Electronic Supplementary Material (ESI) for RSC Advances.

Electronic Supplementary Information

Functionalized graphene/C_{60} nanohybrid for targeting photothermally enhanced photodynamic therapy

Zhen Hu[a, b*], Jun Li[a], Yudong Huang[a*], Lei Chen[a], Zhenhui Li[a]

[a] *School of Chemical Engineering and Technology, State Key Laboratory of Urban Water Resource and Environment, Harbin Institute of Technology, Harbin 150001, China*

[b] *Department of Chemistry, Chemistry Research Laboratory, University of Oxford, Oxford. OX1 3TA, UK*

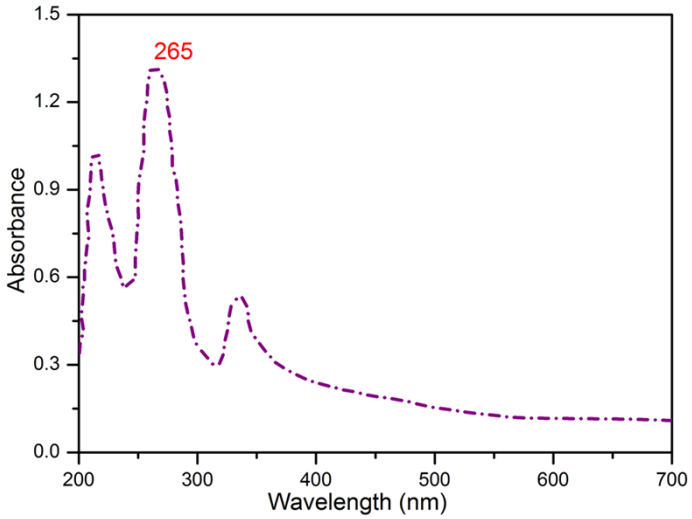

Fig. S1 The UV-vis spectra of the C_{60} in n-hexane.

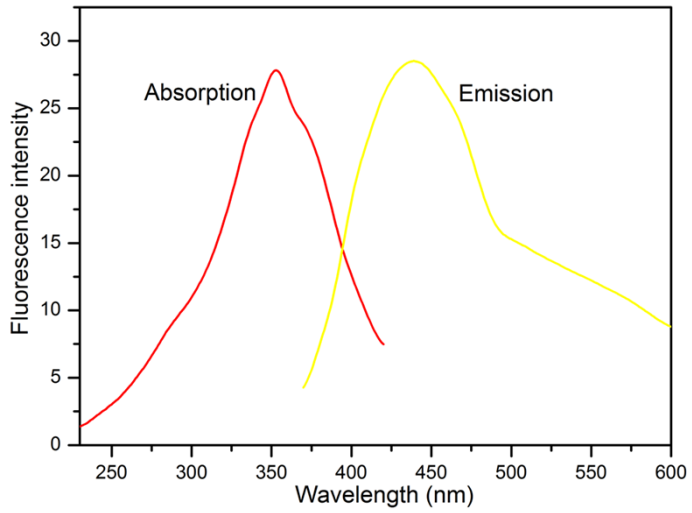

Fig. S2 The fluorescence absorption and emission spectra of FA-GO-PEG/C_{60}.

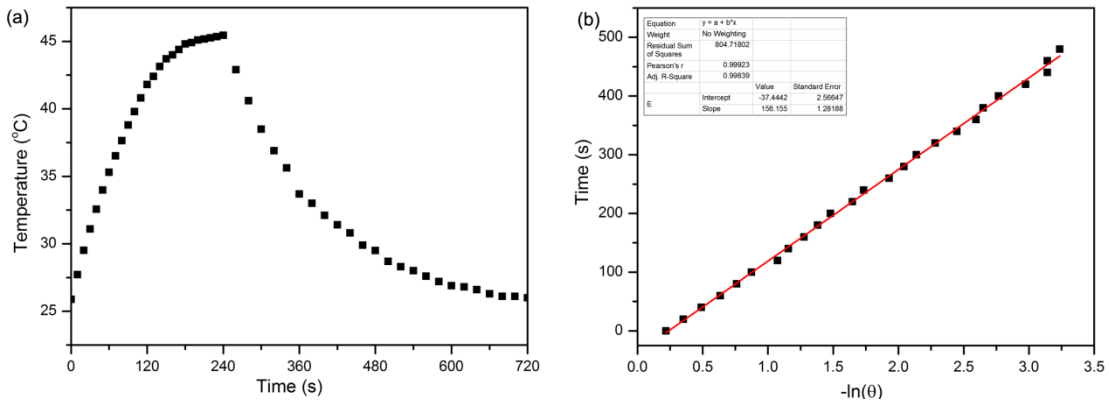

Fig. S3 (a) Photothermal effect of the aqueous dispersion of the FA-GO-PEG/C_{60} (10 μg/mL) irradiated with 808 laser (a power density of 2 W/cm^2), in which the irradiation lasted for 240 s, and then the laser was shut off. (b) Linear time data versus - lnθ obtained from the cooling period of Fig. S3a. In order to get the hS, a dimensionless driving force temperature, θ is introduced using the maximum system temperature, $\theta = (T - T_{surr}) / (T_{max} - T_{surr})$. Time constant for heat transfer from the system is determined to be τ_s = 156 s.

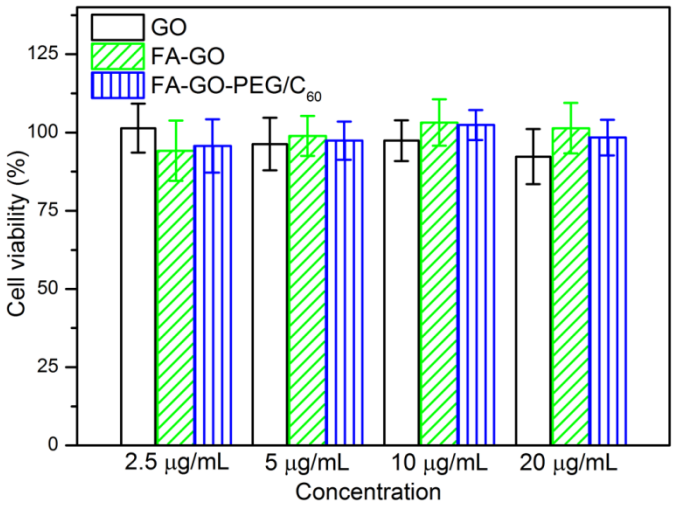

Fig. S4 Cytotoxicity caused by GO, FA-GO and FA-GO-PEG/C_{60} in dark. Cell viability was measured by the conventional MTT reduction assay. Data are presented as mean ± S.D. (n=3).