

Supporting Information

Hybrid Copolymerization of Ethylene Oxide and *tert*-Butyl Methacrylate with Organocatalyst

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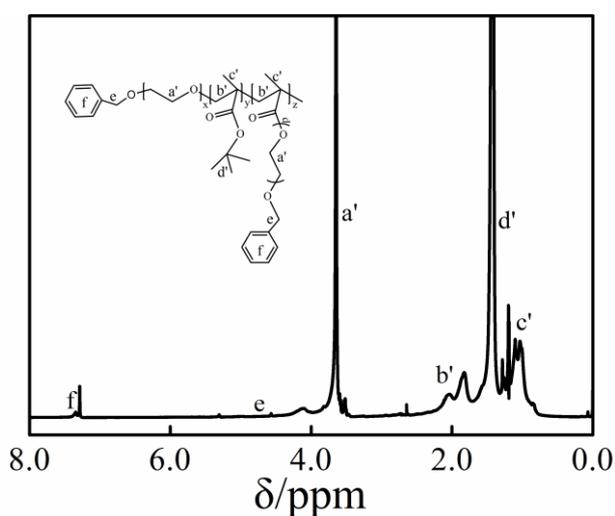


Figure S1. ¹H NMR spectrum of the EO and BMA hybrid copolymerization product (BMA₃₈-co-EO-co-bPEO₁₂).

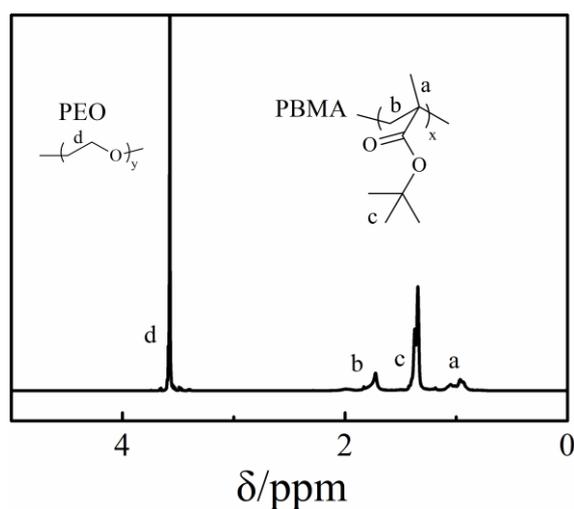


Figure S2. ¹H NMR spectrum for *t*-BuP₄ catalyzed ROP of EO with in the presence of PBMA ($M_{n,SEC} = 1.25 \times 10^4$ g/mol, $D = 1.23$) (BnOH was initiator and THF was solvent, reaction temperature was from -40 °C (2 h) to 40 °C (46 h), the $M_{n,SEC}$ of the obtained PEO is about 4.0×10^3 g/mol with $D = 1.19$).

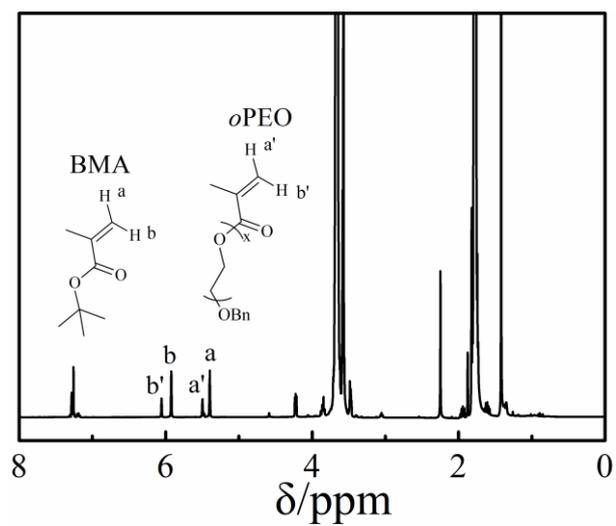


Figure S3. ^1H NMR spectrum of aliquot for $t\text{-BuP}_4$ catalyzed ROP of EO and BMA after 4 h (BnOH was initiator and THF was solvent, reaction temperature was from $-40\text{ }^\circ\text{C}$ (2 h) to $40\text{ }^\circ\text{C}$ (46 h)).

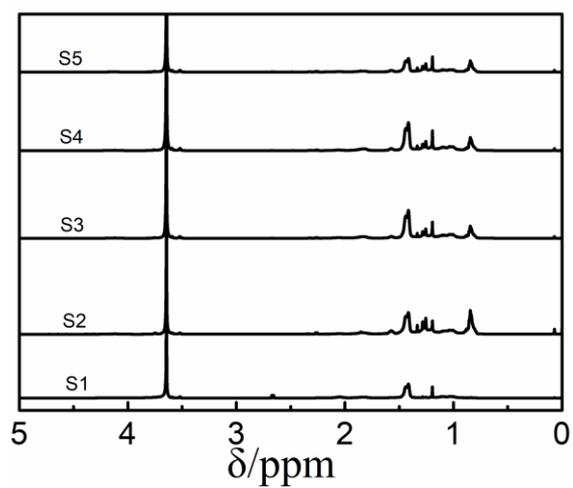


Figure S4. ^1H NMR spectra of EO and BMA copolymerization product ($\text{BMA}_{21}\text{-co-EO-co-bPEO}_9$) fractionations.

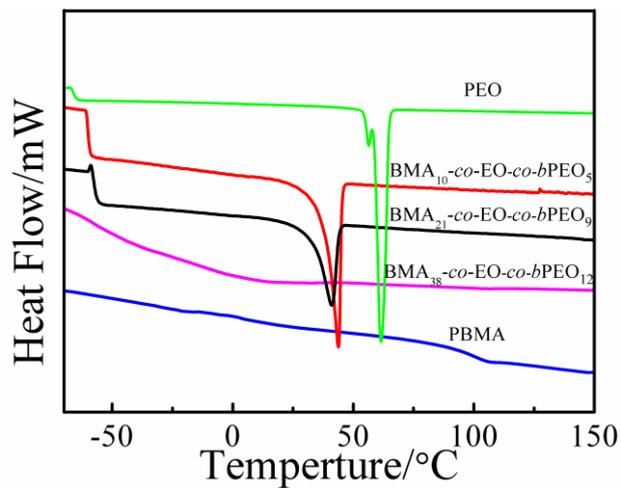


Figure S5. DSC curves of PEO, PBMA and their copolymer products.

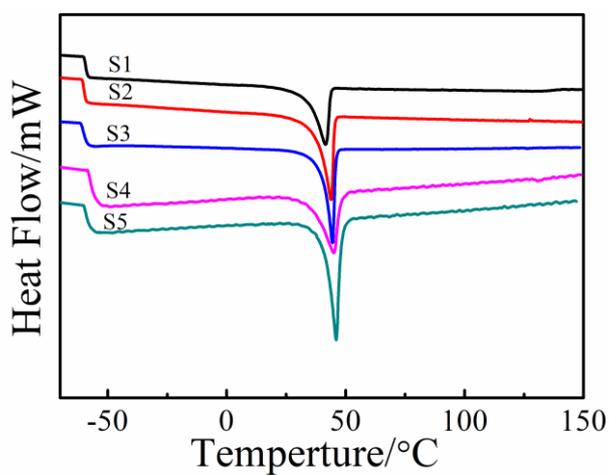


Figure S6. DSC curves of BMA₂₁-co-EO-co-bPEO₉ fractionations.