

Supporting information

**Promoting form I' Crystallization and Melting-recrystallization By
Adding WBG-II into Poly(butene-1)/ isotactic Polypropylene Blends**

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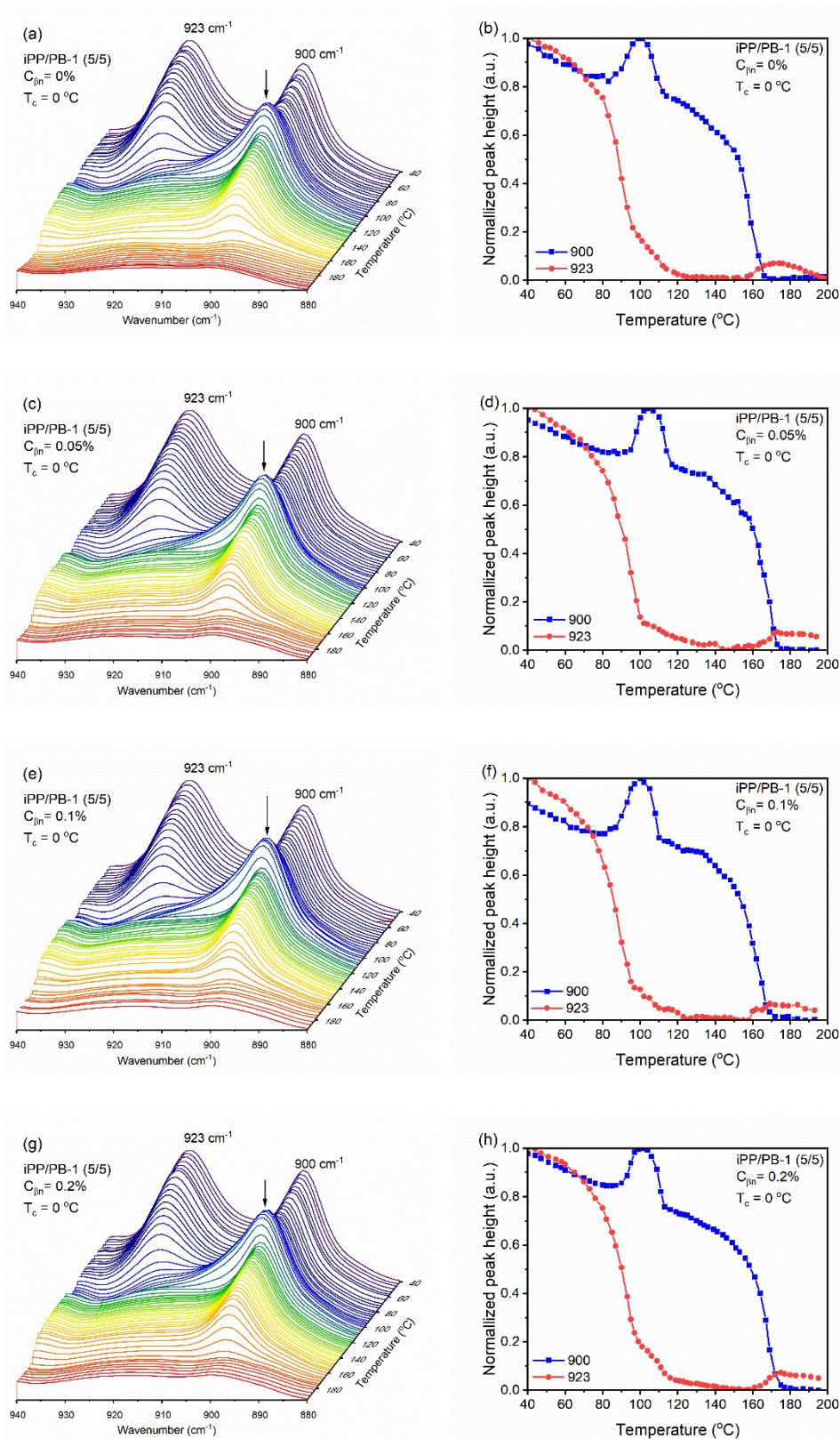


Figure S1. FTIR spectra collected during heating after quenching iPP/PB-1 (5/5) melt without (a), with 0.05 wt% (c), 0.1 wt% (e) and 0.2 wt% WBG-II (g) from 220 °C to 0 °C. (b), (d), (f) and (h) are peak height changes at 900 and 923 cm^{-1} during heating in

(a), (c), (e) and (g), respectively.

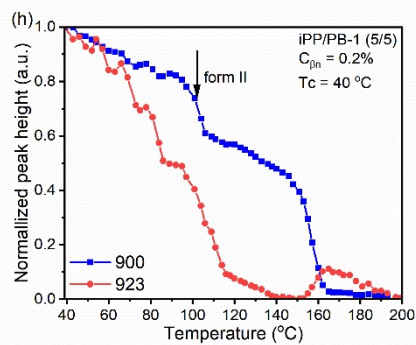
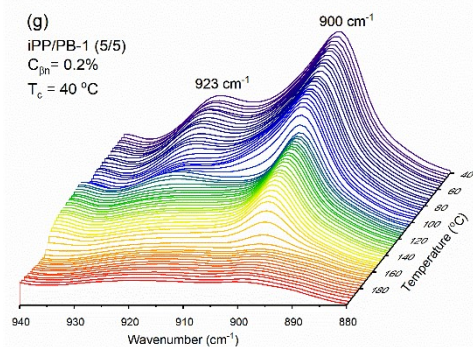
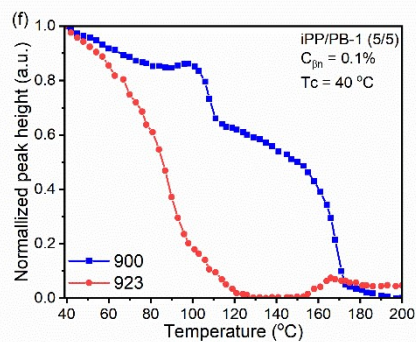
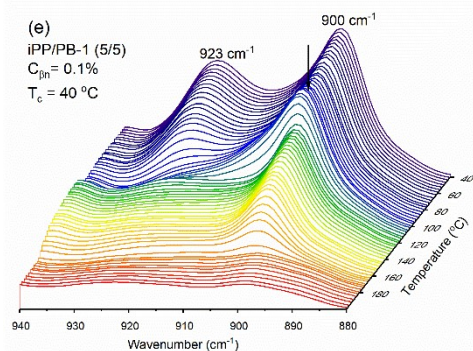
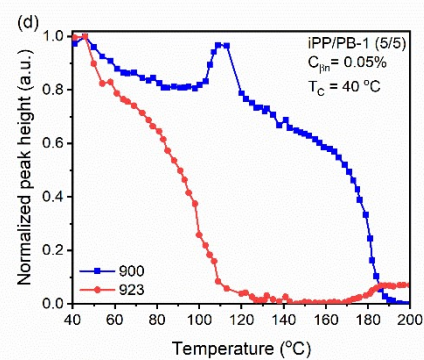
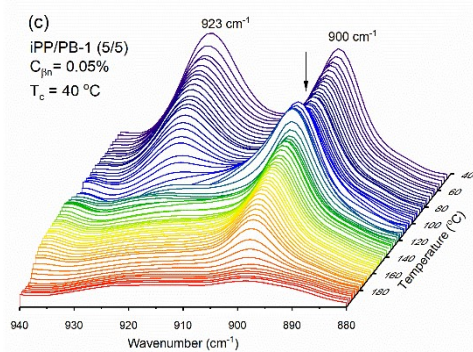
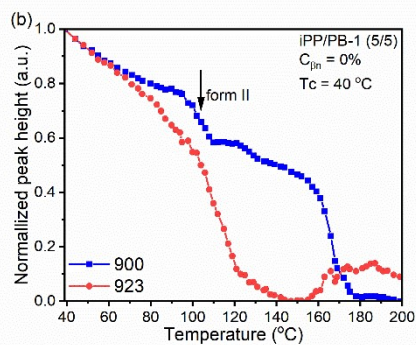
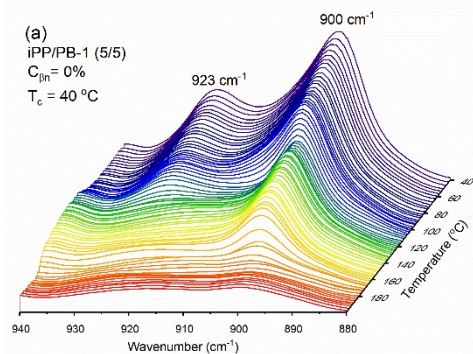


Figure S2. FTIR spectra collected during heating after quenching iPP/PB-1 (5/5) melt without (a), with 0.05 wt% (c), 0.1 wt% (e) and 0.2 wt% WBG-II (g) from 220 °C to 40 °C. (b), (d), (f) and (h) are peak height changes at 900 and 923 cm⁻¹ during heating in (a), (c), (e) and (g), respectively.

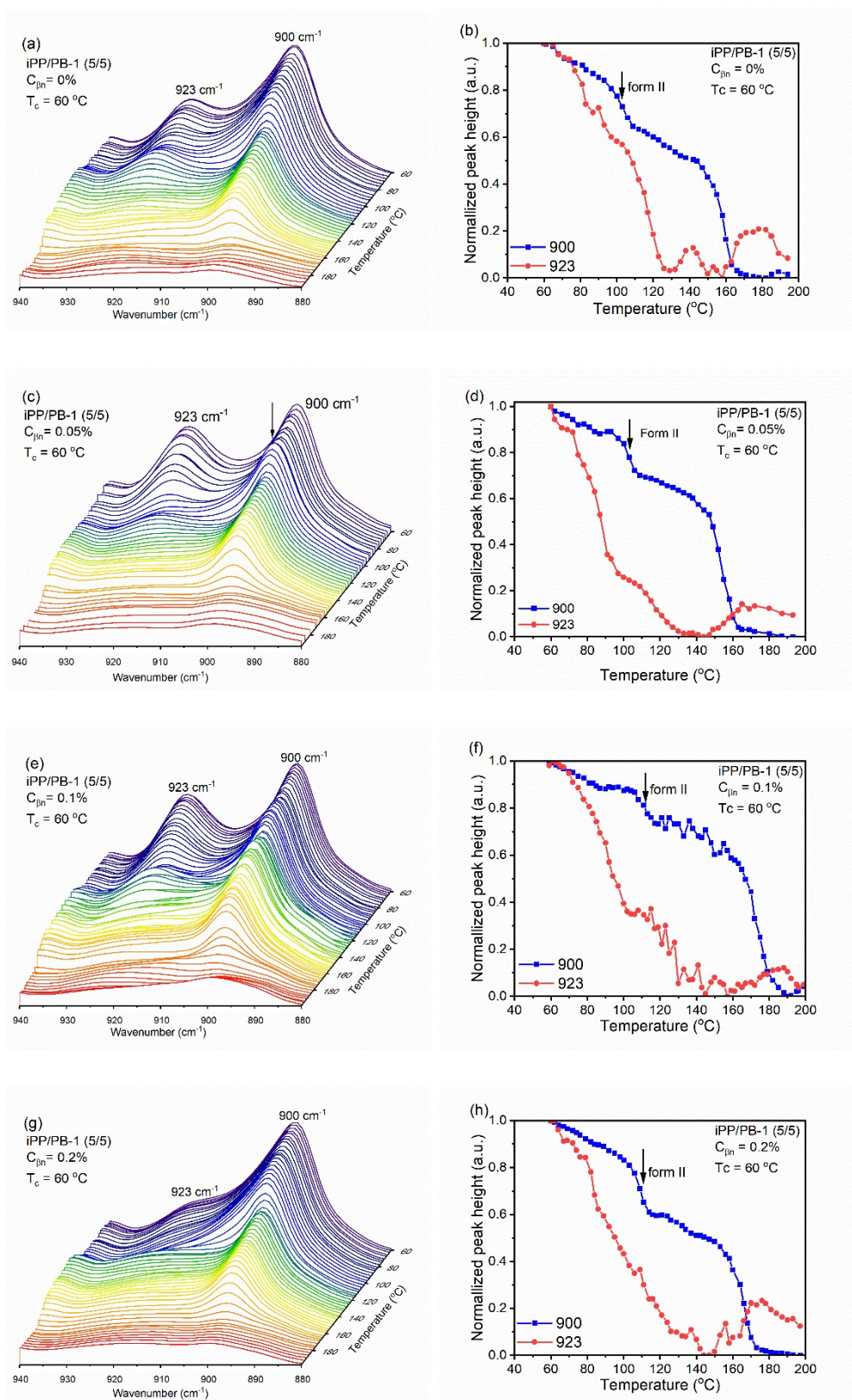


Figure S3. FTIR spectra collected during heating after quenching iPP/PB-1 (5/5) melt with 0 wt% (a), 0.05 wt% (c), 0.1 wt% (e) and 0.2 wt% WBG-II (g) from 220 °C to 60 °C. (b), (d), (f) and (h) are peak height changes at 900 cm⁻¹ and 923 cm⁻¹ during heating in (a), (c), (e) and (g), respectively.

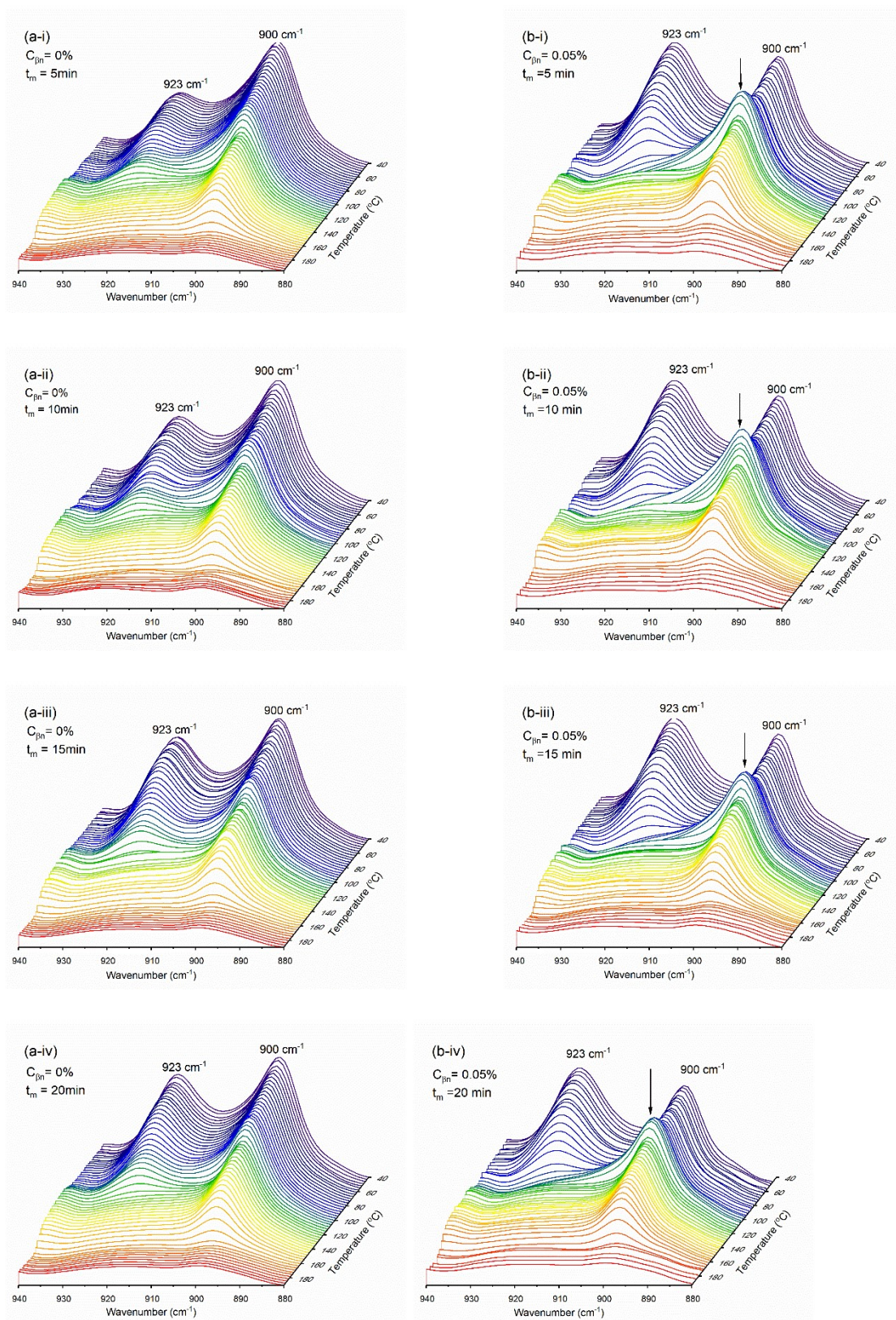


Figure S4. IR spectra collected during heating of iPP/PB-1 (5/5) blends with and without 0.05 wt% WBG-II obtained by quenching after heating at 220 °C for different time.

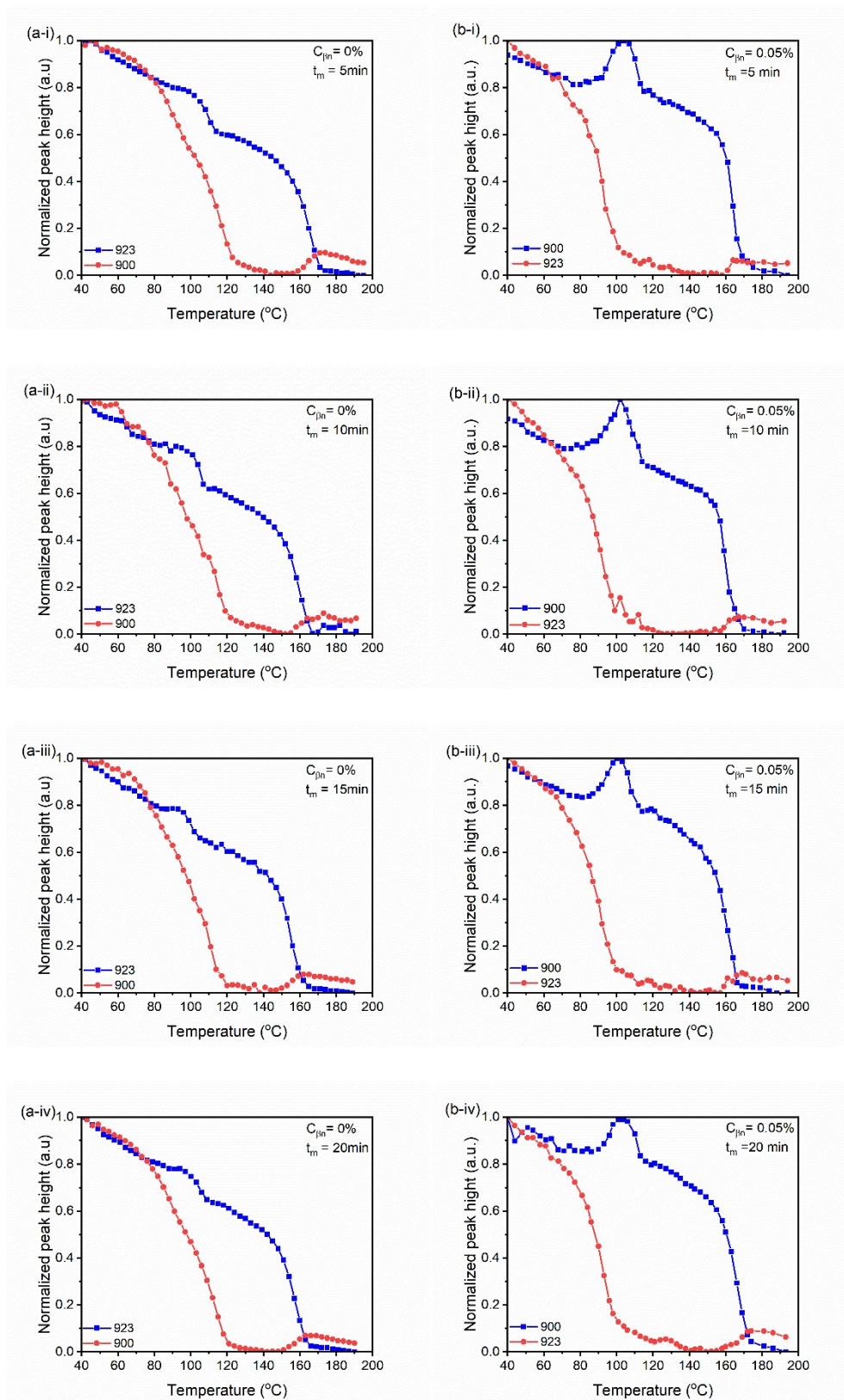
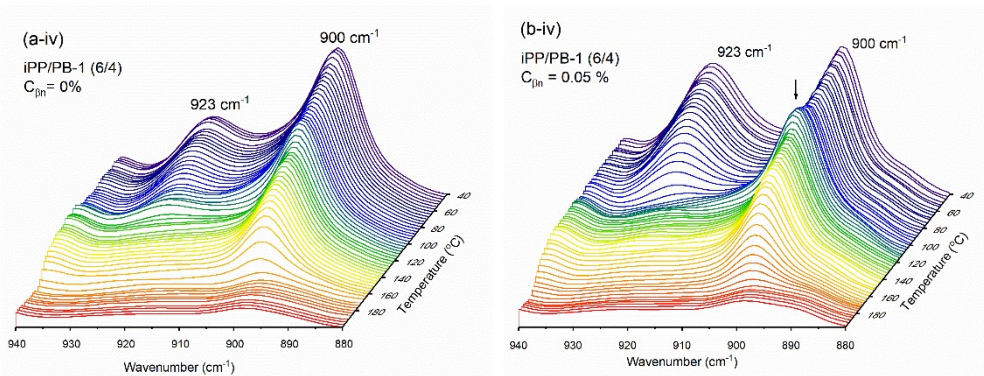
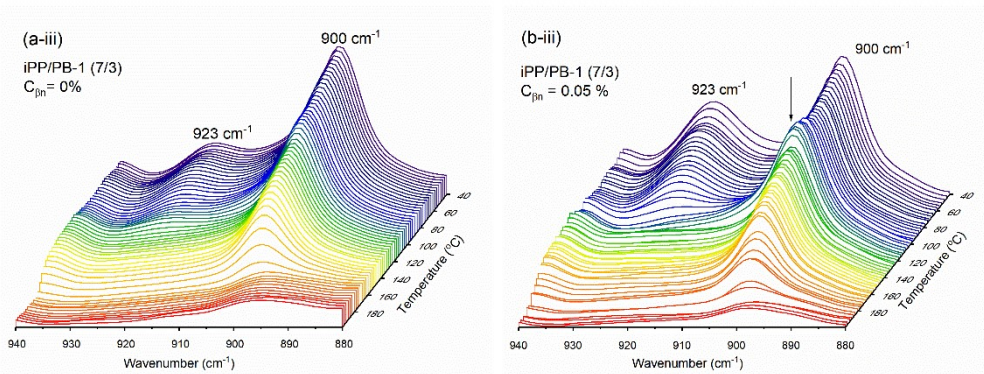
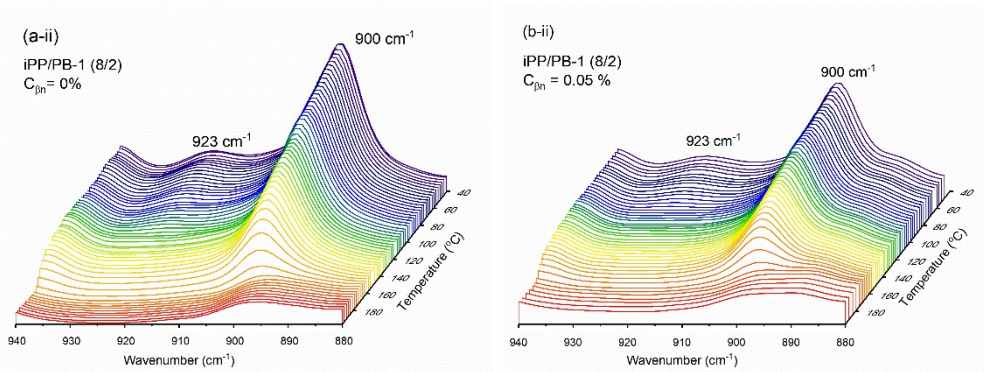
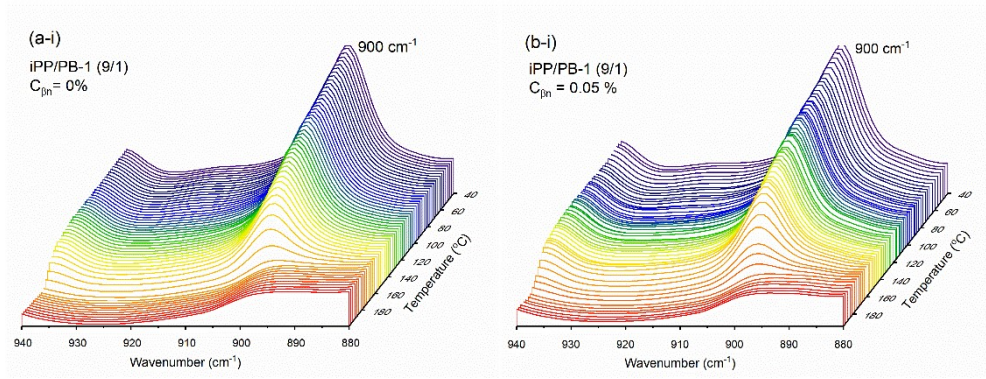


Figure S5. Changes of peak height at 900 and 923 cm^{-1} in Figure S4.



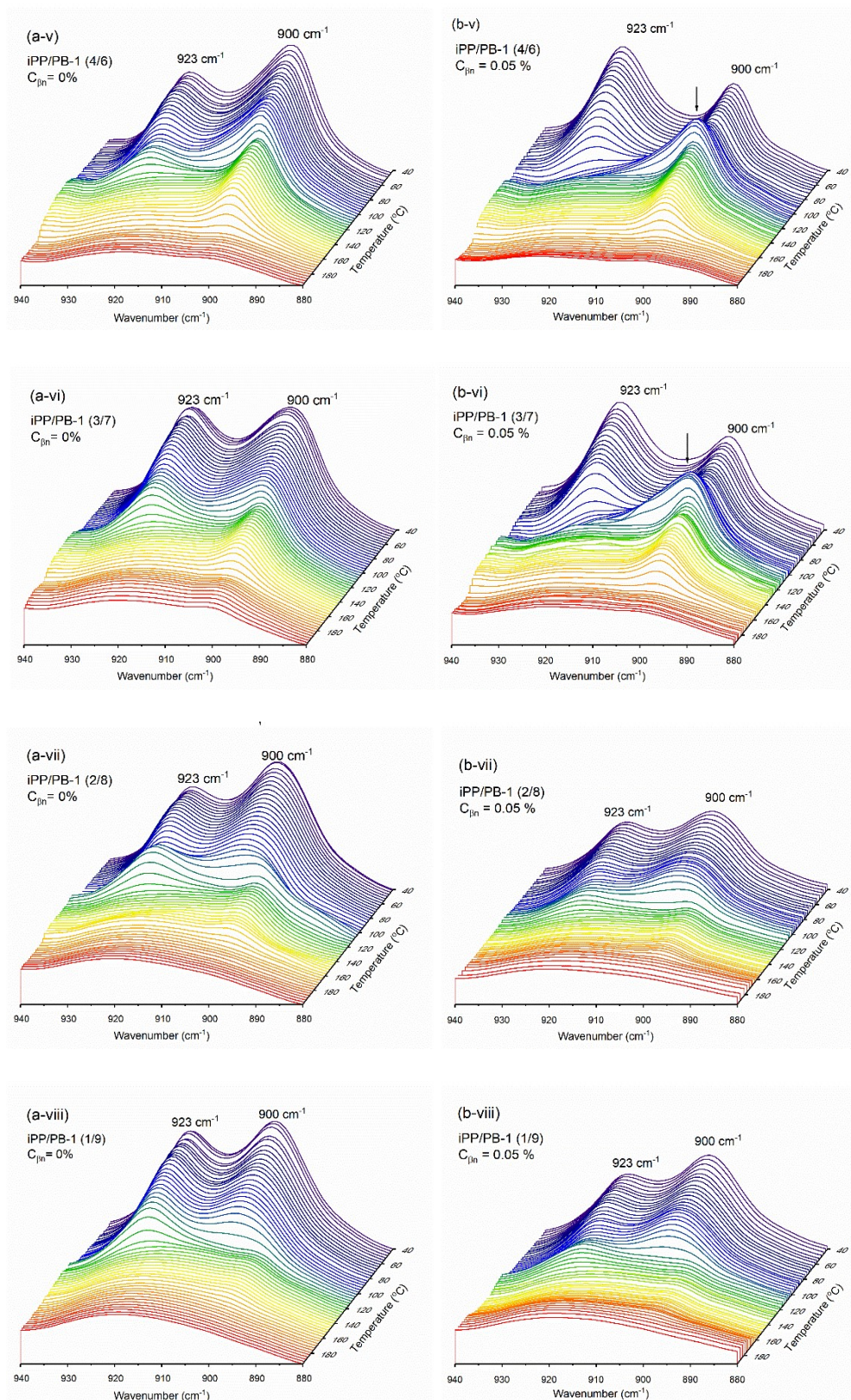
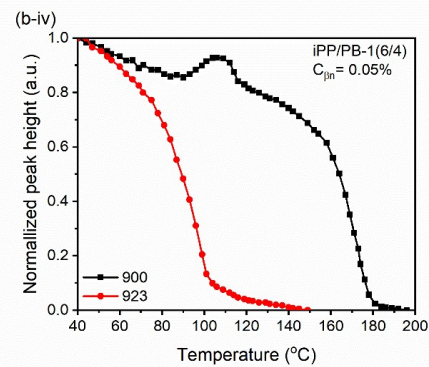
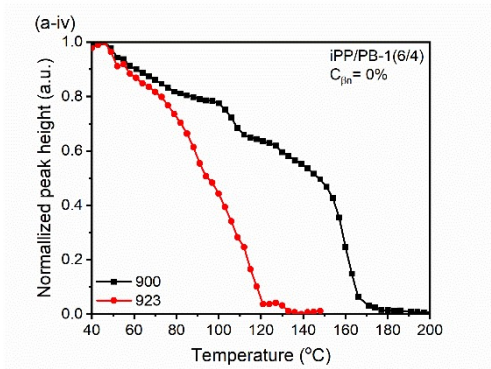
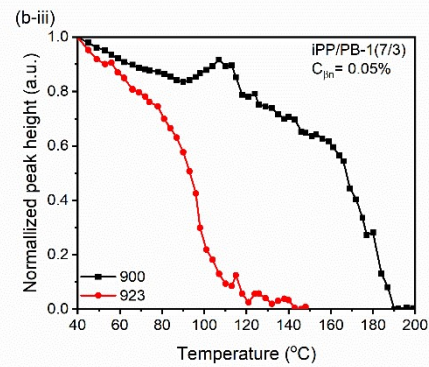
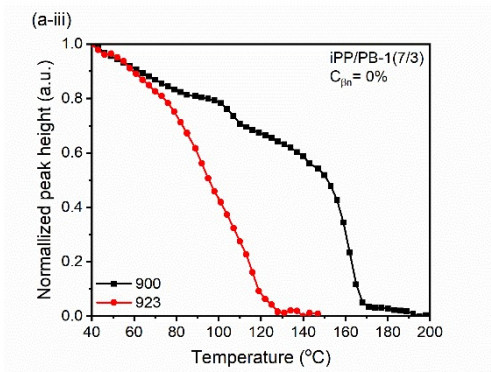
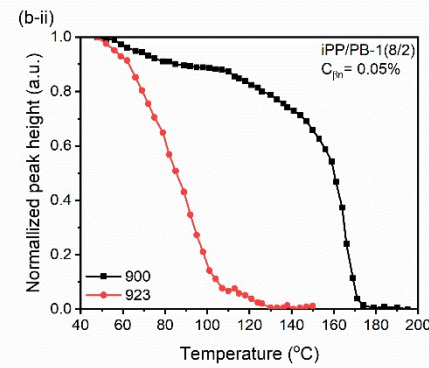
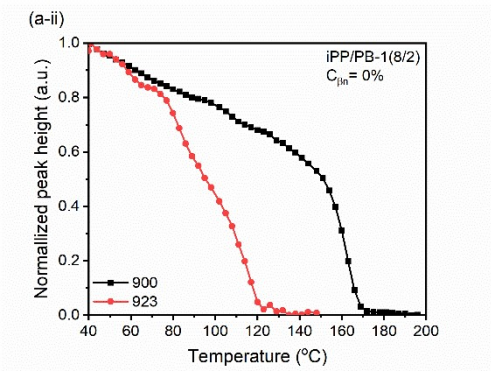
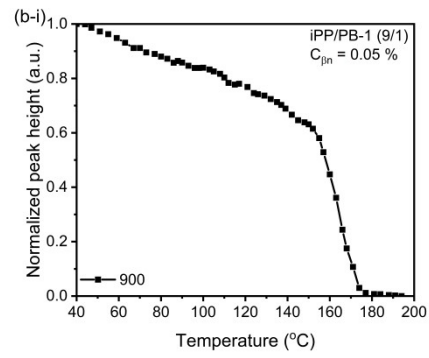
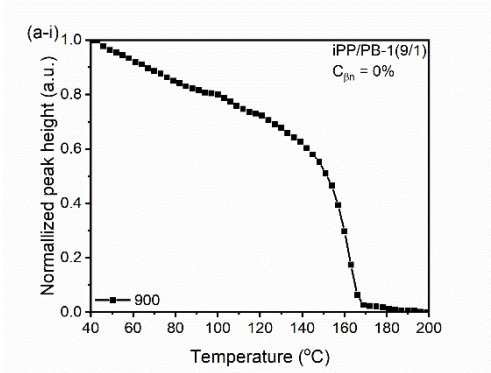


Figure S6. IR spectra collected during heating of different ratios of iPP/PB-1 blends with 0 wt% (a) or 0.05 wt% WBG-II (b) from room temperature to 200 °C. To avoid form II to form I phase transition at room temperature, the blends were heated immediately after quenching to room temperature.



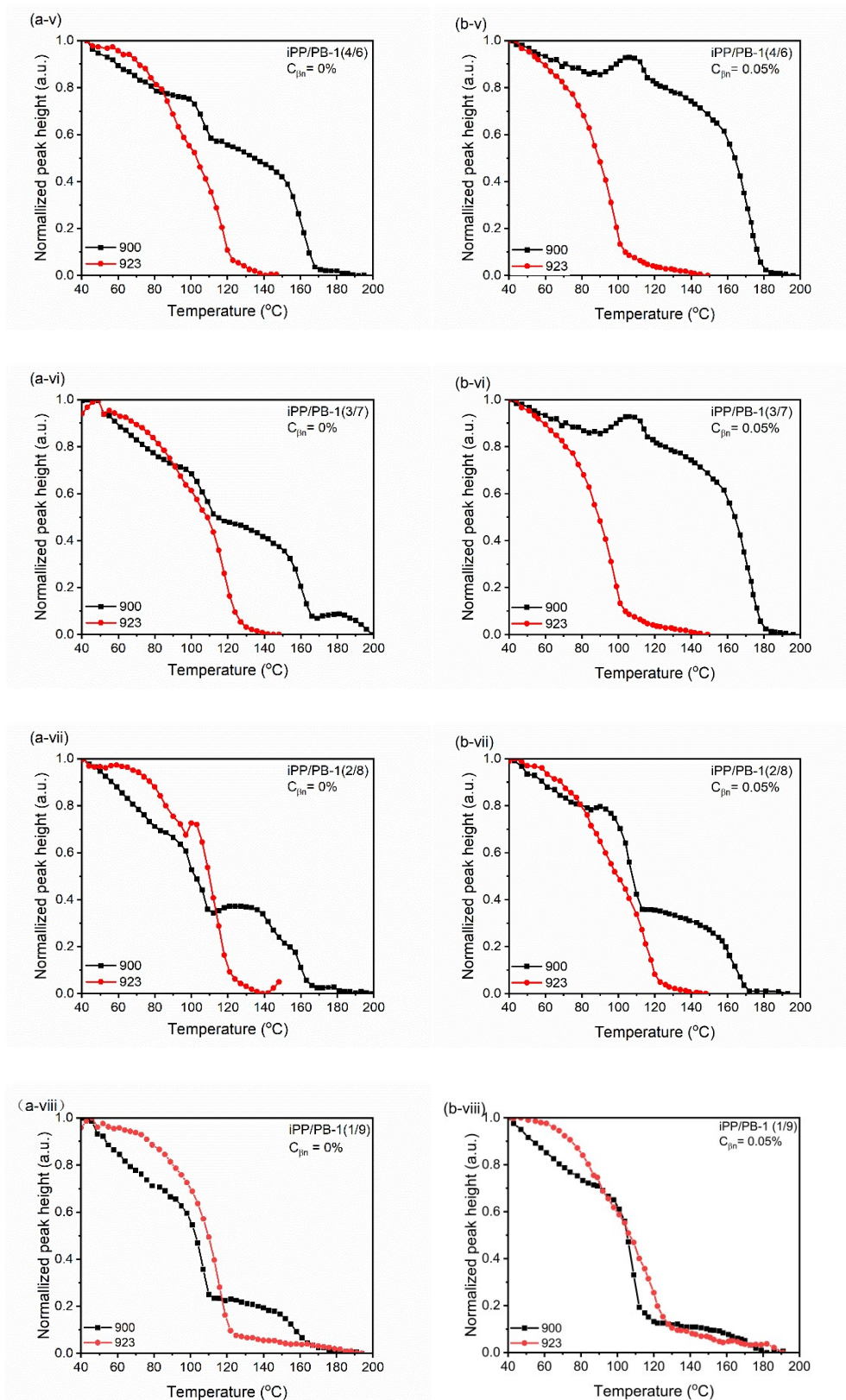


Figure S7. Changes of peak height at 900 and 923 cm^{-1} during heating of different ratio of iPP/PB-1 blends without and with 0.05 wt% WBG-II in Figure S6.