

## Electronic Supplementary Information

### Multifunctional human serum albumin modified reduced graphene oxide for targeted photothermal therapy of hepatocellular carcinoma

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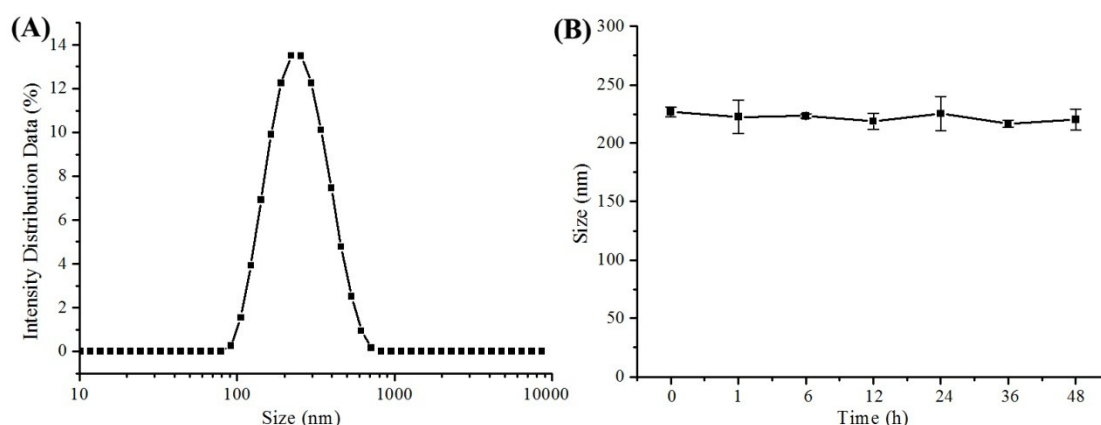
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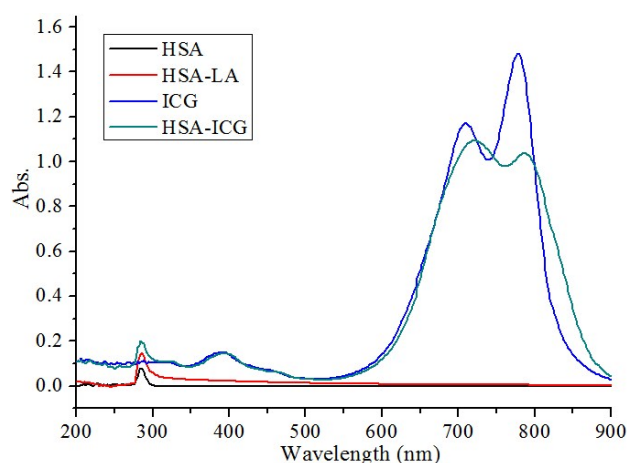
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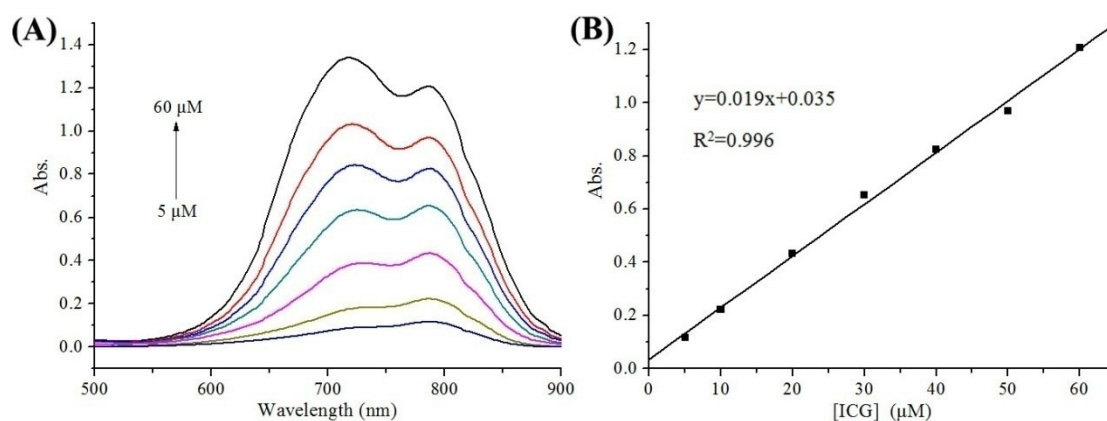
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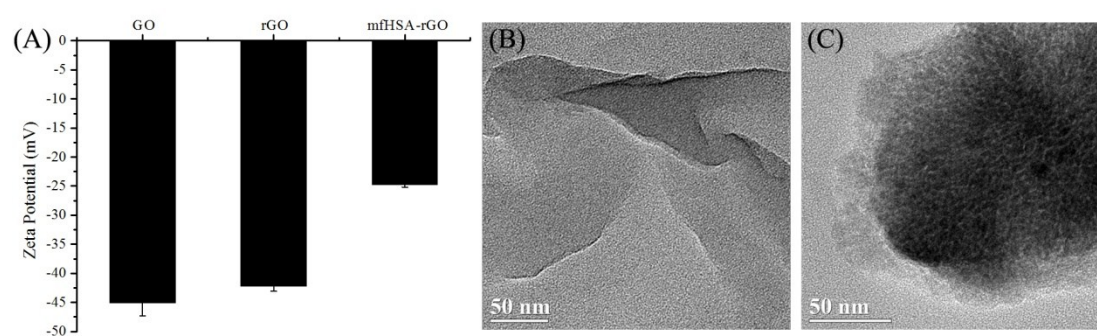
**Fig. S1** Dynamic light scattering (DLS) spectra of GO-HSA (A) and their corresponding size distribution over time (B).



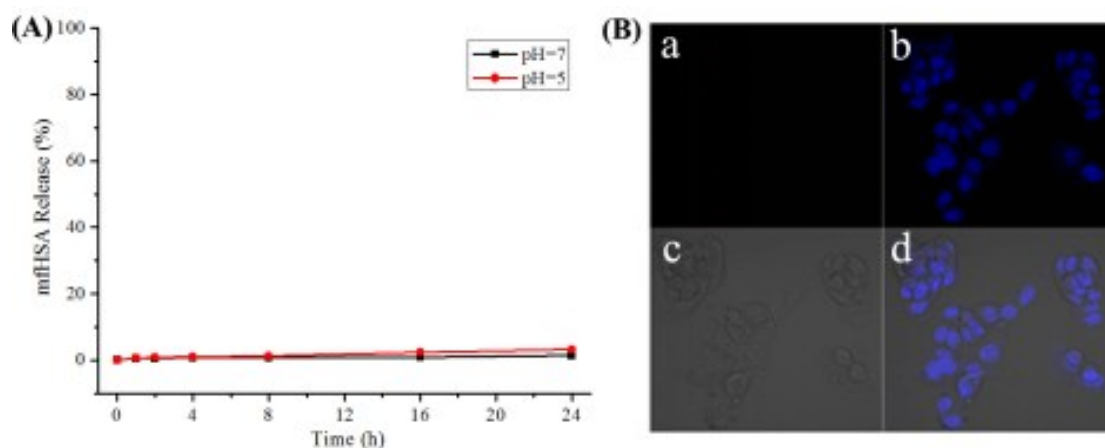
**Fig. S2** The UV-vis-NIR absorption spectra of free ICG, HSA, HSA-ICG and HSA-LA.



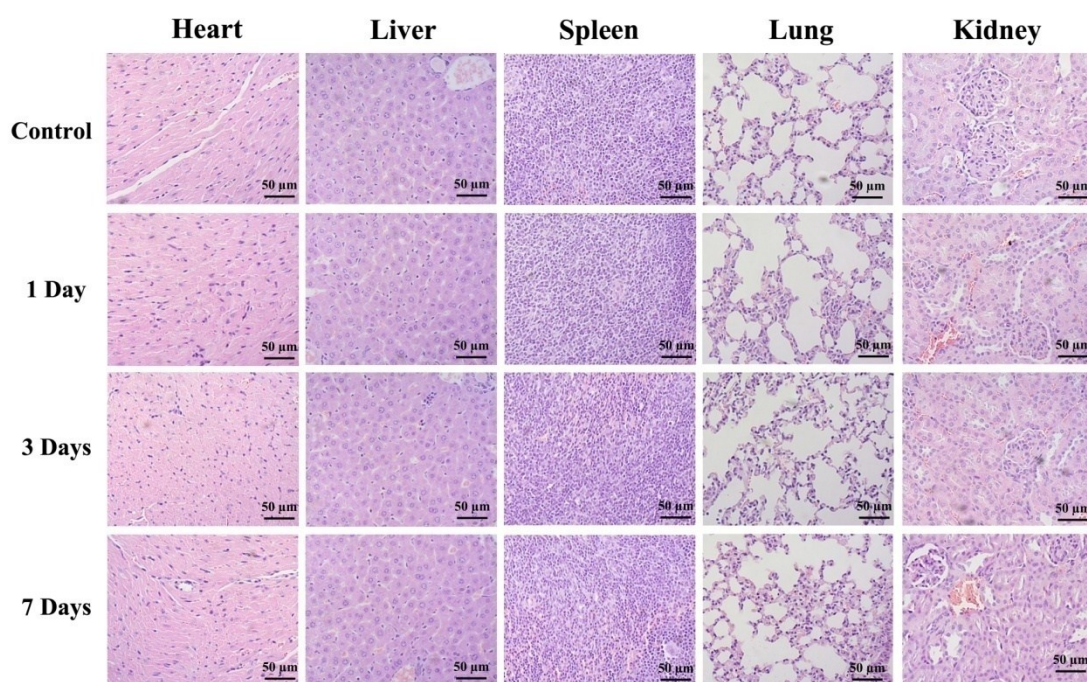
**Fig. S3** (A) The Vis-NIR absorption spectra of different concentrations of ICG in HSA solution; (B) the calibration curve for ICG quantitation.



**Fig. S4** (A) Surface zeta potential of GO, rGO and mfHSA-rGO; (B) TEM image of GO; (C) TEM image of mfHSA-rGO.



**Fig. S5** (A) The release behaviour of the mfHSA-rGO in buffer (with pH 5 or 7) determined by measuring ICG fluorescence of the supernatant; (B) Confocal microscopy images of mfHSA-rGO treated HepG2 cells. The d images were merged with the Hoechst image (nucleus staining) and cellular morphology.



**Fig. S6** Histopathological analysis of the mice injected with 200µg rGO-mfHSA for 1, 3, and 7 days. The mouse injected with 200µL PBS was used as control. The major organs of the mice were isolated and H&E stained. The H&E staining showed no signs of inflammation or deformities.