Supplementary Information for

Temperature-dependent compatibilizing effect of graphene oxide as a compatibilizer for immiscible polymer blends

Shibing Ye, Yewen Cao, Jiachun Feng* and Peiyi Wu

1. Digital images for GO and CRGO suspensions in THF.

Fig. S1. Digital images for GO and CRGO suspensions in THF.

2. SEM images of PMMA/PS blends with different concentrations of GO at 190 °C.

Fig. S2. SEM images of PMMA/PS blends with different concentrations of GO at 190 °C: (a) 0.5 wt % GO, (b) 1.0 wt % GO, and (c) 2.0 wt % GO.
3. DSC and first derivative curves for blends at 220 °C and 250 °C.

![Fig. S3. DSC and first derivative curves for uncompatibilized and GO-compatibilized PMMA/PS blends at (a, b) 220 °C and (c, d) 250 °C.](image)

4. TGA and DTG curves for GO.

![Fig. S4. TGA and DTG curves for GO treated in N₂.](image)
5. XRD curves for GO and CRGO.

![XRD curves for GO and CRGO.](image)

**Fig. S5.** XRD curves for GO and CRGO.

6. TGA curves for GO and CRGO.

![TGA curves for GO and CRGO.](image)

**Fig. S6.** TGA curves for GO and CRGO.
7. XPS C 1s spectra for CRGO.

![XPS C 1s spectra for CRGO](image)

**Fig. S7.** XPS C 1s spectra for CRGO.

8. SEM images of the mechanically fractured surfaces of blends.

![SEM images](image)

**Fig. S8** SEM images of the mechanically fracture surfaces of (a) PMMA/PS-190, (b) PMMA/PS/GO-190, (c) PMMA/PS-220, (d) PMMA/PS/GO-220, (e) PMMA/PS-250, and (f) PMMA/PS/GO-250.
9. TGA curves for PMMA/PS and PMMA/PS/GO blends.

**Fig. S9** TGA thermograms of PMMA/PS blends and PMMA/PS/GO blends with a heating rate of 10 °C/min.