



SUPPLEMENTARY MATERIAL TO
**Polymer–graphene composites by the photocuring of a system
containing benzophenone macromer**

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¹H-NMR DATA FOR BP–DMA, PPO–DMA AND PEG–DMA

BP–DMA. ¹H-NMR (400 MHz, CDCl₃, δ / ppm): 8.5 (1H, *s*, NH); 8.2 & 7.8 (6H, *m*, Ar-H); 6.1 & 5.7 (4H, *s*, CH₂=C in the *trans/cis* position relative to the CH₃ unit from HEMA); 4.33 (8H, *m*, CH₂–OCO); 4.1–4.0 (4H, *m*, NH–COO–CH₂); 3.42 (6H, *m*, CH₂–CH(CH₃)–O); 3.6 (12H, *m*, CH₂–CH(CH₃)–O); 3.46–3.40 (8H, *m*, O–CH₂–(CH₂)₂–CH₂–O); 1.95 (6H, *s*, CH₃ from HEMA); 1.62 (54H, *m*, O–CH₂–(CH₂)₂–CH₂–O); 0.95–0.88 (24H, *m*, aliphatic protons from isocyanate residue).

PPO–DMA. ¹H-NMR (400 MHz, CDCl₃, δ / ppm): 8.6 (1H, *s*, NH); 6.01 & 5.6 (4H, *s*, CH₂=C in the *trans/cis* position relative to the CH₃ unit from the methacrylate structure); 4.3 (6H, *m*, CH₂–OCO); 3.2 (4H, *m*, CH₂–NH–CO–); 1.9 (6H, *s*, CH₃ from methacrylate).

PEG–DMA. ¹H-NMR (DMSO-*d*₆, δ / ppm): 7.96, 7.22–7.07 (4H, *m*, NH); 6.07 (2H, *d*, *J* = 1.4 Hz, CH₂=C in the *trans* position with respect to the CH₃ unit from HEMA); 5.69 (2H, *s*, CH₂=C in the *cis* position with respect to the CH₃ unit from HEMA); 4.26–4.04 (8H, *m*, CH₂–NH and CH₂–O–CO); 3.51 (26.45H, *m*, CH₂–CH₂ from PEO); 1.88 (6H, *s*, CH₃ from HEMA); 1.45–0.8 (15H, *m*, isophorone unit).

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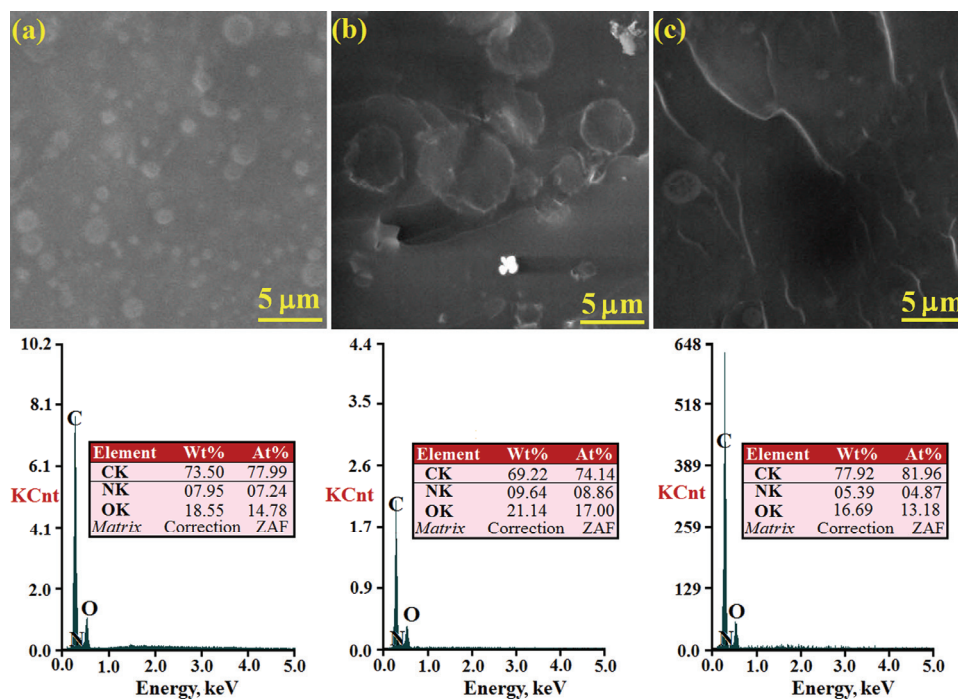


Fig. S-1. ESEM and EDAX analysis for the composites derived from the F2 formulation (a), F2+0.5 % GO (b) and F2+0.5 % RGO (c).