Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supporting Information

Contents

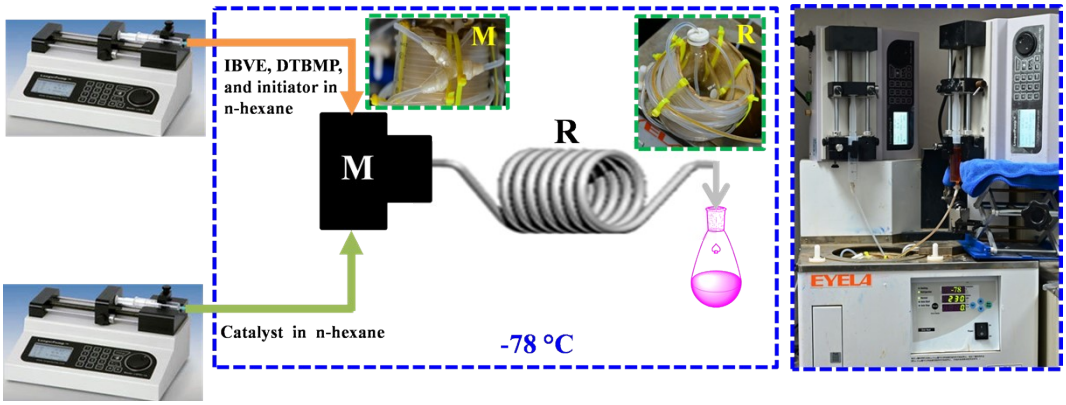

Figure S1. Continuous flow through process (left) for the cationic polymerization of IBVE. Actual experimental setup (right)

1. ^{13}C NMR spectra of poly(IBVE) obtained at various reaction conditions

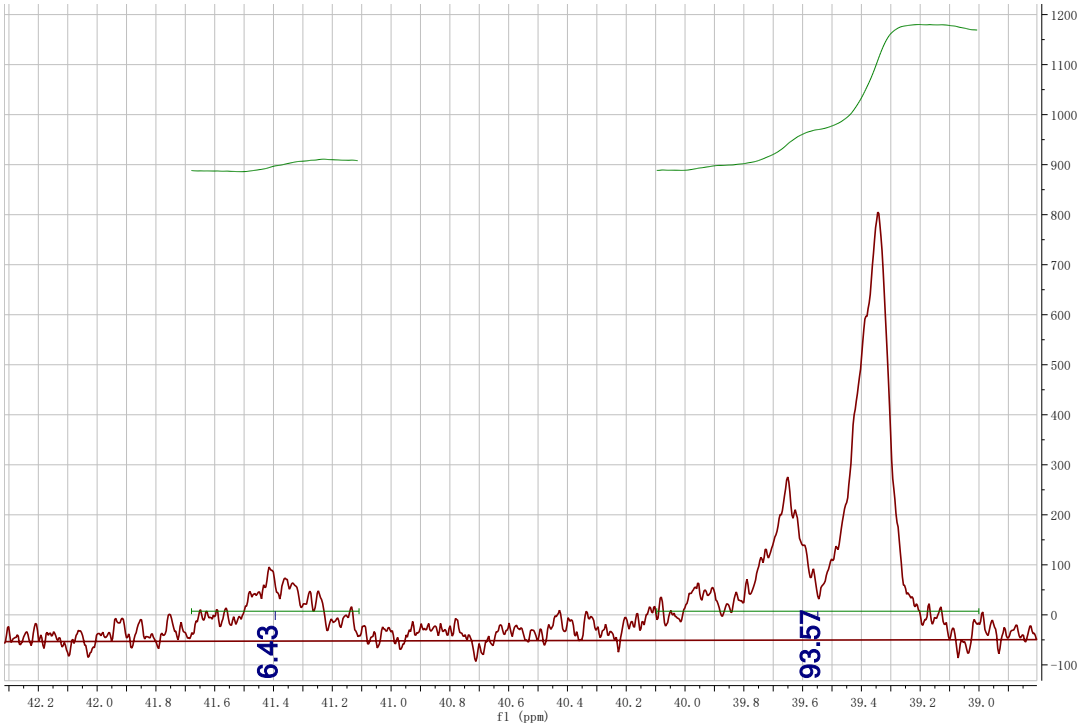

Figure S2. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~94% m (Table 1, Entry 1).

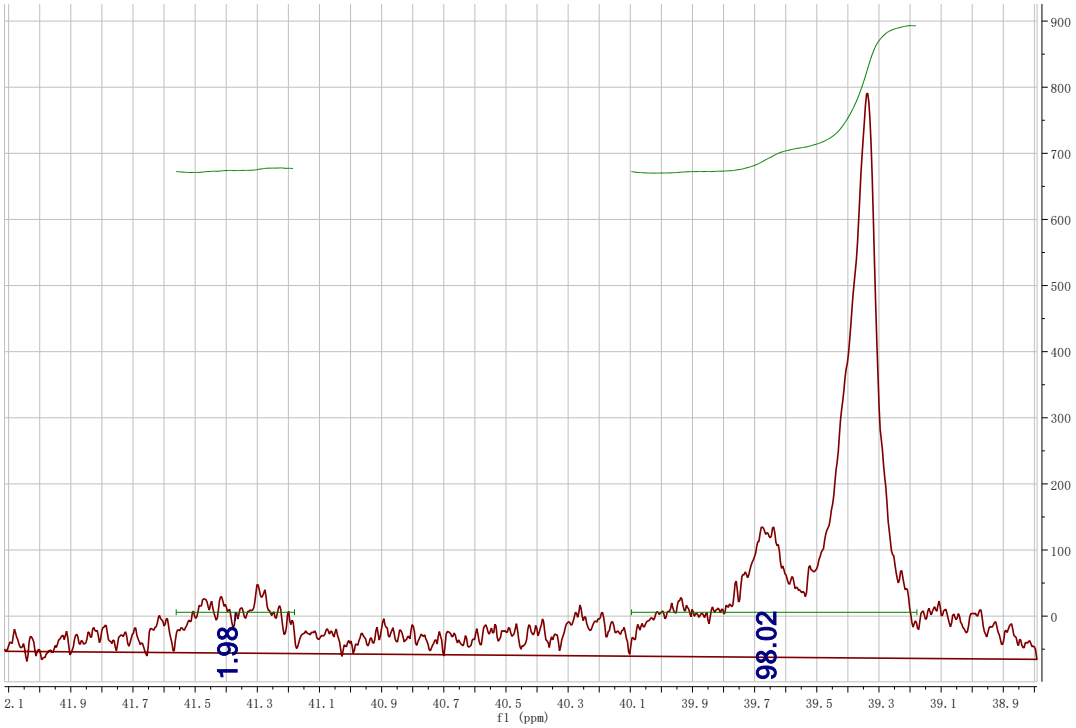

Figure S3a. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to 98% m (Table 1, Entry 2).

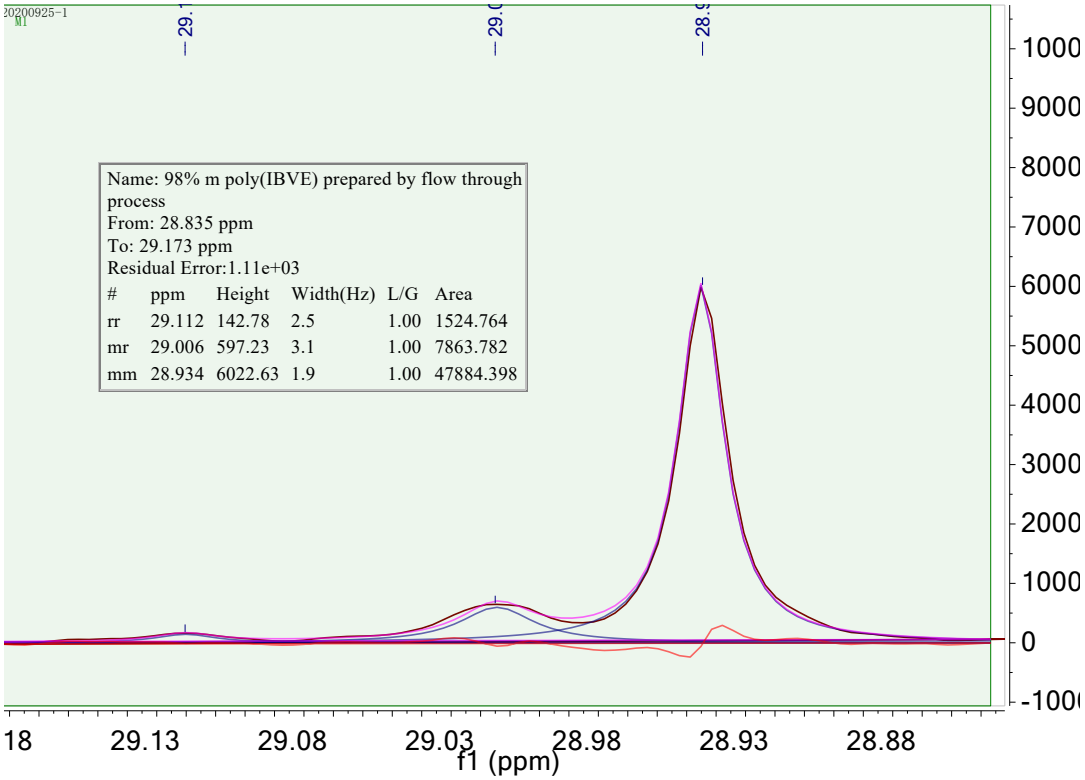

Figure S3b. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to 98% m (Table 1, Entry 2). Fitted peaks (blue), peak sum (magenta) and peak residual (red) are shown overlaid on the original spectrum (black). Triad mm% value is 84%.

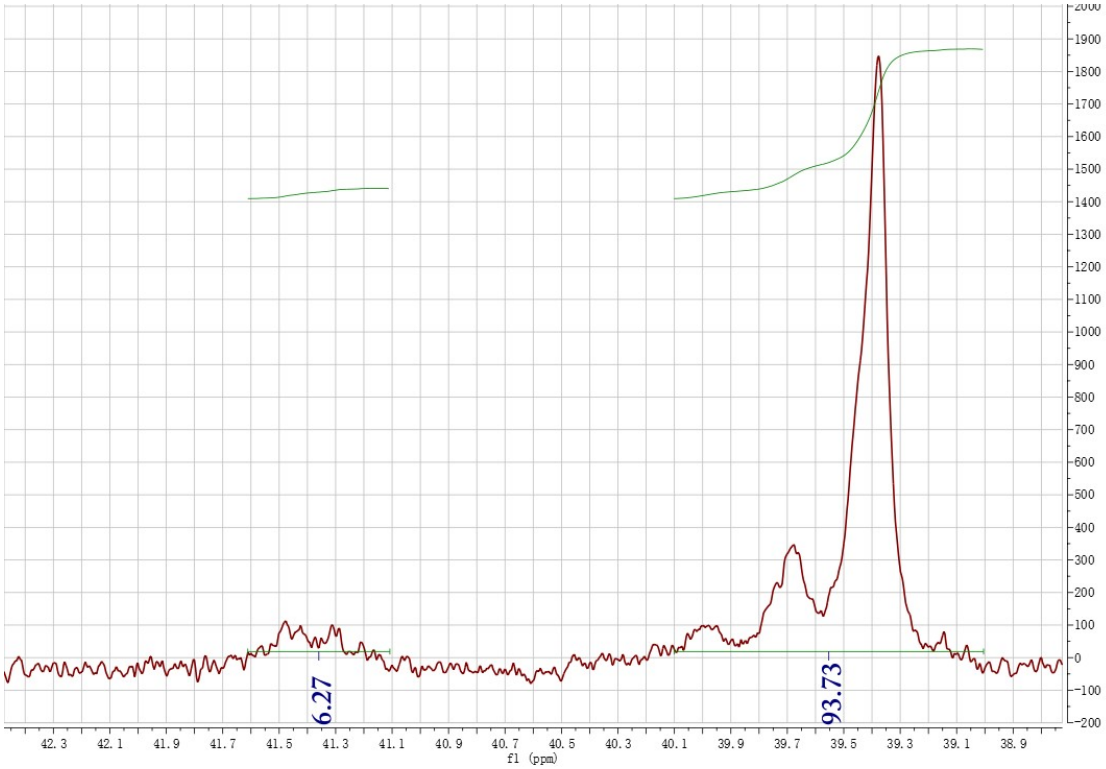

Figure S4. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~94% m (Table 1, Entry 3)

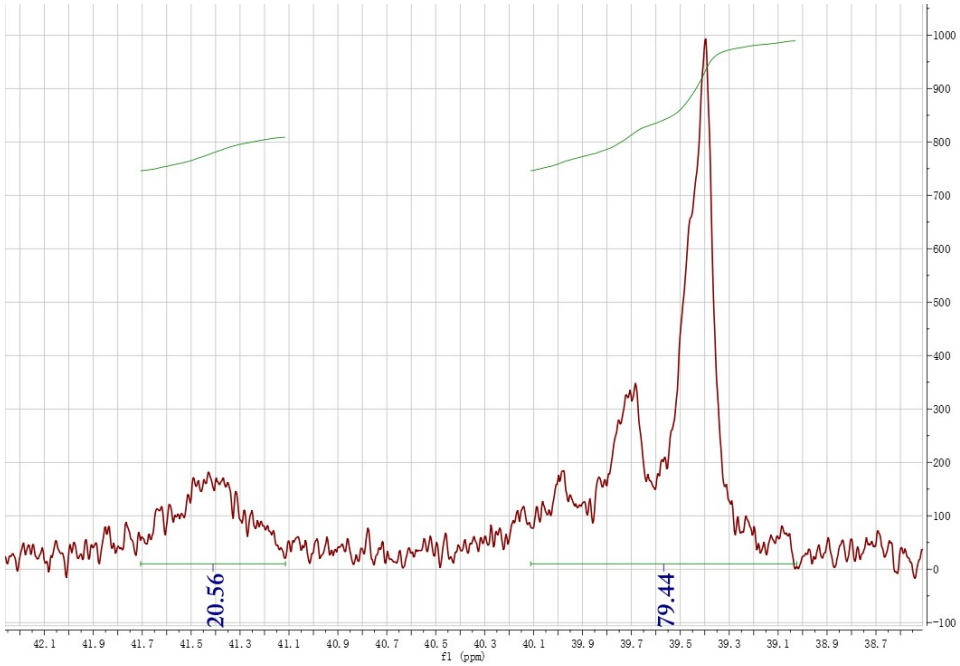

Figure S5. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~79% m (Table 1, Entry 4)

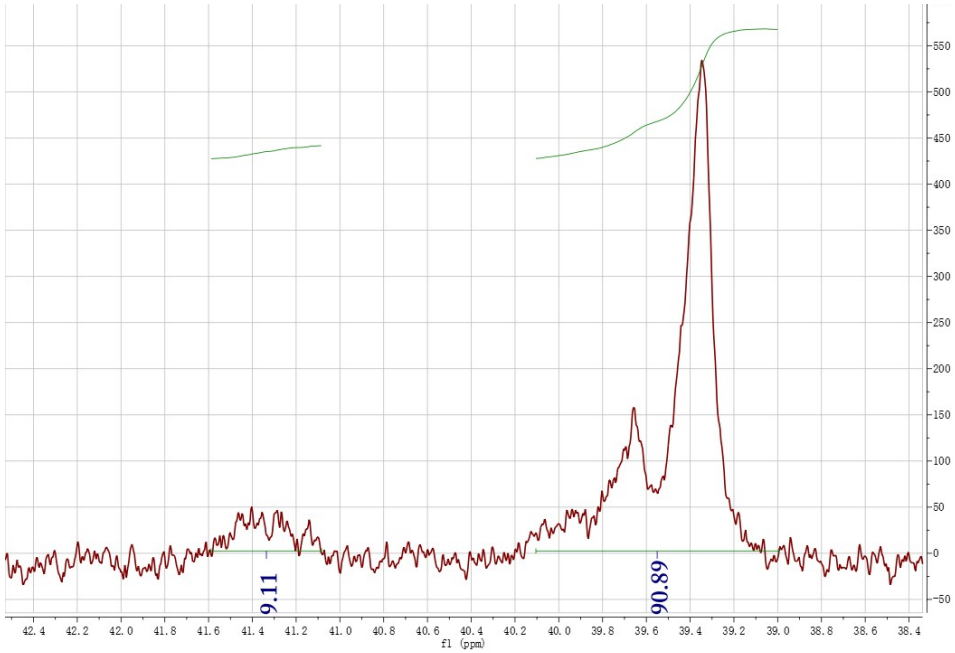

Figure S6. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~91% m (Table 1, Entry 5)

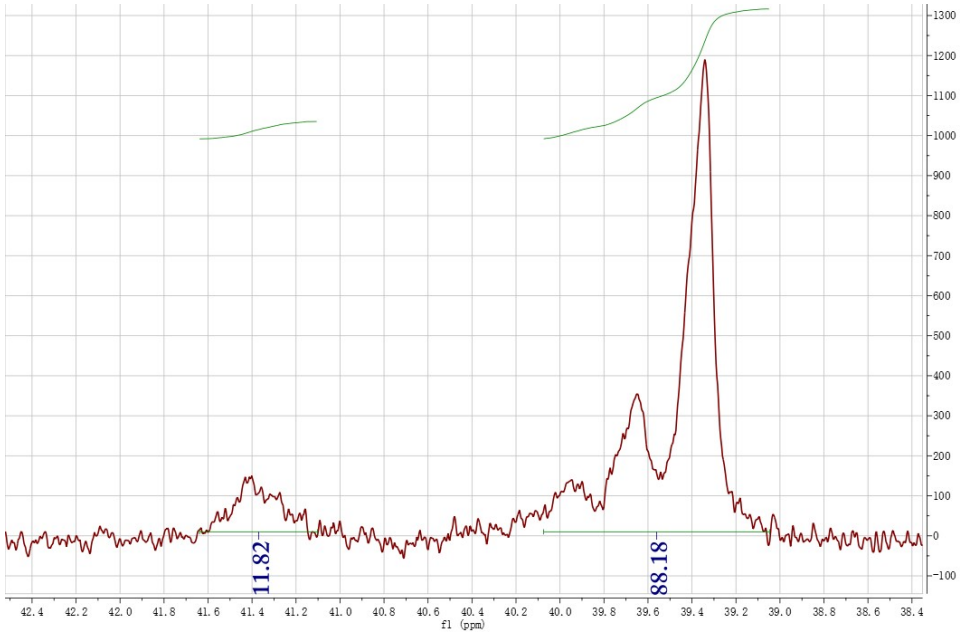

Figure S7. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~88% m (Table 1, Entry 6)

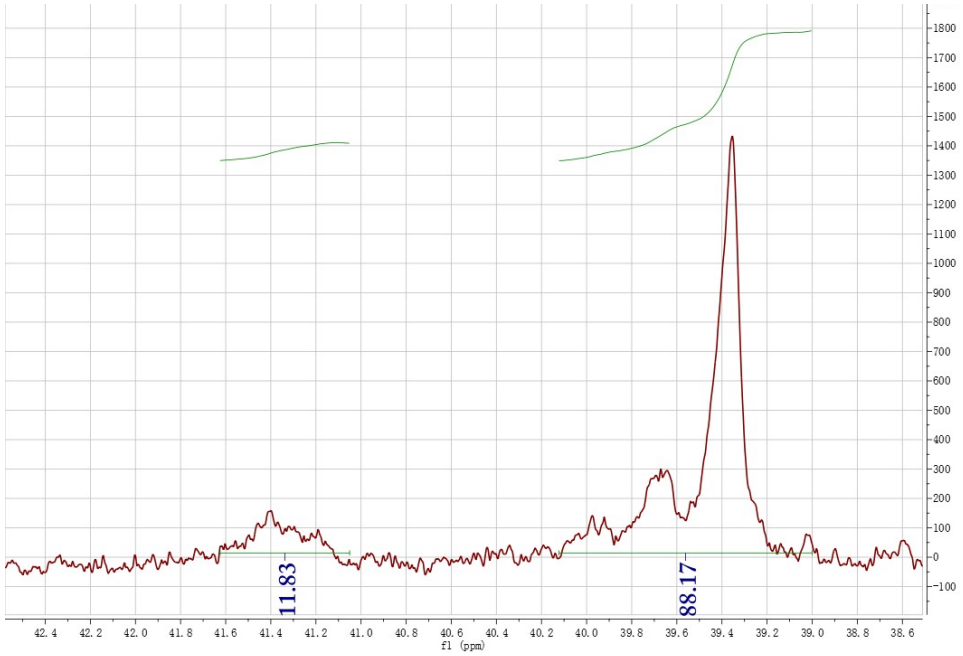

Figure S8. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~88% m (Table 1, Entry 7)

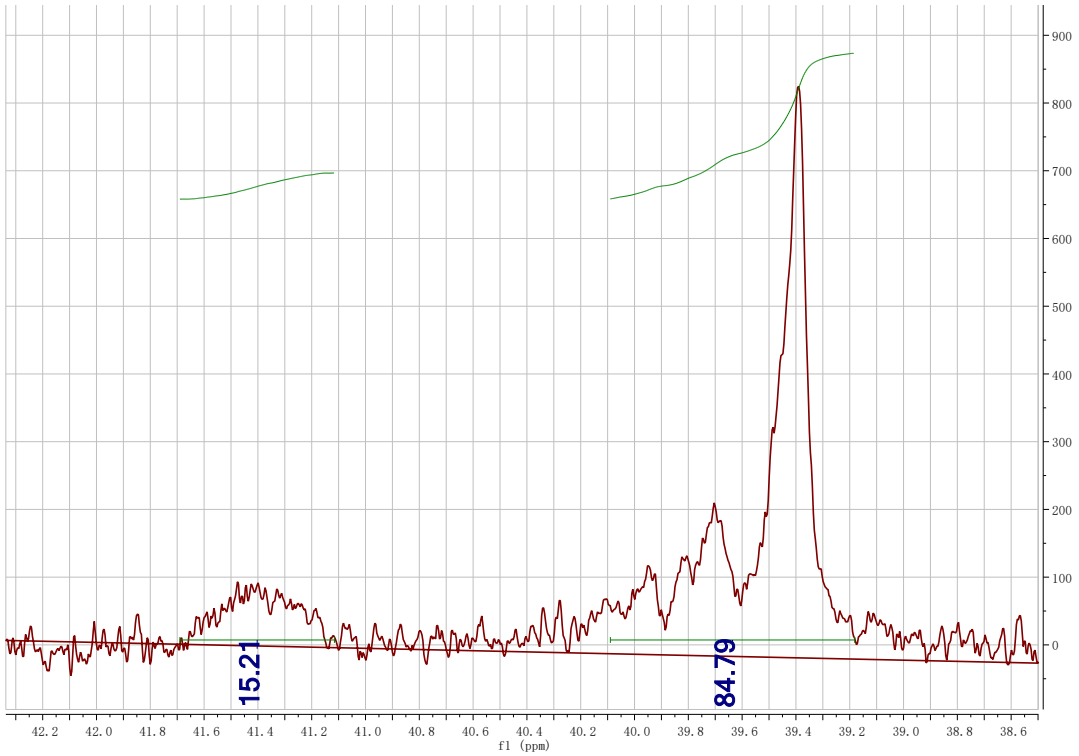

Figure S9. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~85% m (Table 1, Entry 8).

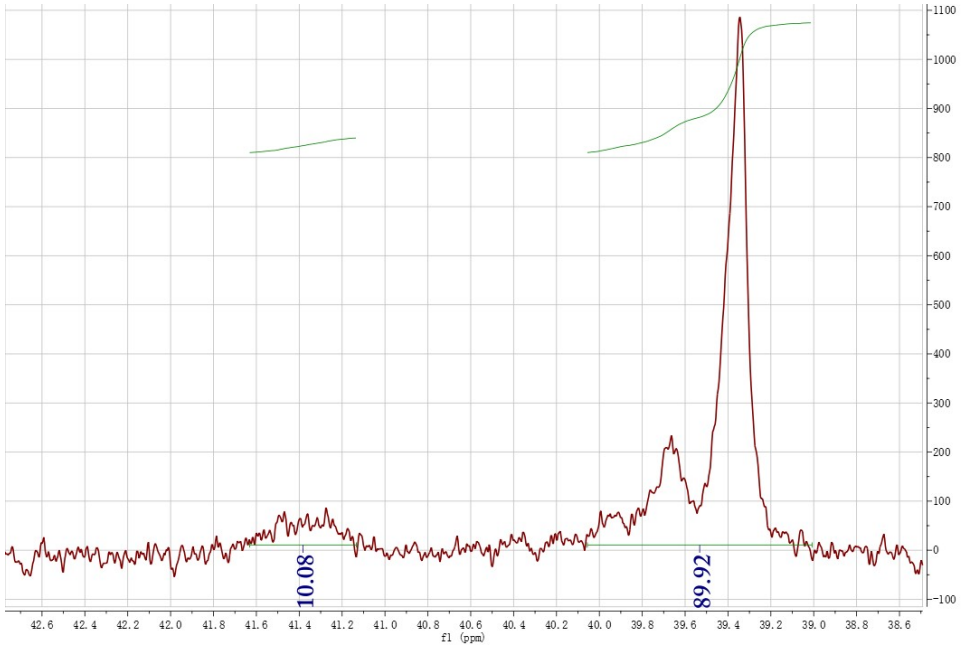

Figure S10a. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~90% m (Table 1, Entry 9).

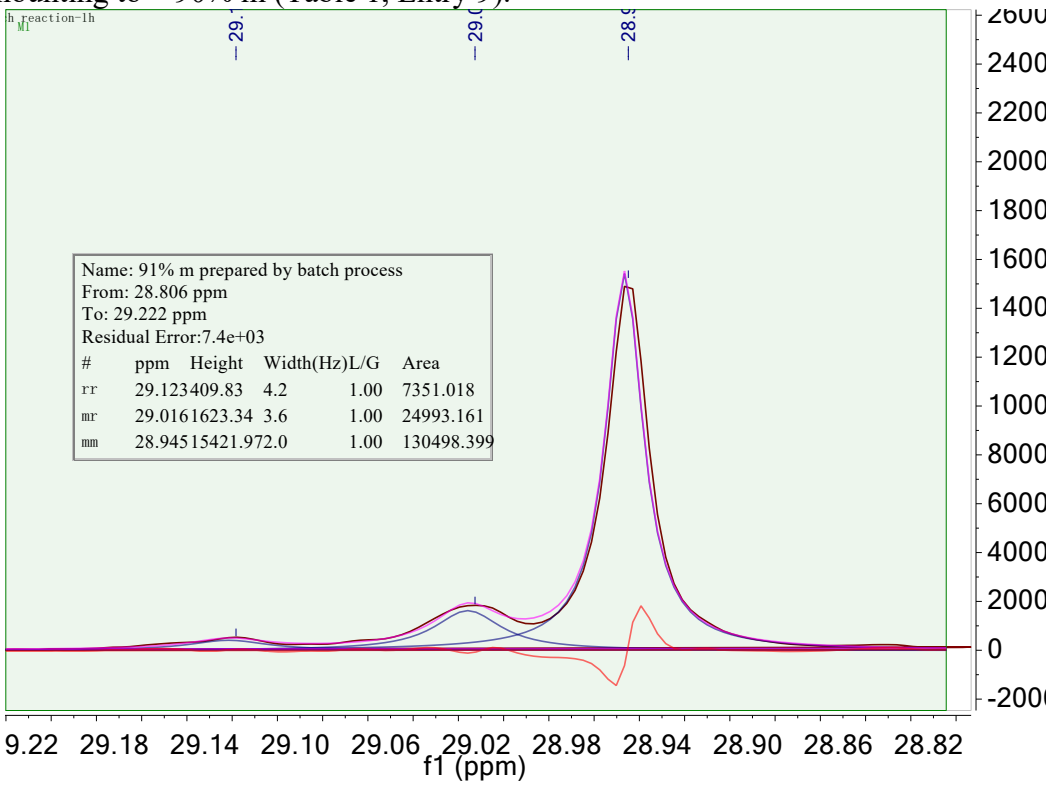

Figure S10b. ^{13}C NMR spectra of poly(IBVE) in $CDCl_3$ showing relative integrations amounting to ~90% m (Table 1, Entry 9). Fitted peaks (blue), peak sum (magenta) and peak residual (red) are shown overlaid on the original spectrum (black). Triad mm% value is 80%.

2. DSC data of poly(IBVE) obtained at various reaction conditions

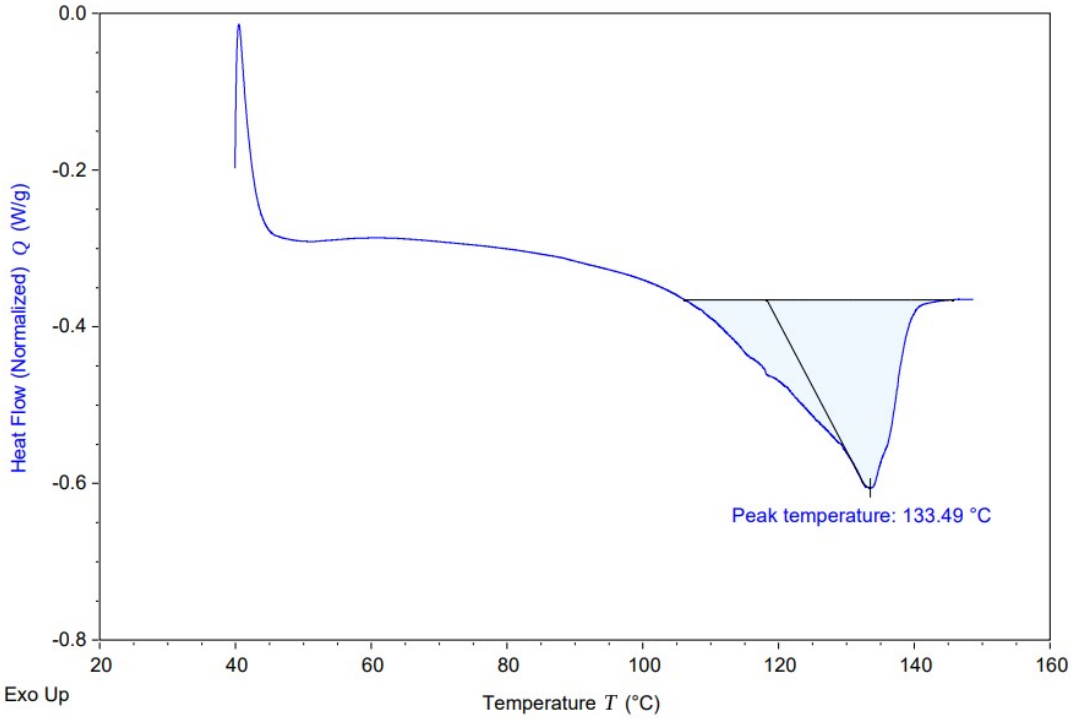

Figure S11. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 1).

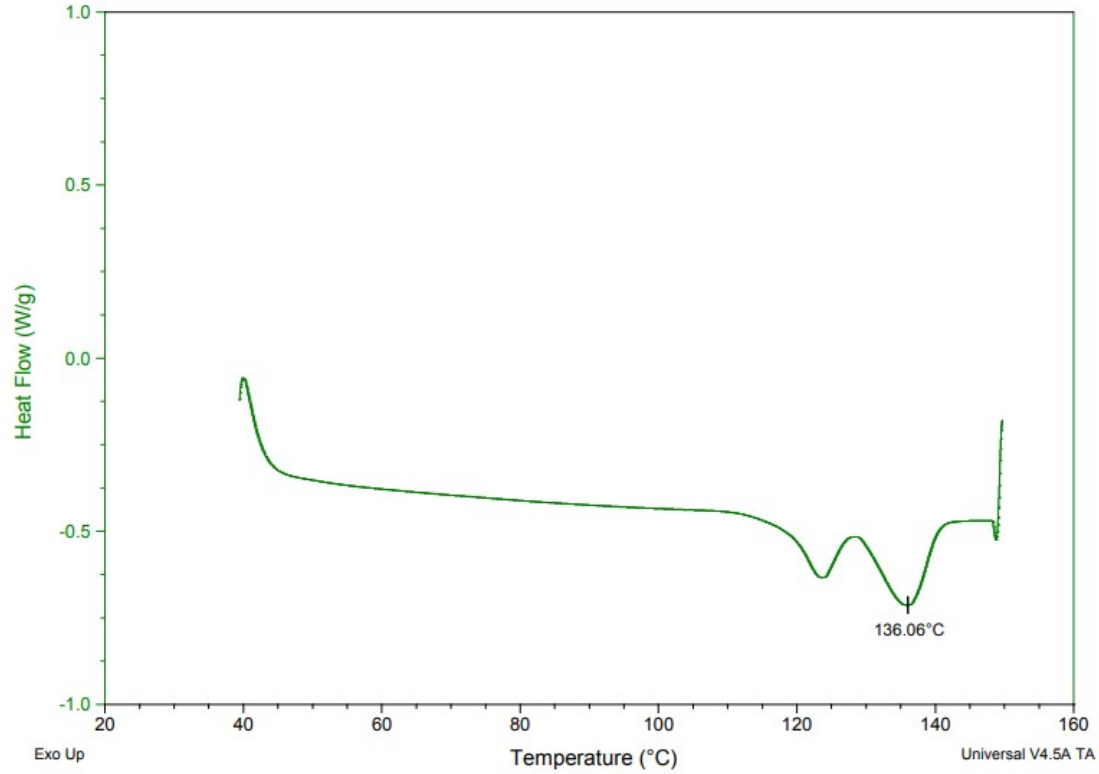

Figure S12. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 2).

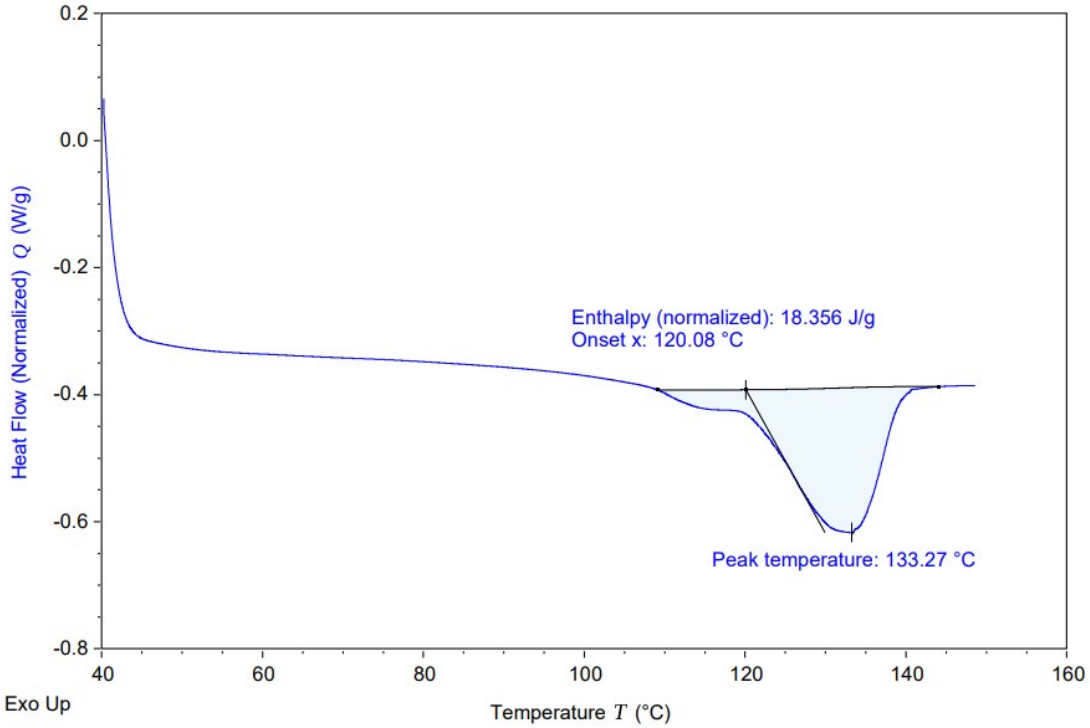

Figure S13. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 3).

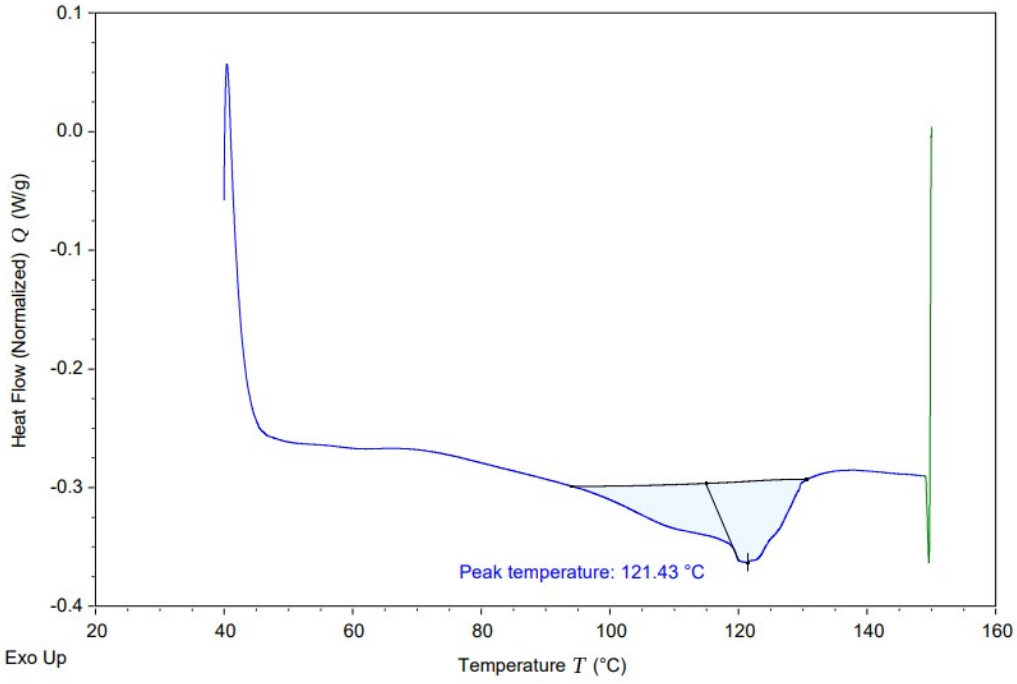

Figure S14. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 4).

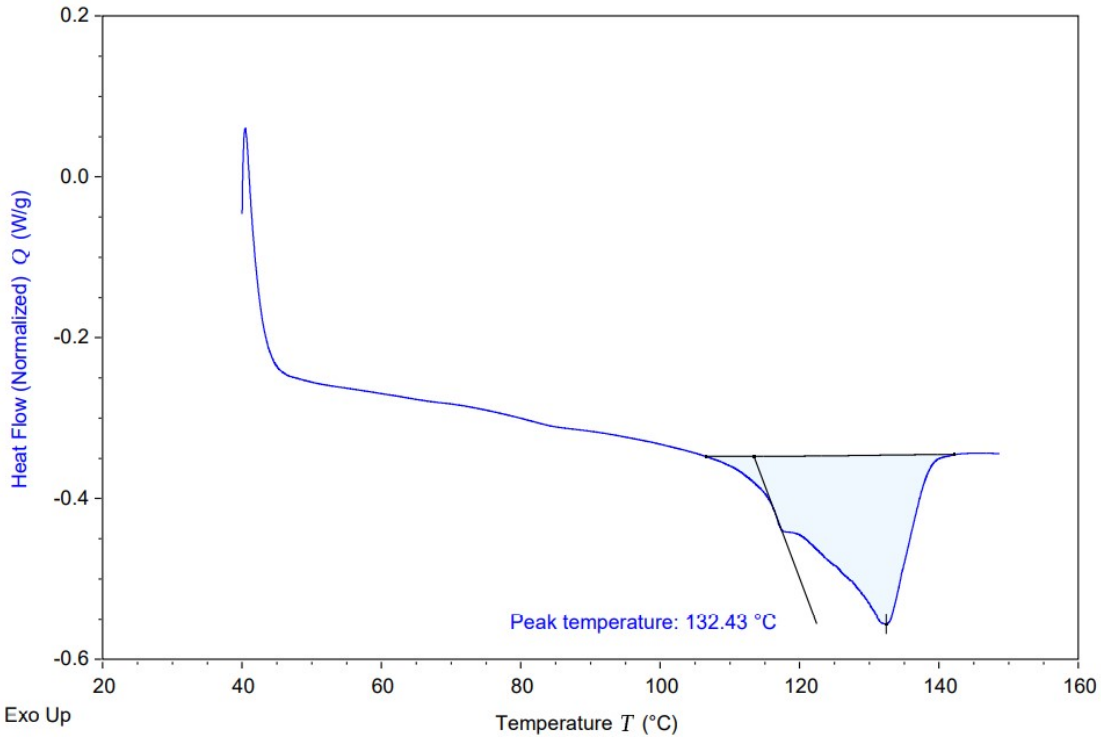

Figure S15. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 5).

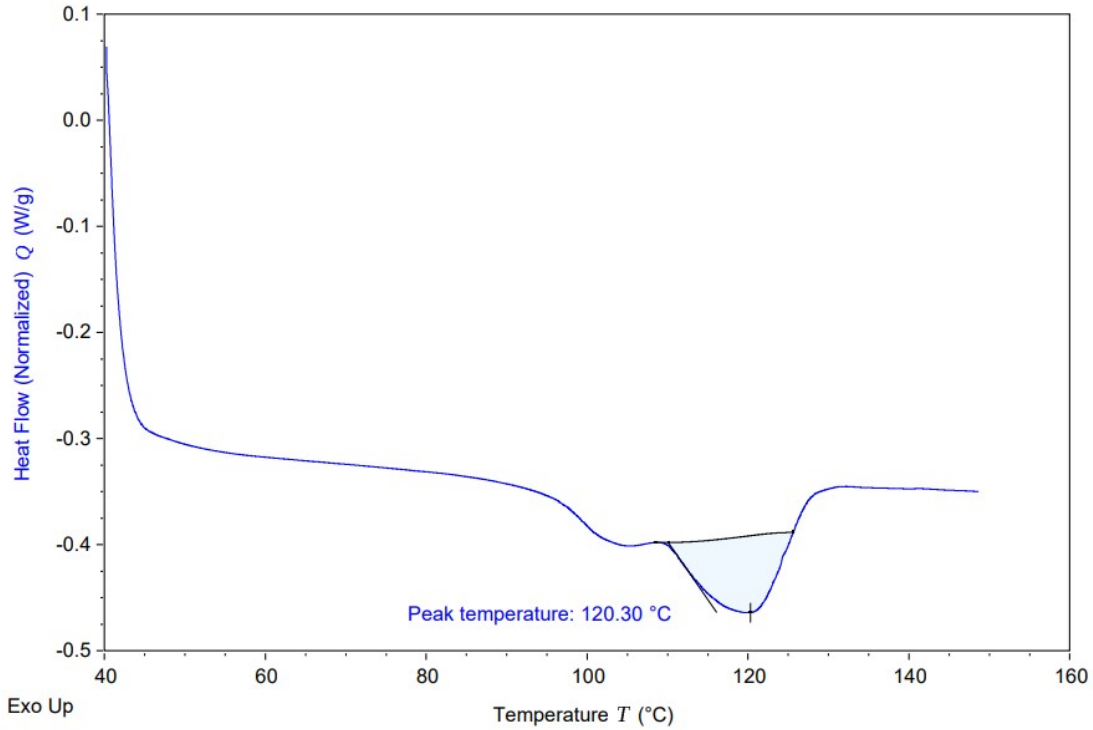

Figure S16. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 6).

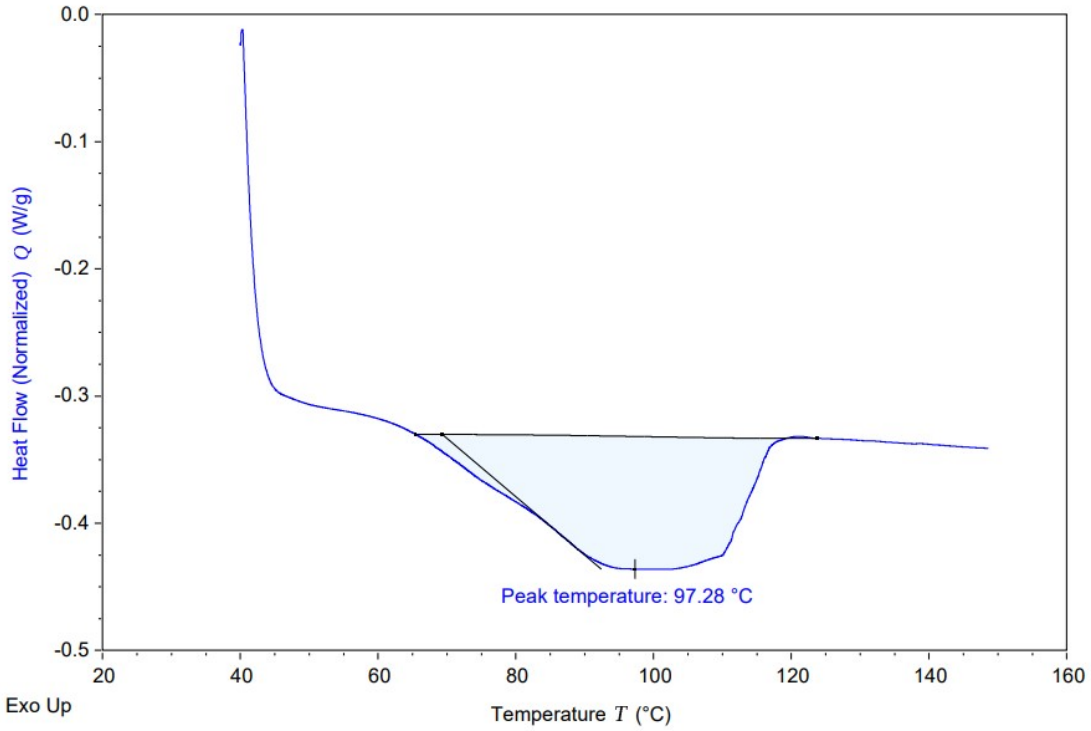

Figure S17. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 7).

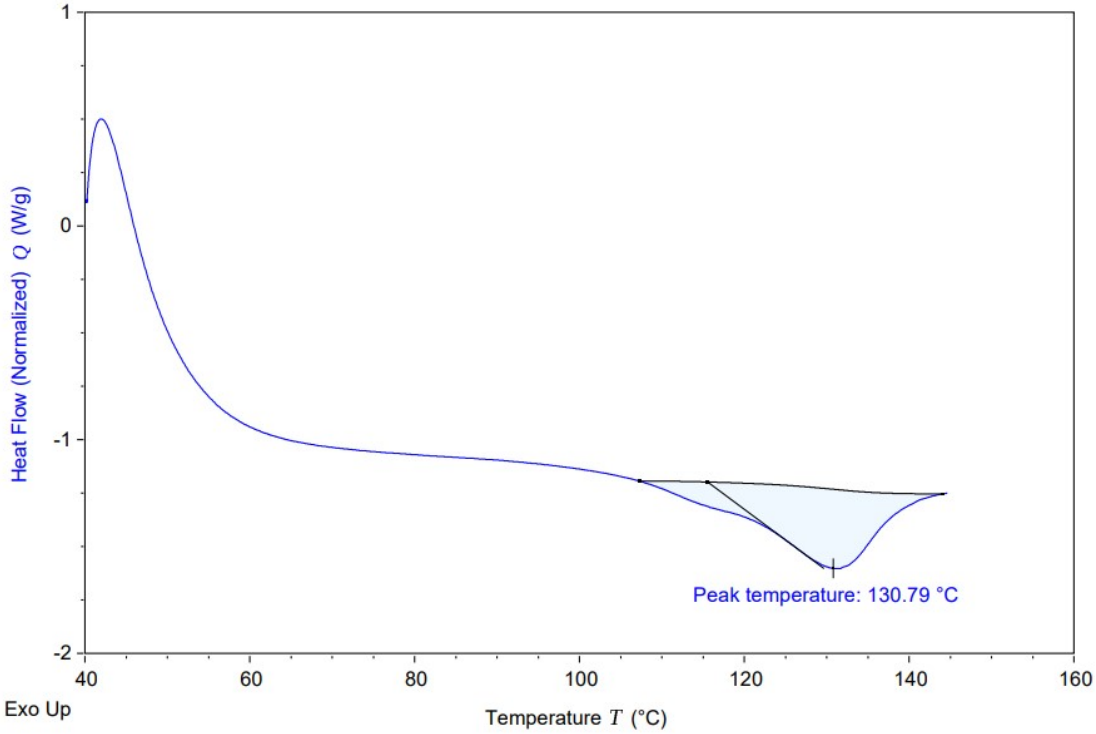

Figure S18. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 8).

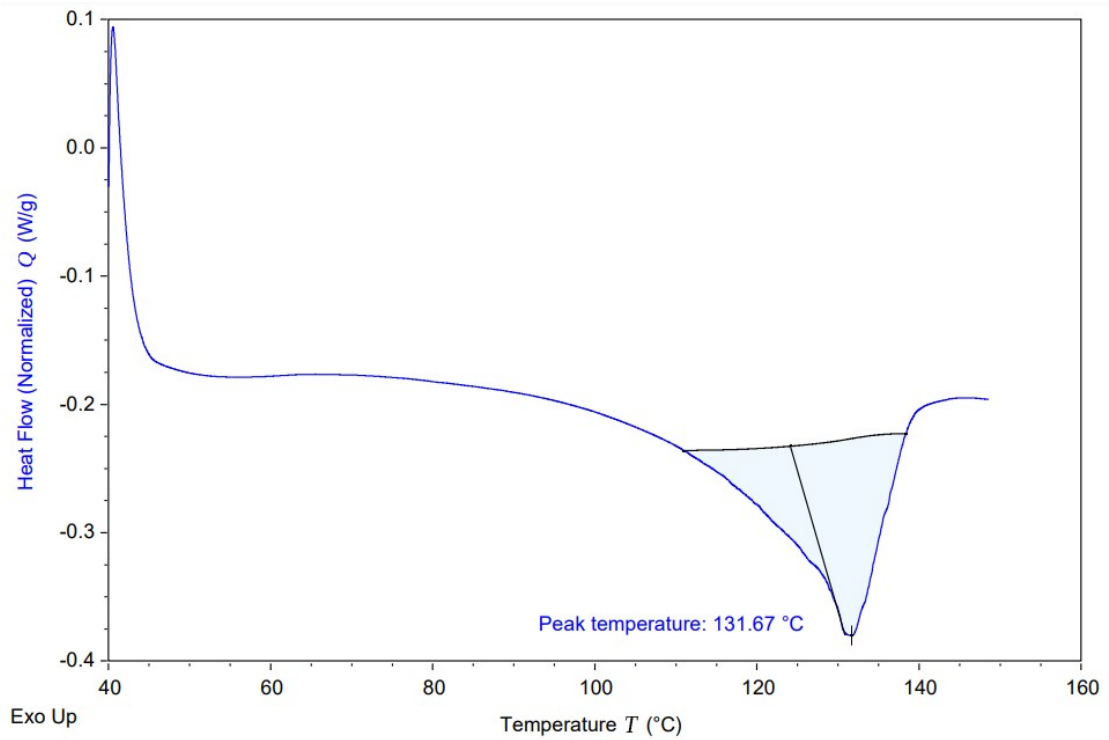

Figure S19. DSC curve for poly(IBVE) during the second heating cycle at a temperature ramp rate of 10 ºC/min (Table 1, Entry 9).

3 GPC results of poly(IBVE) obtained at various reaction conditions

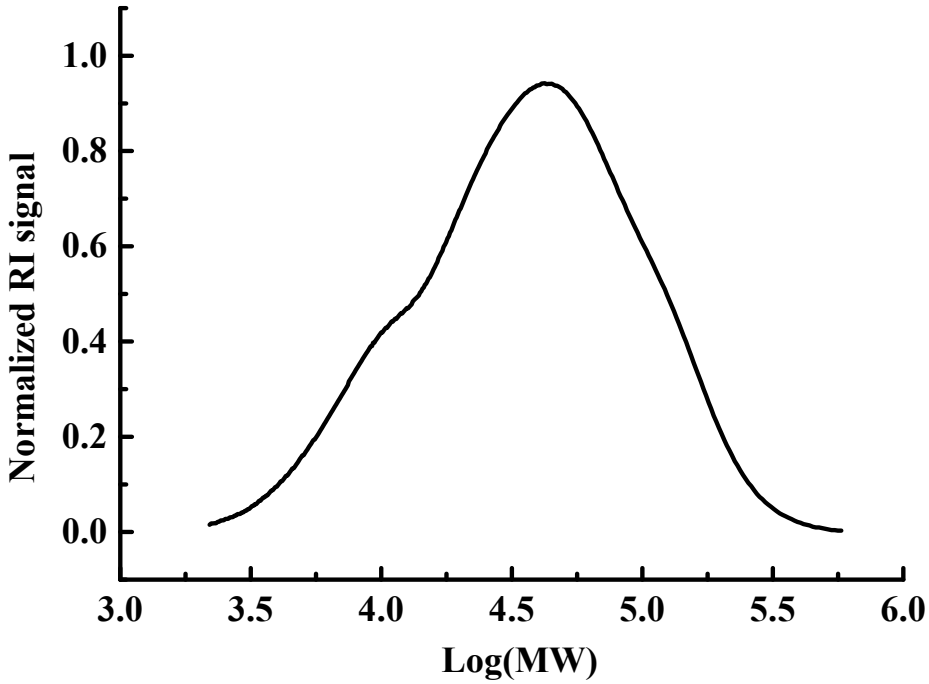

Figure S20. GPC trace of isotactic poly(BVE) (Table 1, Entry 1).

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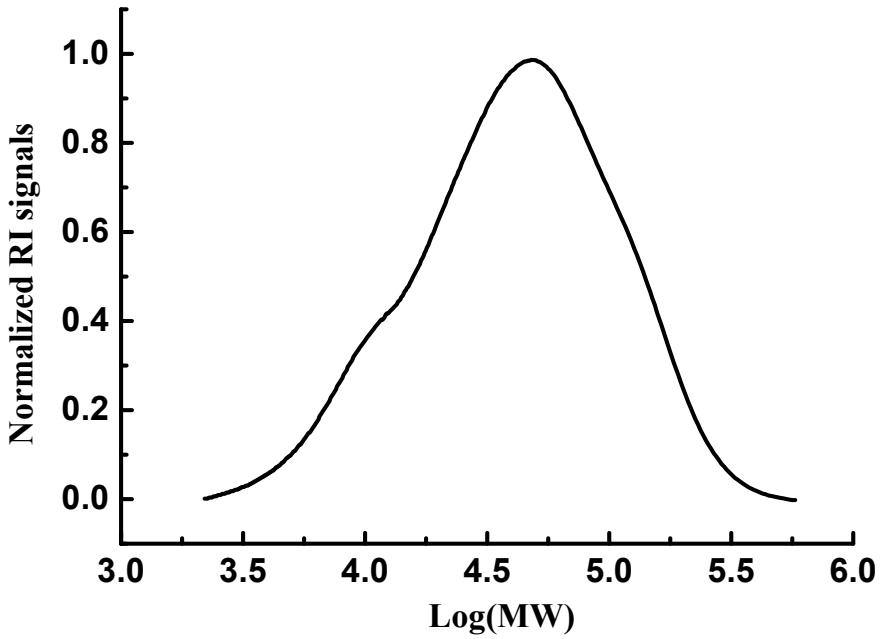

Figure S21. GPC trace of isotactic poly(BVE) (Table 1, Entry 2).

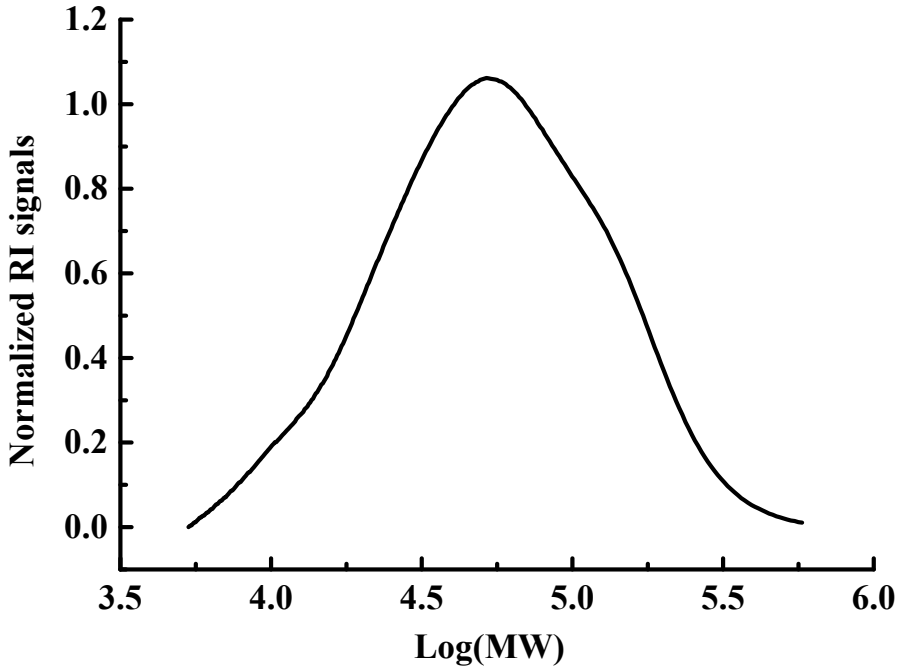

Figure S22. GPC trace of isotactic poly(BVE) (Table 1, Entry 3).

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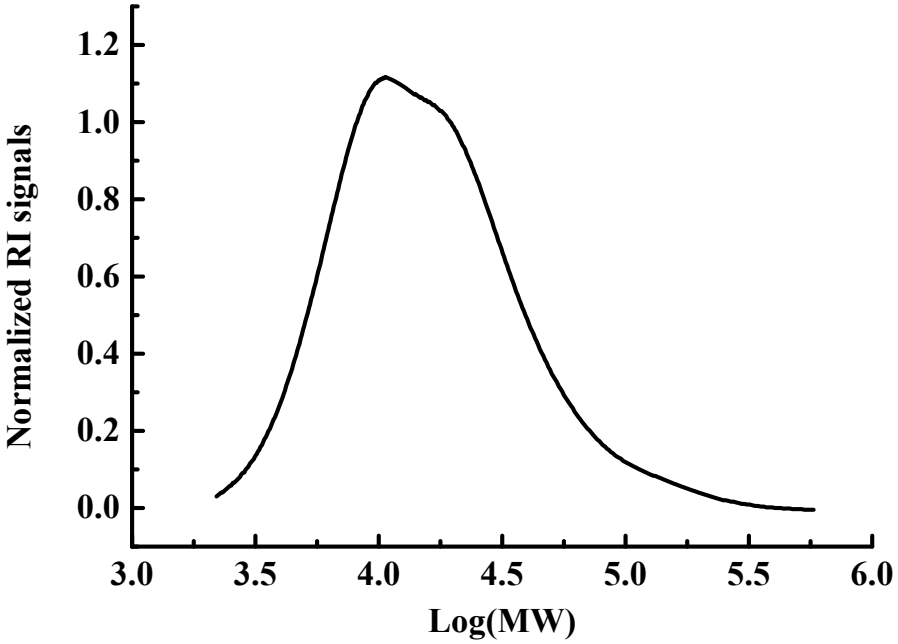

Figure S23. GPC trace of isotactic poly(BVE) (Table 1, Entry 4).

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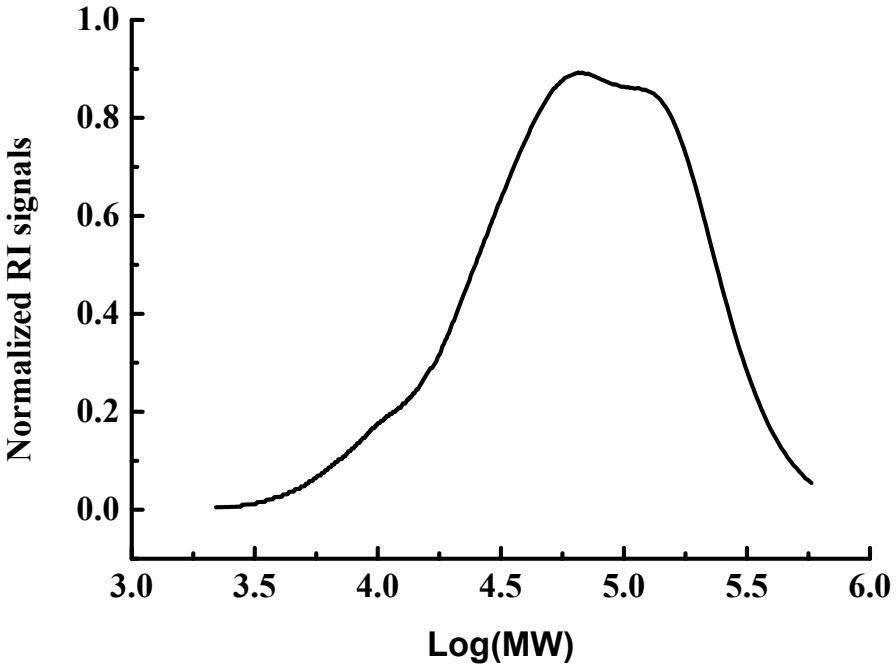

Figure S24. GPC trace of isotactic poly(BVE) (Table 1, Entry 5).

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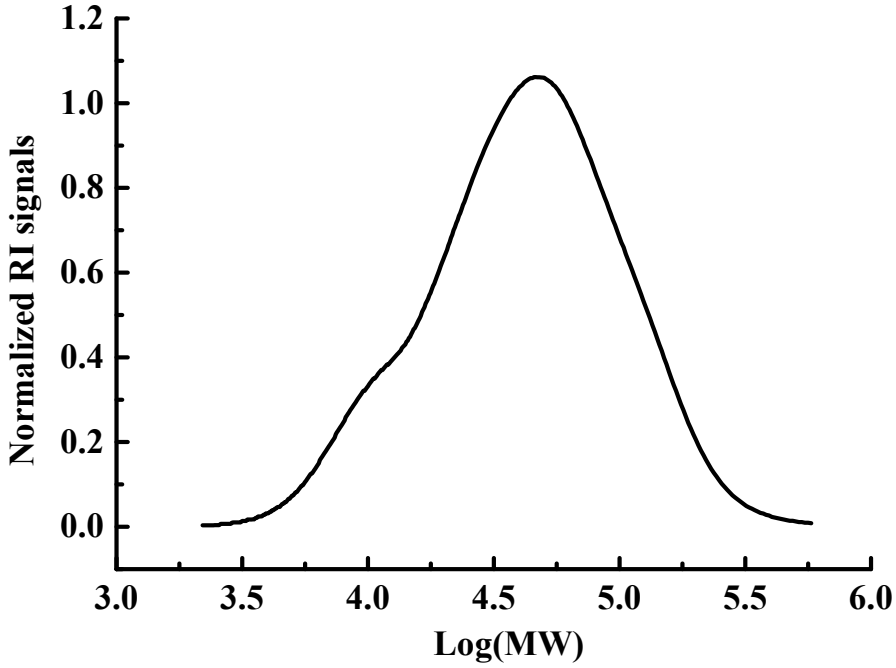

Figure S25. GPC trace of isotactic poly(BVE) (Table 1, Entry 6).

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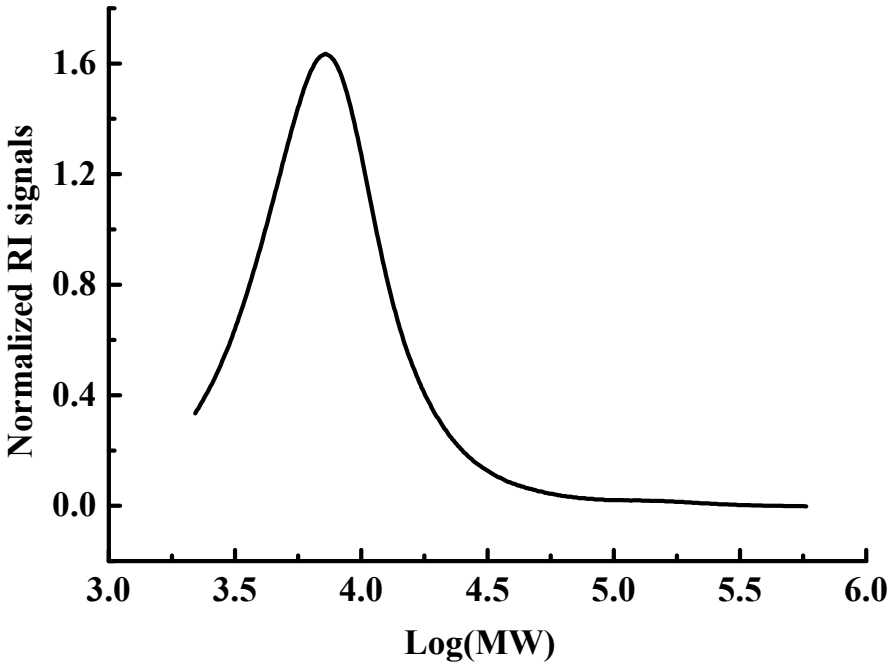

Figure S26. GPC trace of isotactic poly(BVE) (Table 1, Entry 7).

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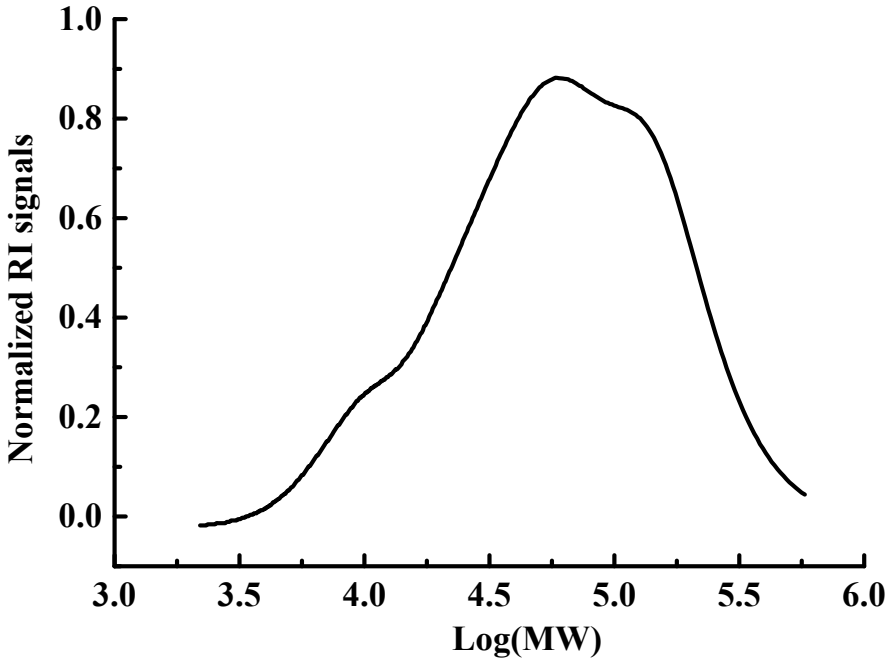

Figure S27. GPC trace of isotactic poly(BVE) (Table 1, Entry 8).

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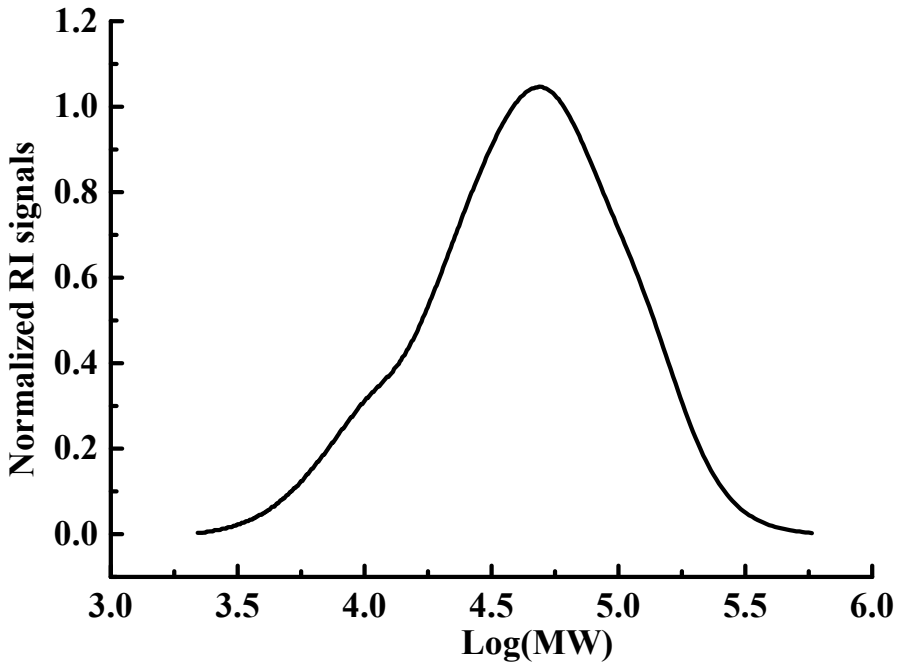

Figure S28. GPC trace of isotactic poly(BVE) (Table 1, Entry 9).