

Supplementary Information for

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

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

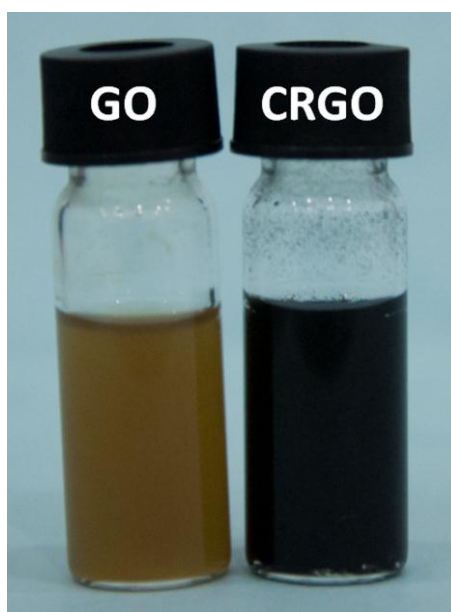


Fig. S1. Digital images for GO and CRGO suspensions in THF.

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

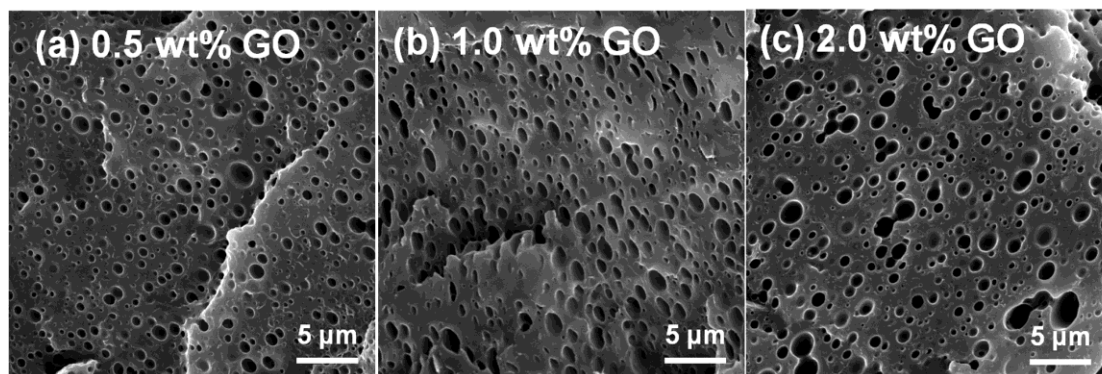


Fig. S2. SEM images of PMMA/PS blends with different concentrations of GO at 190 °C: (a) 0.5 wt % GO, (b) 1.0 wt % GO, and (c) 2.0 wt % GO.

3. DSC and first derivative curves for blends at 220 °C and 250 °C.

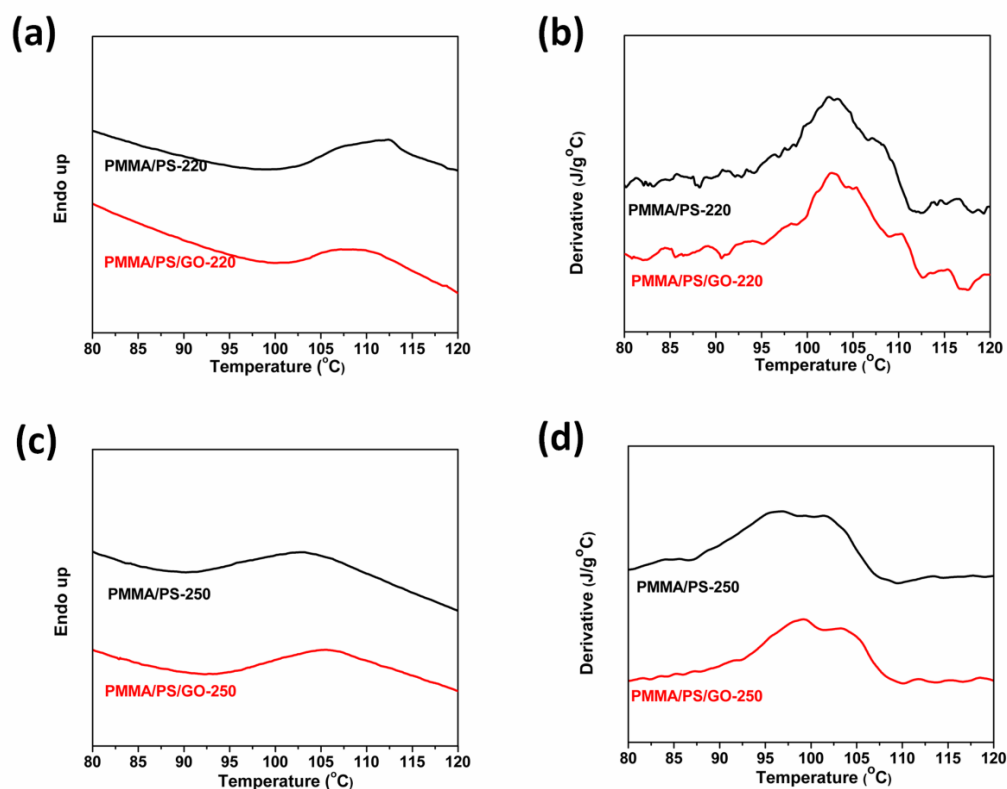


Fig. S3. DSC and first derivative curves for uncompatibilized and GO-compatible PMMA/PS blends at (a, b) 220 °C and (c, d) 250 °C.

4. TGA and DTG curves for GO.

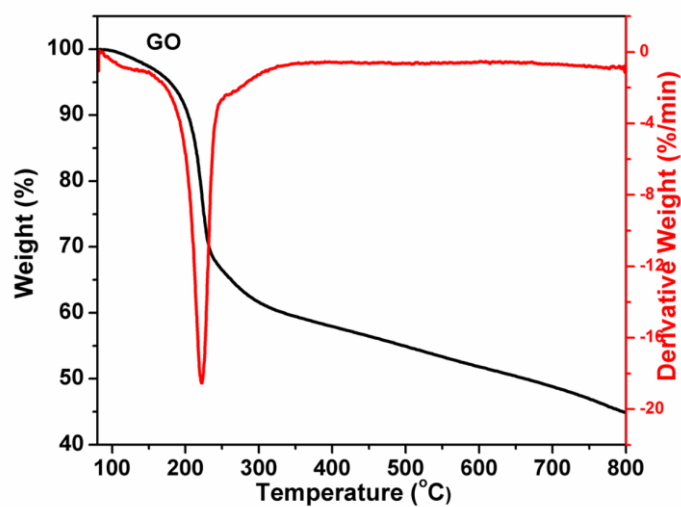


Fig. S4. TGA and DTG curves for GO treated in N₂.

5. XRD curves for GO and CRGO.

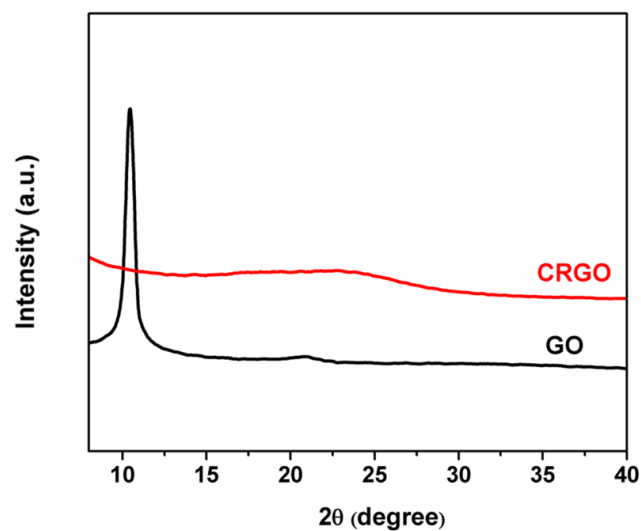


Fig. S5. XRD curves for GO and CRGO.

6. TGA curves for GO and CRGO.

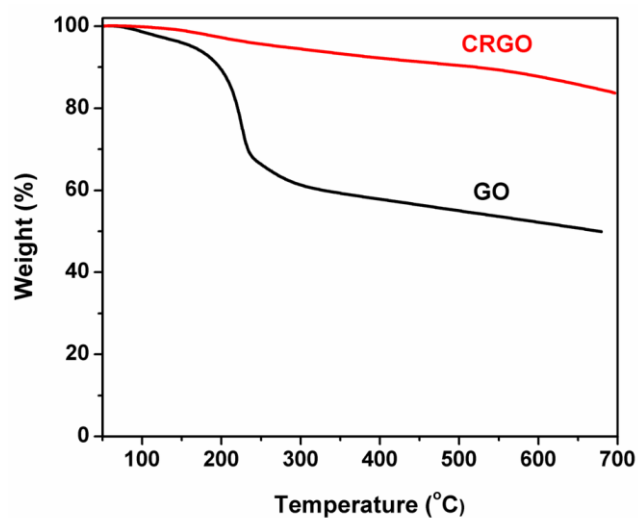


Fig. S6. TGA curves for GO and CRGO.

7. XPS C 1s spectra for CRGO.

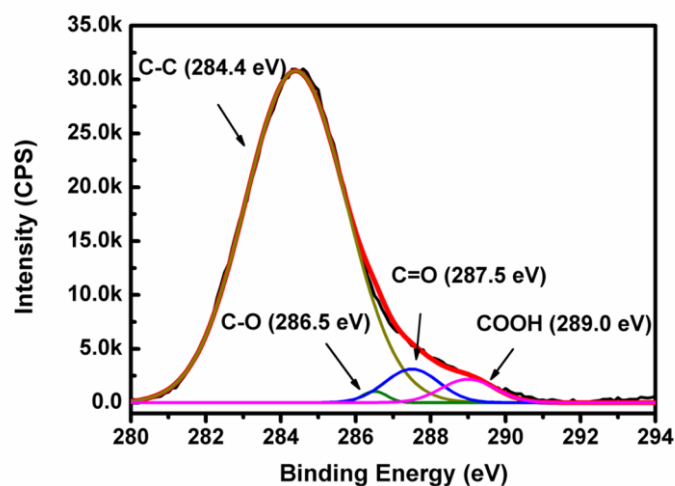


Fig. S7. XPS C 1s spectra for CRGO.

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

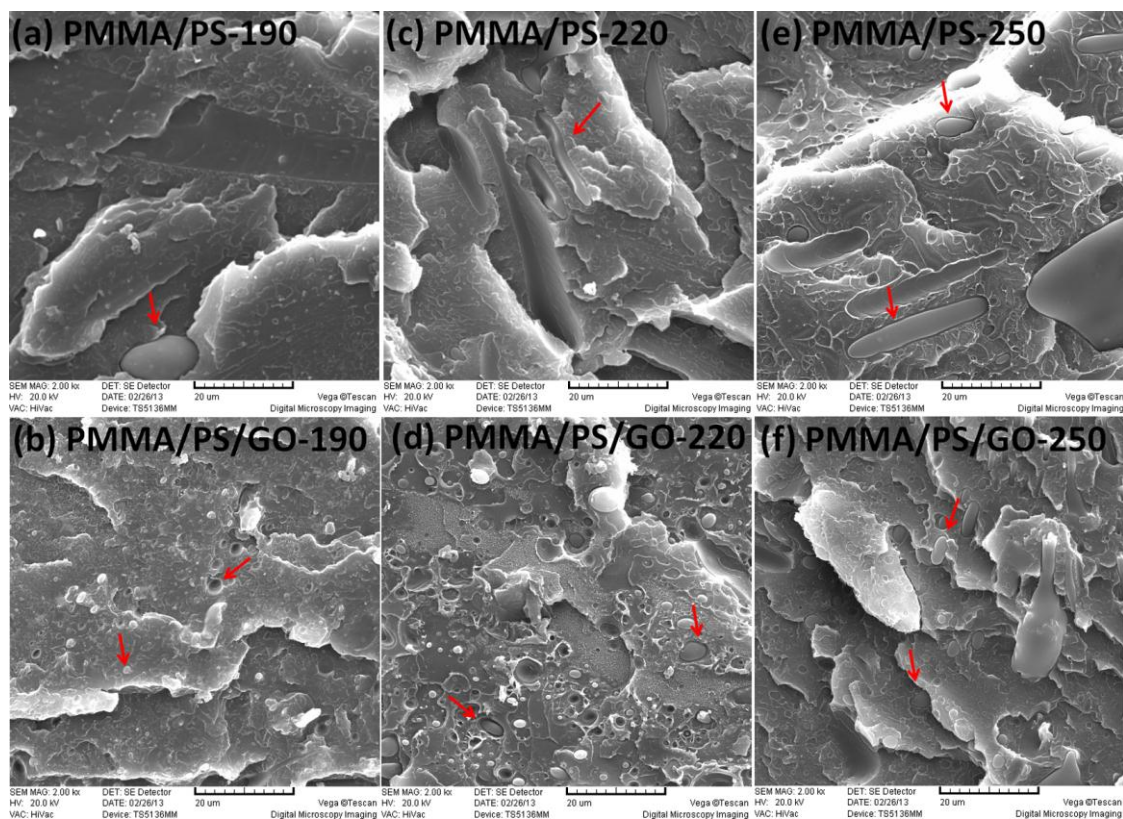


Fig. S8 SEM images of the mechanically fracture surfaces of (a) PMMA/PS-190, (b) PMMA/PS/GO-190, (c) PMMA/PS-220, (d) PMMA/PS/GO-220, (e) PMMA/PS-250, and (f) PMMA/PS/GO-250.

9. TGA curves for PMMA/PS and PMMA/PS/GO blends.

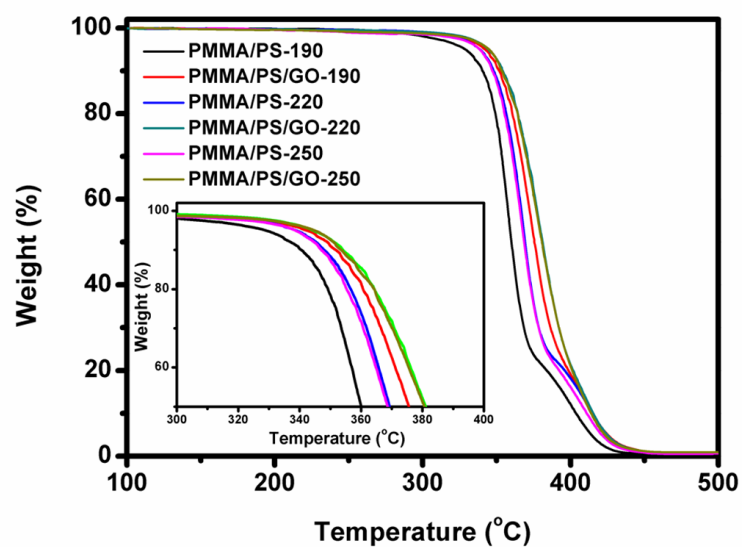


Fig. S9 TGA thermograms of PMMA/PS blends and PMMA/PS/GO blends with a heating rate of 10 °C/min.