

Electronic Supplementary Information for:

**Injectable and self-healing nanocomposite hydrogel loading
needle-like nano-hydroxyapatite and graphene oxide for the
synergistic tumour proliferation inhibition and photothermal
therapy**

Yujie Qia, Zhiyi Qiana, Weizhong Yuan^{a*} and Zhihong Li^{b*}

^aSchool of Materials Science and Engineering, Tongji University, Shanghai 201804, People's Republic of China. E-mail address: yuanwz@tongji.edu.cn (W. Yuan). Tel: +86 21 69580234, Fax: +86 21 69584723

^bDivision of General Surgery, Shanghai Pudong New District Zhoupu Hospital, Shanghai 201200, PR China. E-mail address: lance007@126.com

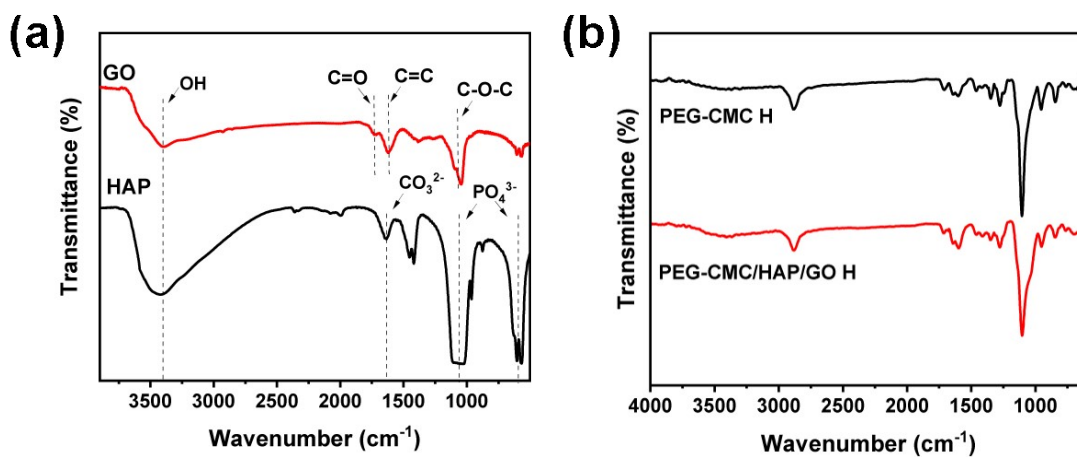


Fig. S1 (a) FT-IR spectra of GO and HAP. (b) ATR FT-IR spectra of PEG-CMC hydrogel and PEG-CMC/HAP/GO hydrogel.

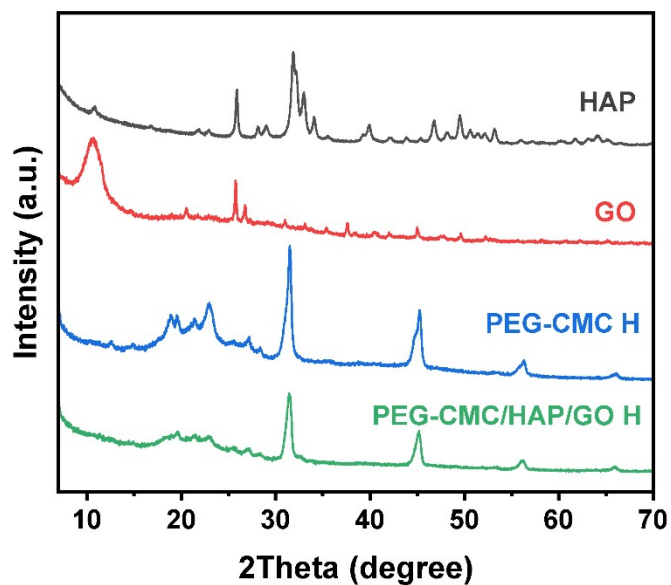


Fig. S2 XRD spectra of GO, HAP, PEG-CMC hydrogel and PEG-CMC/HAP/GO hydrogel.

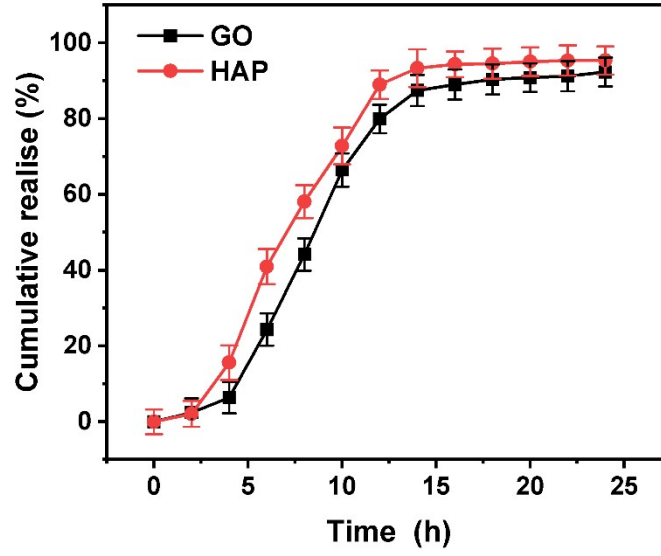


Fig. S3 The GO and HAP release profile of the PEG-CMC/HAP/GO hydrogel.

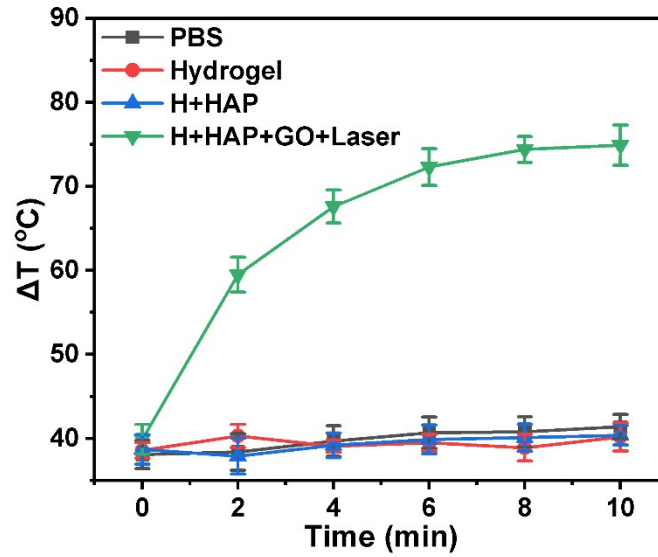


Fig. S4 Temperature rise curve of tumor location in mice after NIR irradiation.

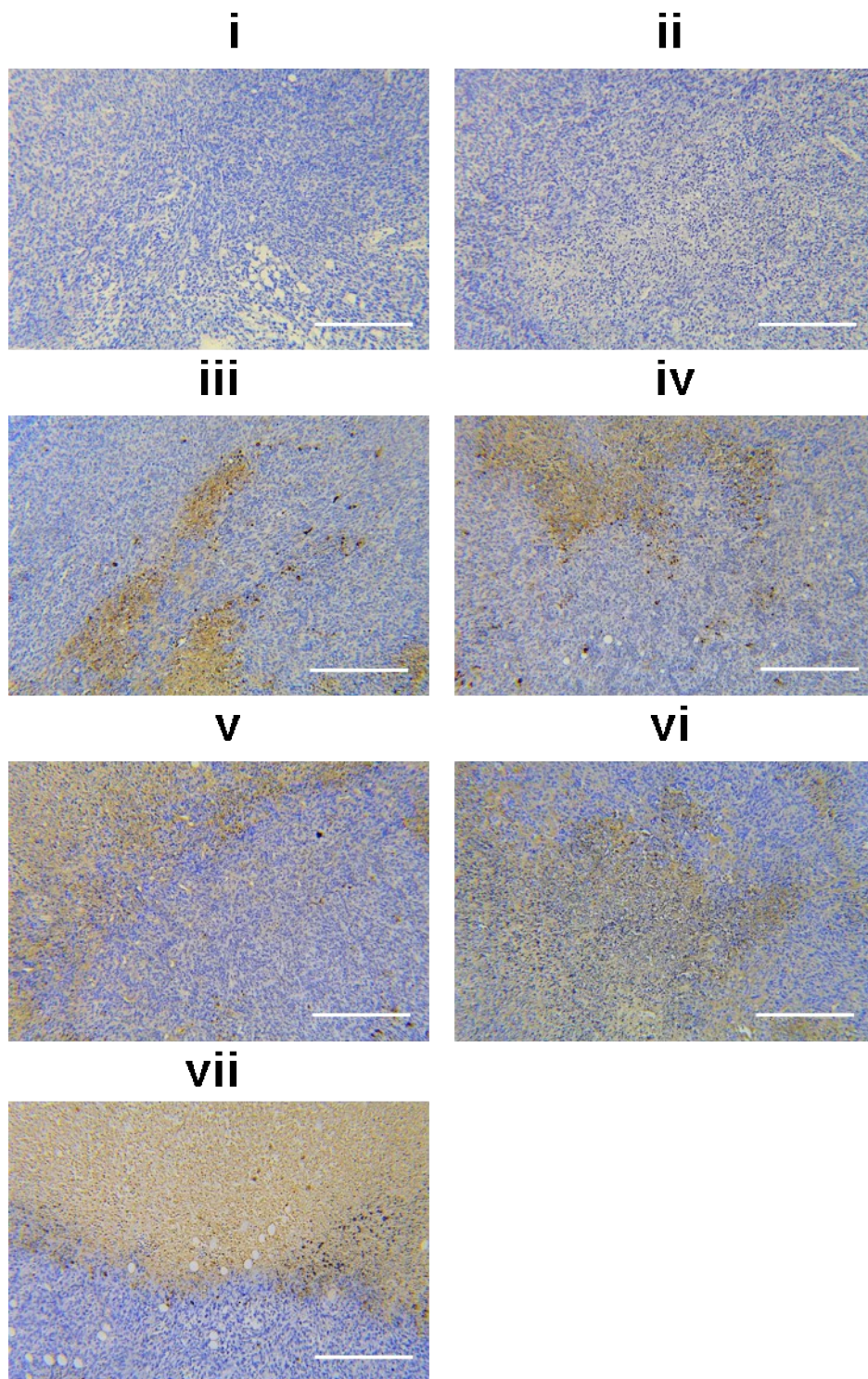


Fig. S5 TUNEL analysis of tumours under different treatments (i-vii: PBS, Hydrogel, Hydrogel+HAP, Hydrogel+HAP+GO, HAP+GO+Laser, Hydrogel+GO+Laser, Hydrogel+HAP+GO+Laser) (scale bar: 300 μ m).