PBCL_{25}$-*b*-$PNPIL_{50}$.

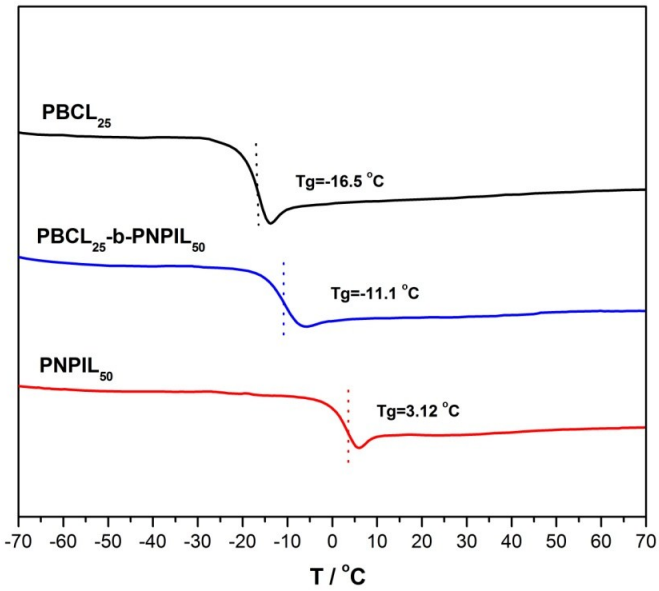

Fig. S5 DSC curves of homopolymer $PBCL_{25}$, $PNPIL_{50}$ and block copolymer $PBCL_{25}$-*b*-$PNPIL_{50}$.

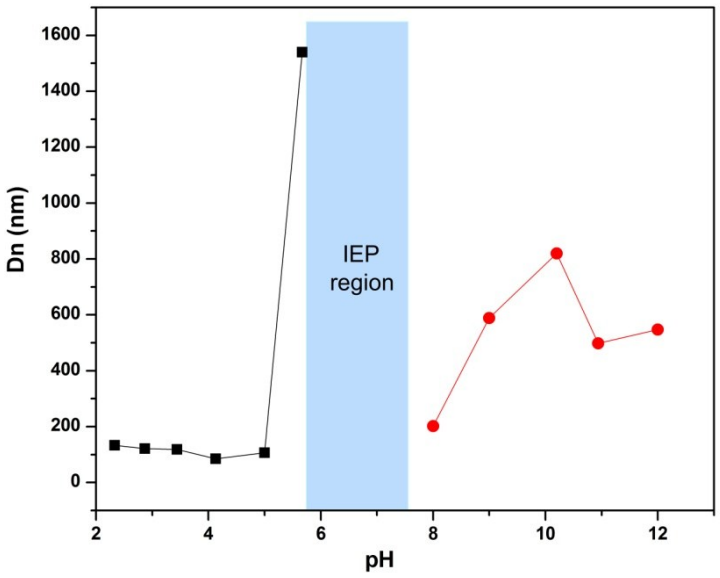

Fig. S6 The hydrodynamic diameter of $PCCL_{25}$-*b*-$PPIL_{50}$ at different pHs. Sample concentration was 0.5 mg/mL.

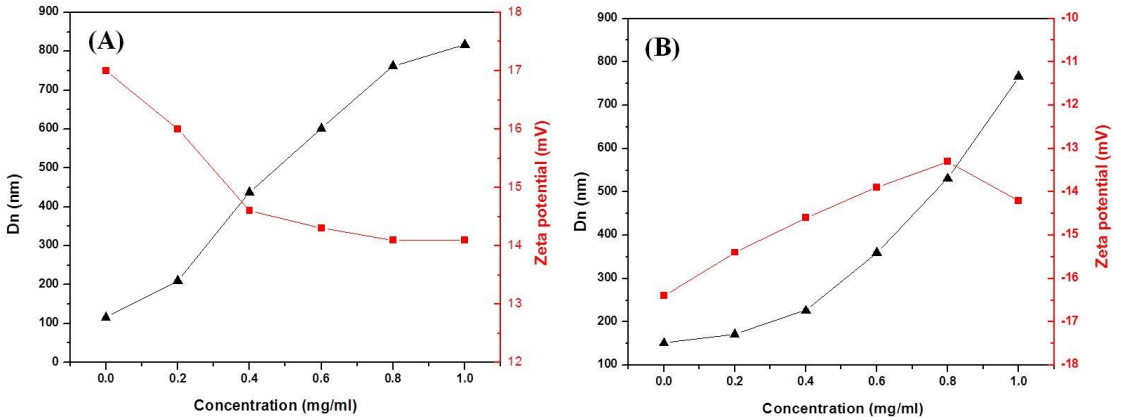

Fig. S7 The hydrodynamic diameter and zeta potential of $PCCL_{25}$-*b*-$PPIL_{50}$ copolymer (0.5 mg/mL) in NaCl aqueous solution with different salt concentrations. (A) at pH 5, (B) at pH 8, respectively.

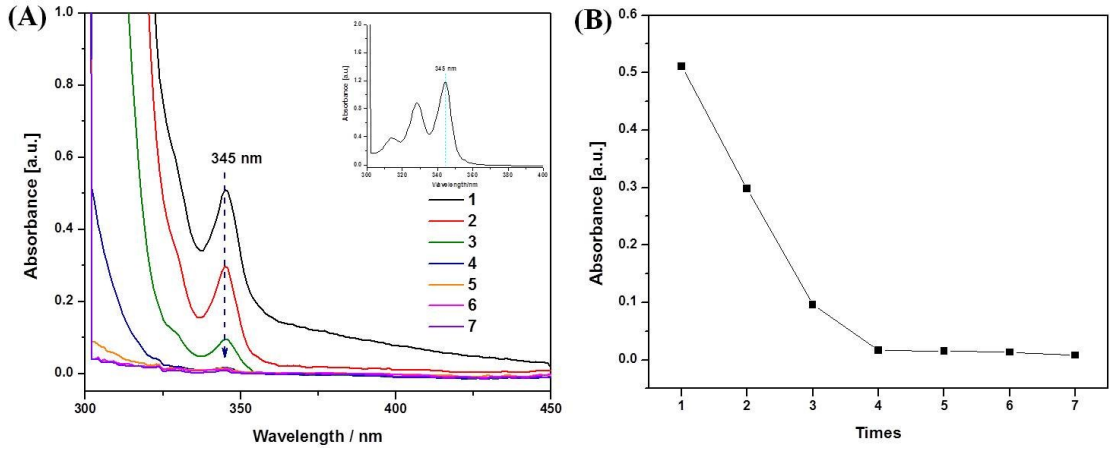

Fig. S8 (A) UV-vis absorption spectra of 1-(hydroxymethyl)pyrene in precipitated solution as a function of precipitation times and (B) the absorbance at 345 nm of pyrene derivatives in each precipitation time. The inset in (A) shows UV-vis absorption spectrum of free 1-(hydroxymethyl)pyrene in diethyl ether at 0.001mg/mL.

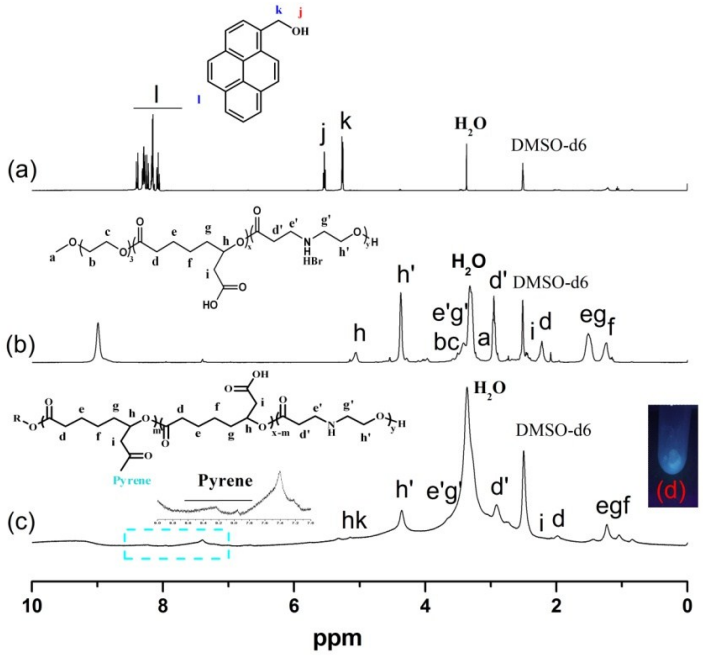

Fig. S9 ^{1}H NMR spectra of (a) 1-(hydroxymethyl)pyrene, (b) $PCCL_{25}$-*b*-$PPIL_{50}$ and (c) $PCCL_{25}$-*b*-$PPIL_{50}$-*g*-Py in DMSO-d6. The inset in (d) shows photograph of the partial sample for pyrene-labeled copolymer under UV irradiation (365 nm).

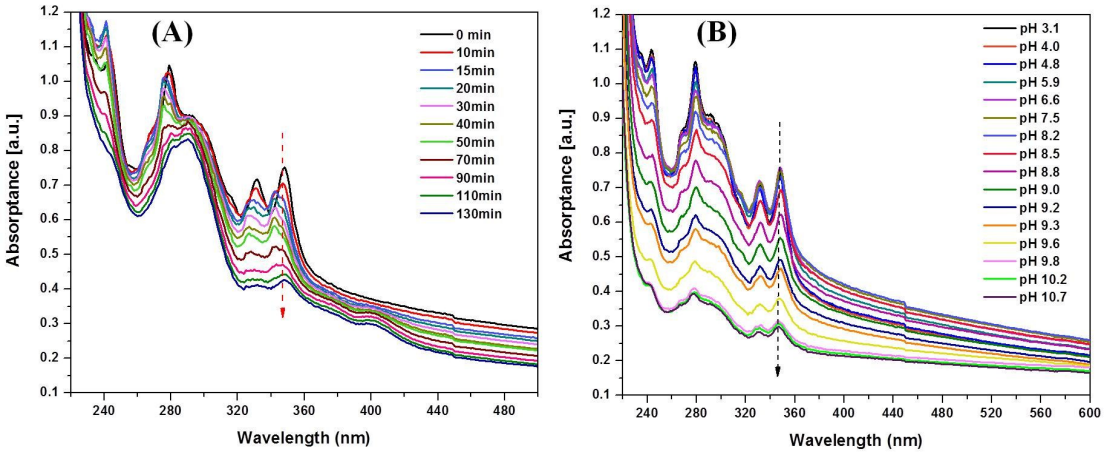

Fig. S10 UV-vis absorption spectra of pyrene-labeled copolymer aqueous solution (0.1 mg/mL) (A) UV irradiation (365 nm) for different time and (B) at different pHs.

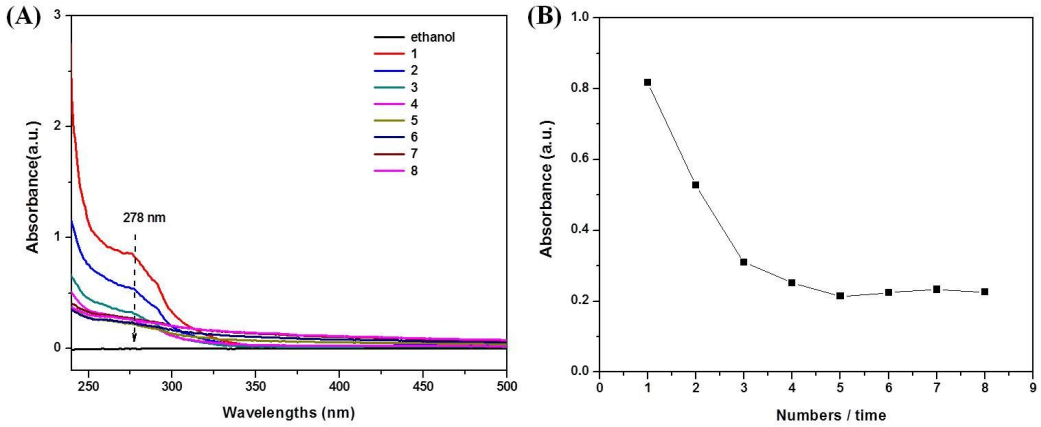

Fig. S11 (A) UV-vis absorption spectra of FITC in ethanol as a function of washing times and (B) the absorbance at 278 nm of FITC in each washing time.

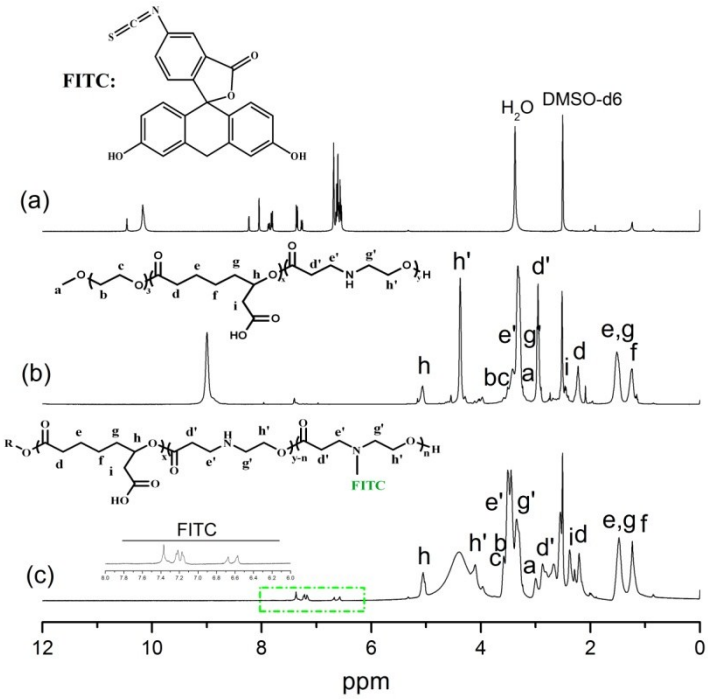

Fig. S12 ^{1}H NMR spectra of (a) FITC, (b) $PCCL_{25}$-*b*-$PPIL_{50}$ and (c) $PCCL_{25}$-*b*-$PPIL_{50}$-*g*-FITC in DMSO-d6.