

Electronic Supporting Information (ESI) for New Journal of Chemistry

**Study of benzophenone grafting on reduced graphene oxide by
unconventional techniques**

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Supporting Information

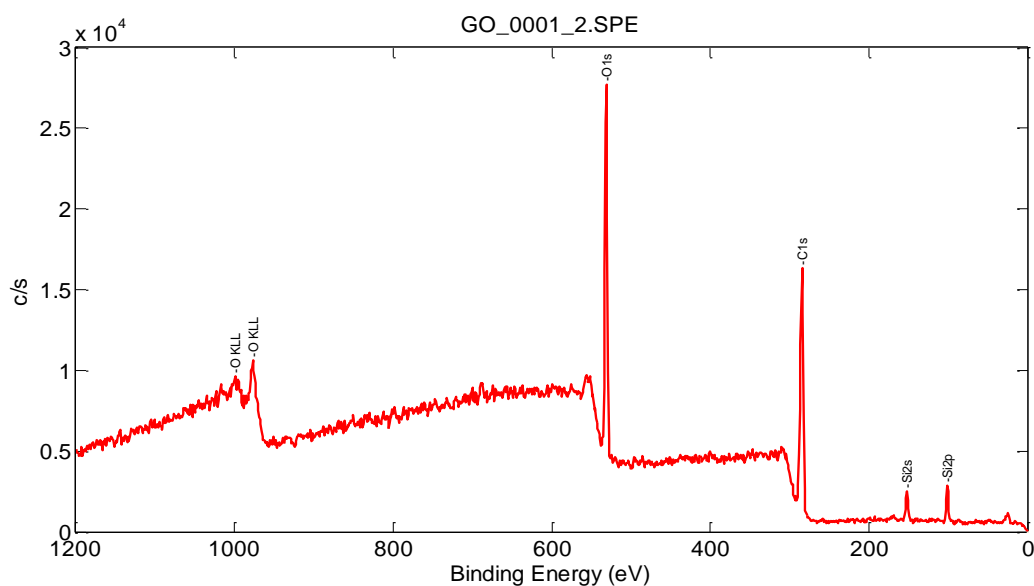


Figure S1 XPS survey spectra of pristine graphene oxide.

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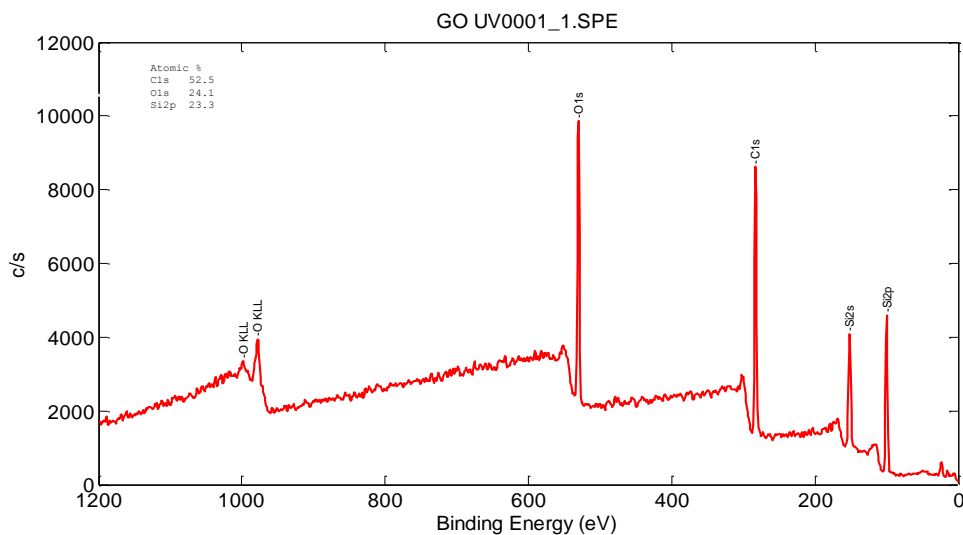


Figure S2 XPS survey spectra of pristine graphene oxide after 5 minutes of UV irradiation.

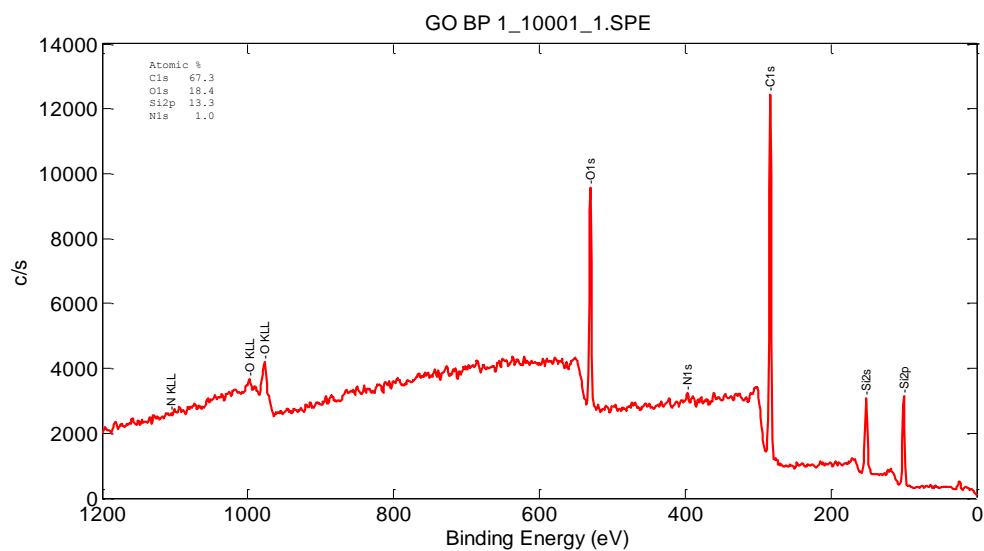


Figure S3 XPS survey spectra of pristine graphene oxide after 5 minutes of UV irradiation in the presence of benzophenone (1:1 wt/wt).

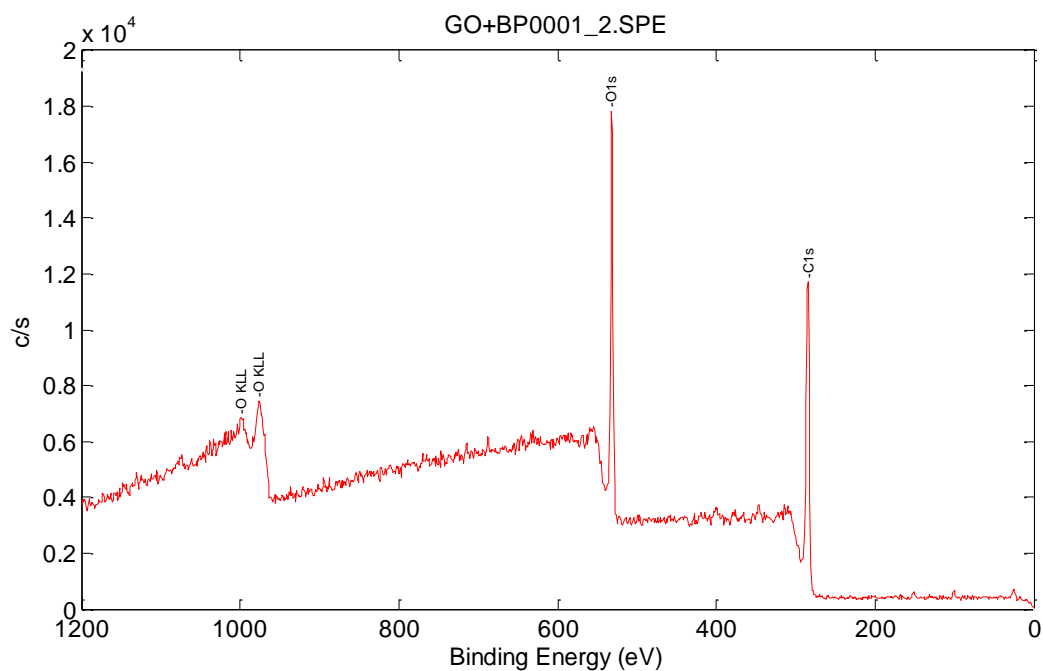


Figure S4 XPS survey spectra of pristine graphene oxide after 5 minutes of UV irradiation in the presence of benzophenone (1:3 wt/wt).

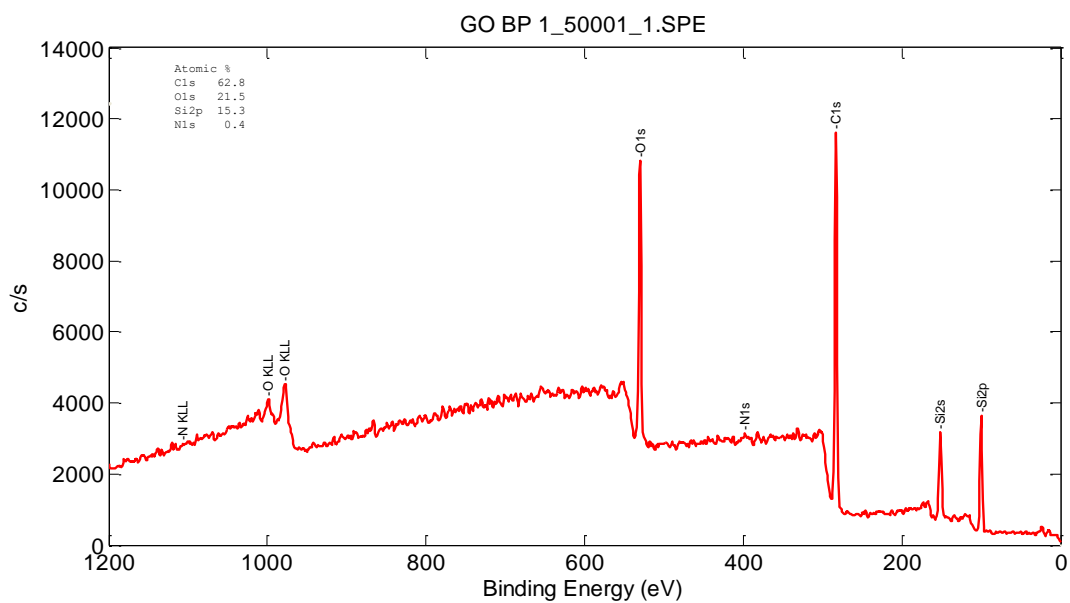


Figure S5 XPS survey spectra of pristine graphene oxide after 5 minutes of UV irradiation in the presence of benzophenone (1:5 wt/wt).

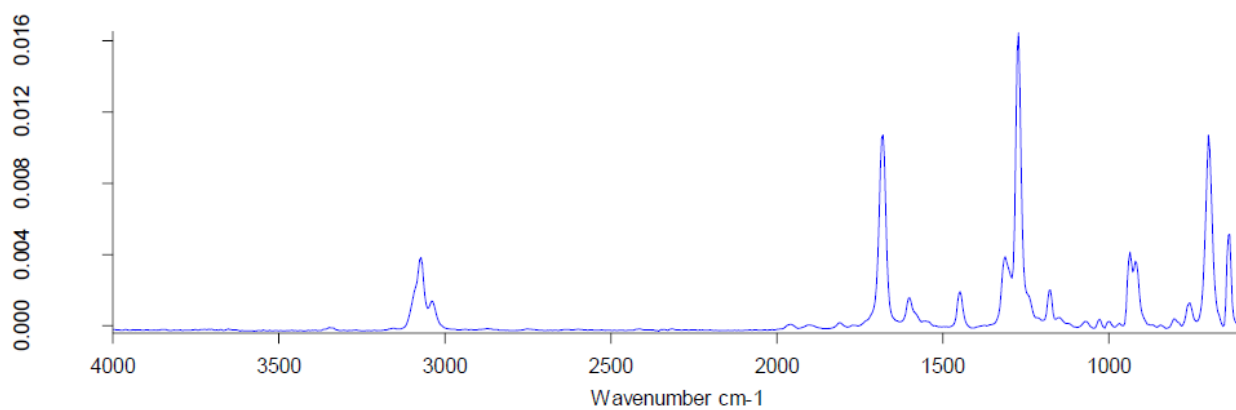


Figure S6 IR spectrum of Benzophenone at the degradation temperature

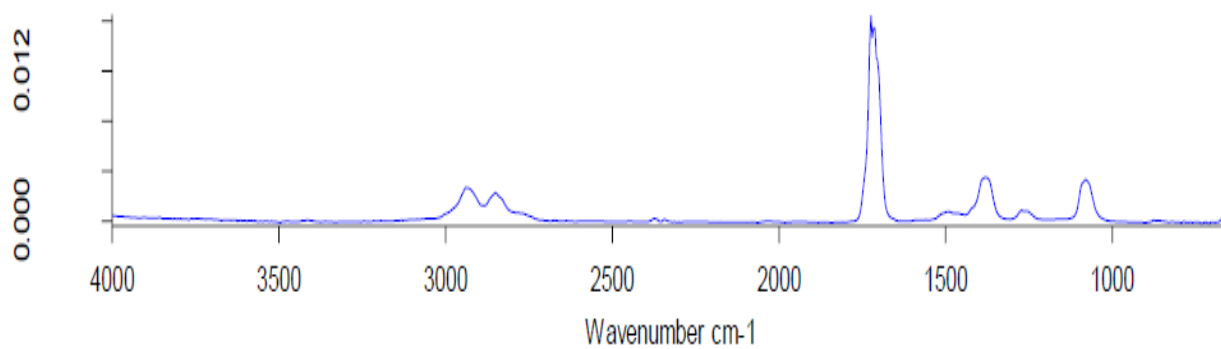


Figure S7 IR spectrum of DMF

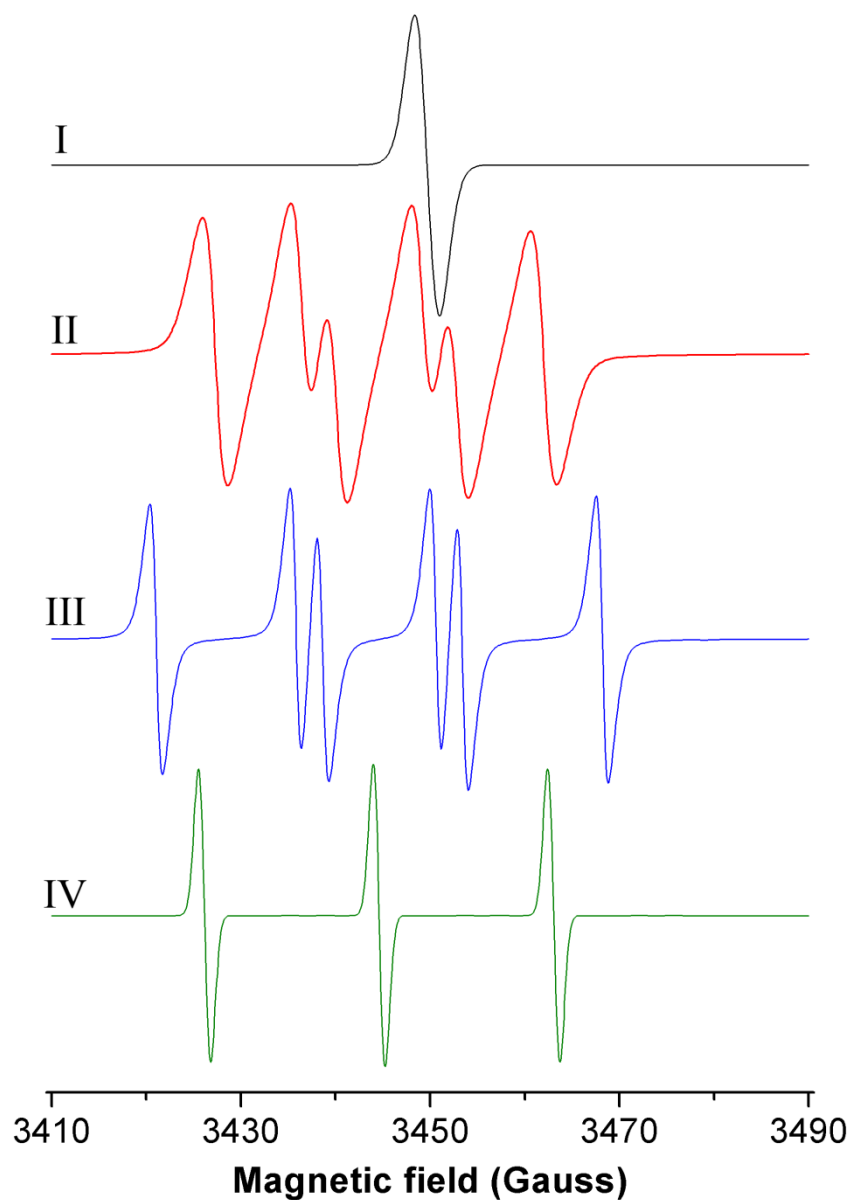


Figure S8. ESR simulation of the different radical species measured. I, a single isotropic signal, observed also in absence of DMPO; II, the DMPO-DMF species; III, the DMPO-BP radical adduct; IV, a three-lines pattern of a nitroxide-like radical, probably due to a degradation of DMPO as a results of irradiation. For a better comprehension, the relative abundance of each species was not taken in account into the representation.

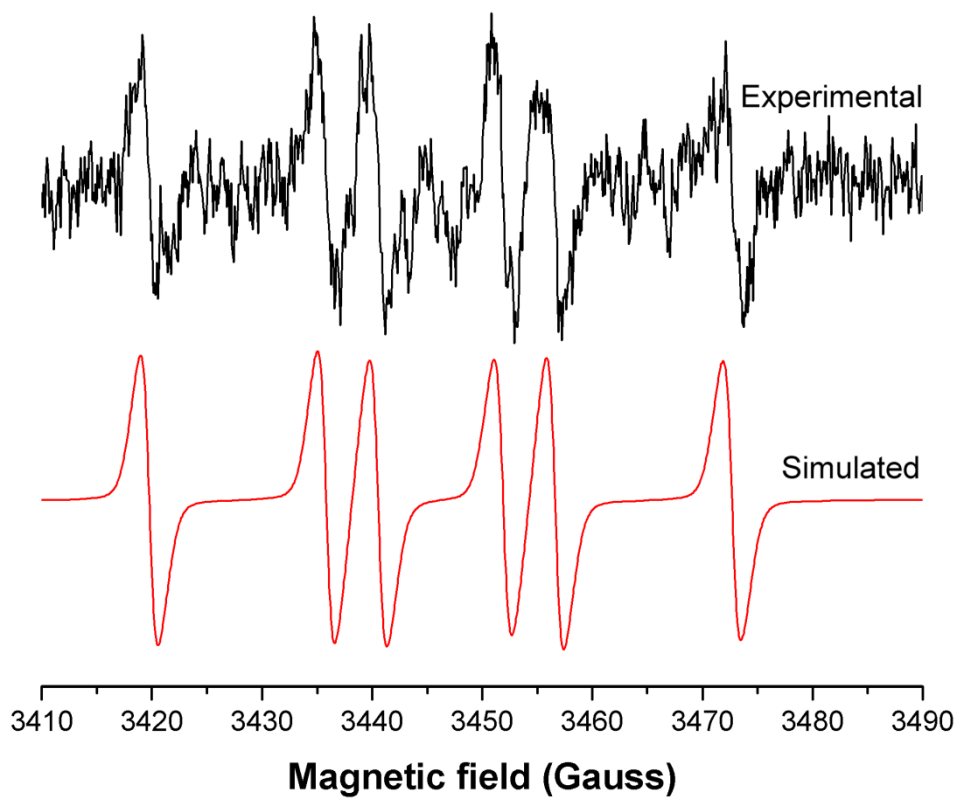


Figure S9. ESR spectra of DMPO-BP in water. The experimental spectrum was obtained from the GO/UV spectrum shown in Figure 5 by subtraction of the simulated spectra of the species I, II and IV.