

**Supporting information for:**

**In Vivo Near-Infrared Photothermal Therapy and Computed  
Tomography Imaging of Cancer Cells Using Novel Tungsten-based  
Theranostic Probe**

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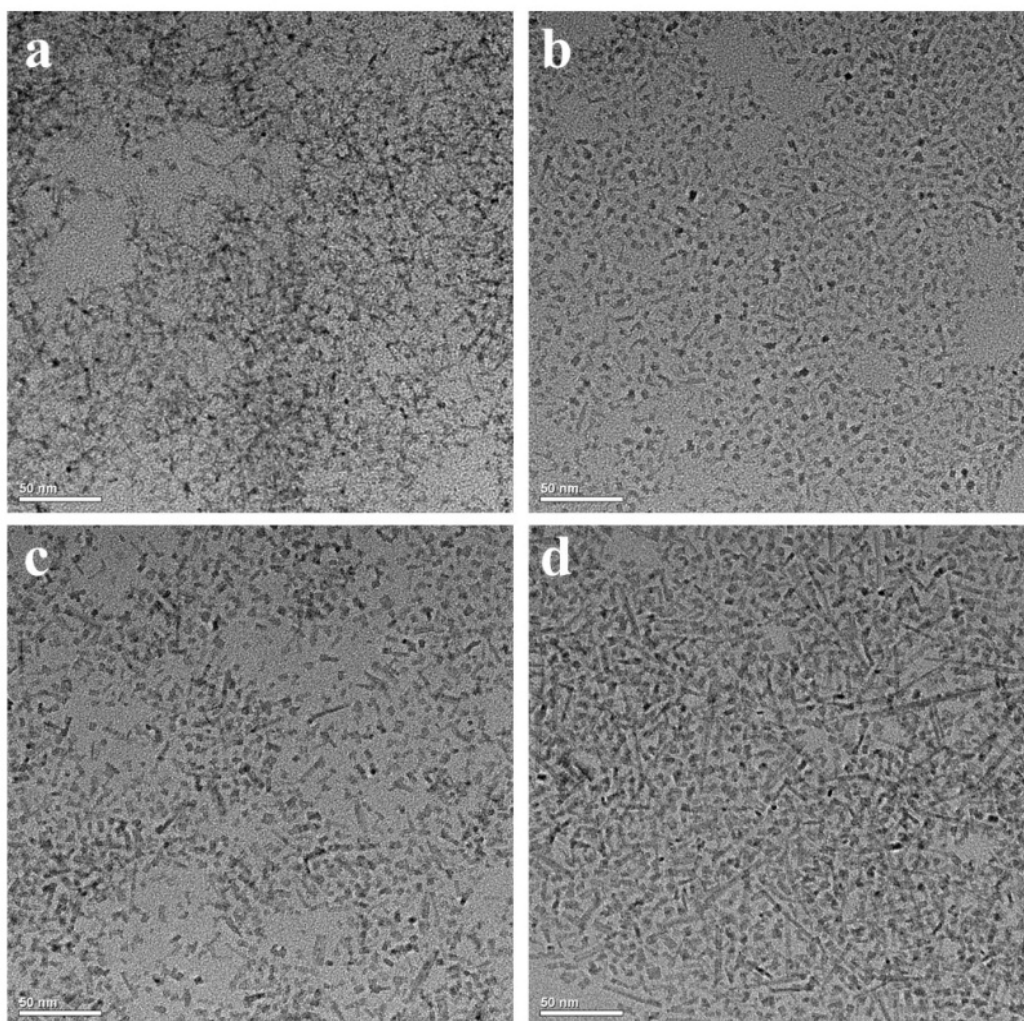
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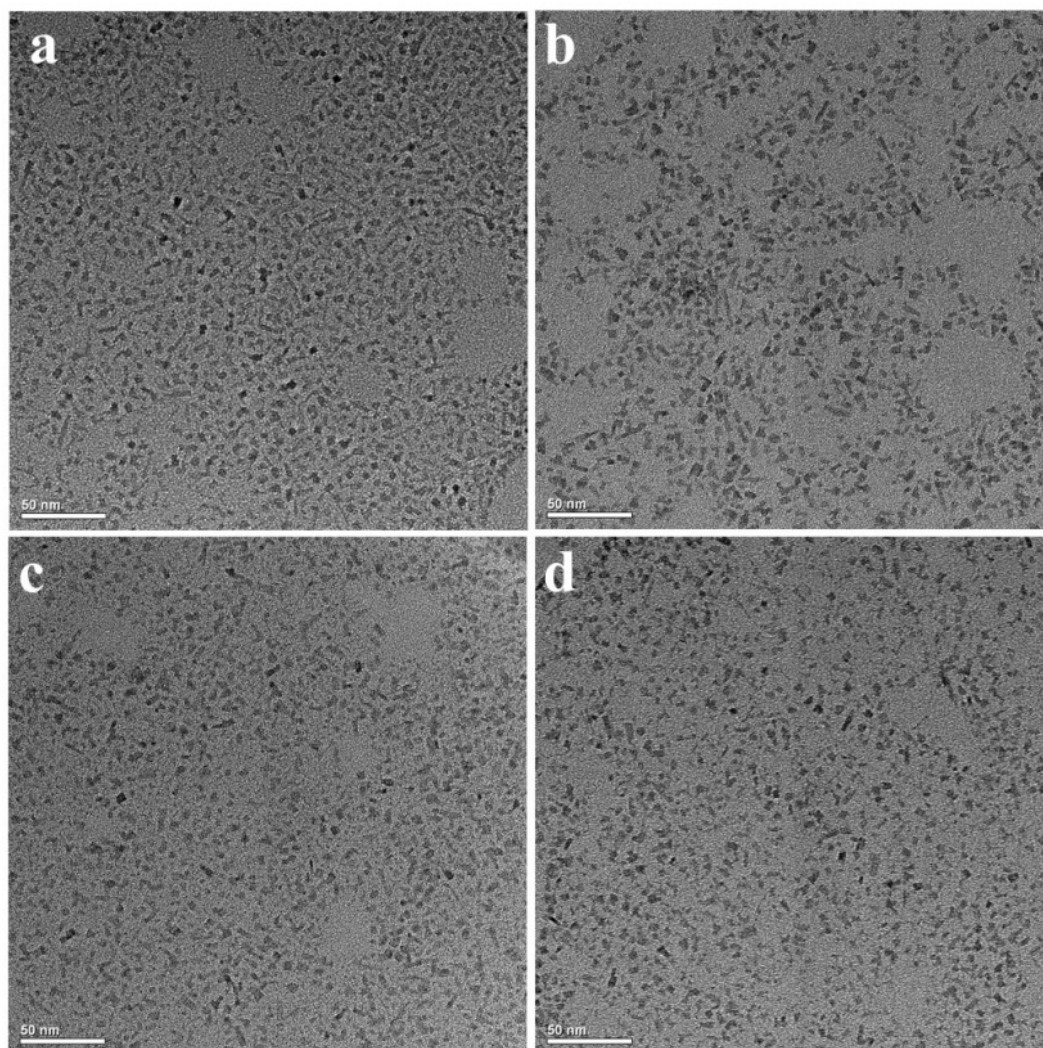
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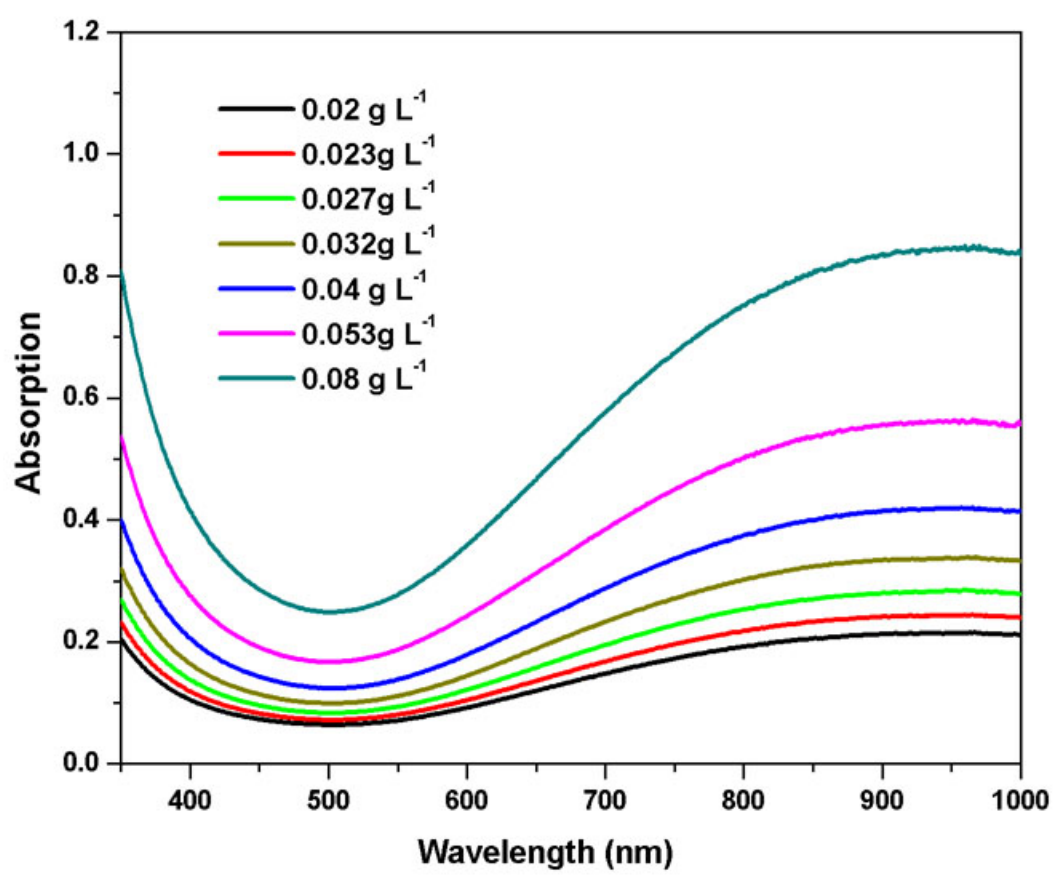
drliujh@yahoo.com (J. Liu), drlihp@yahoo.com (H. Li), hanxueli6613@sina.com.cn (X. Han)



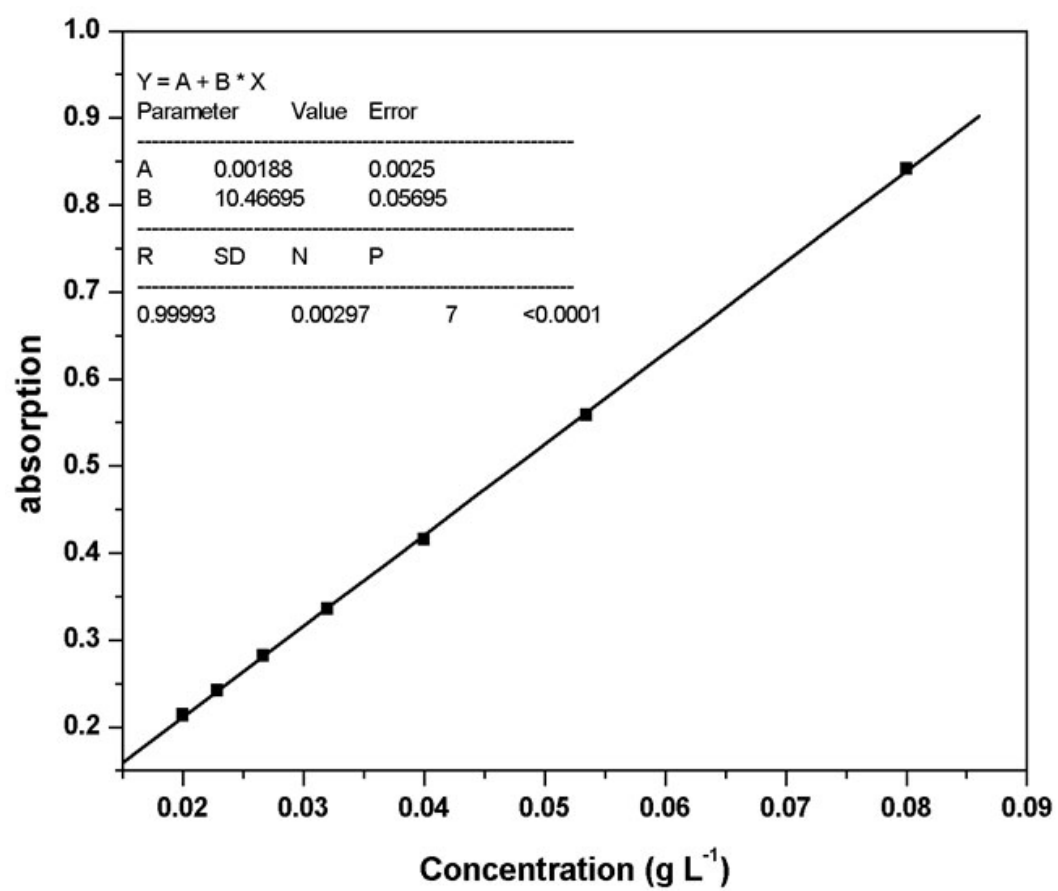
**Fig. S1.** TEM images of  $\text{WO}_{3-x}$  nanoparticles achieved via different temperature: 250 °C (a), 270 °C (b), 290 °C (c), and 310 °C (d).



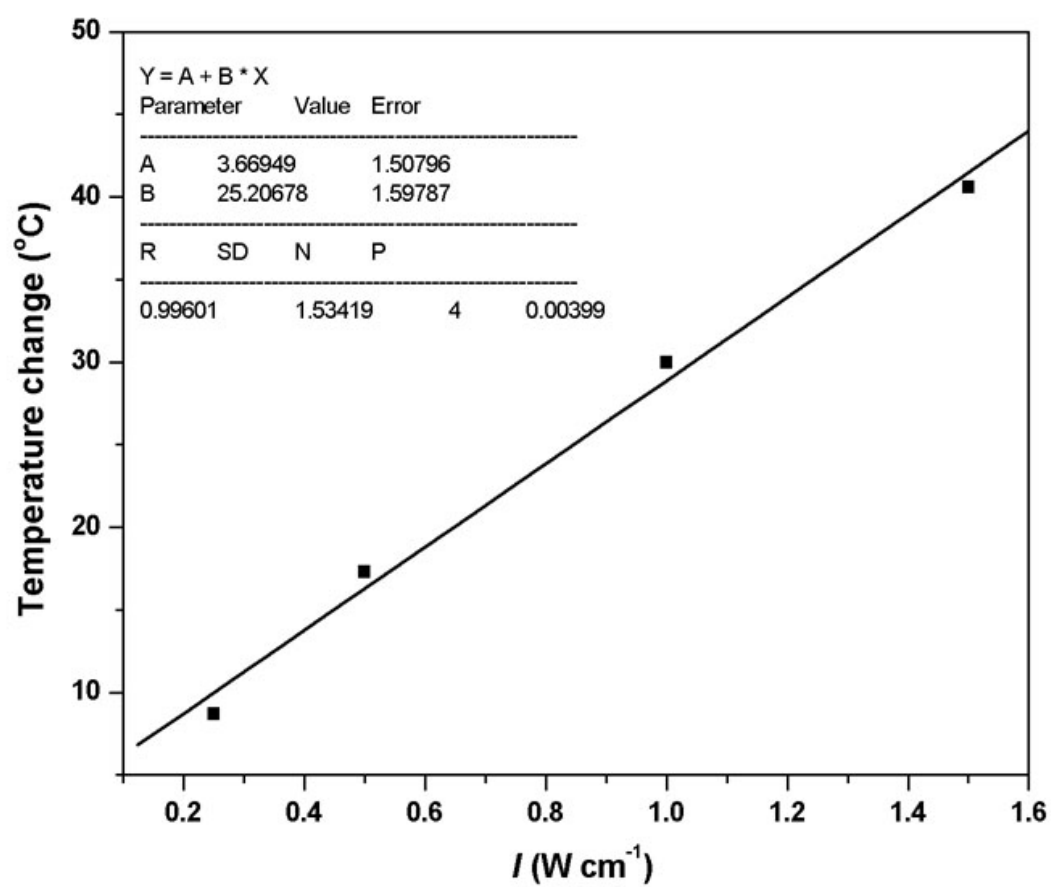
**Fig. S2.** TEM images of  $\text{WO}_{3-x}$  nanoparticles achieved via different volume ratio: 0.5g/30mL (a), 0.7g/30mL (b), 0.9g/30mL(c), and 1.1g/30mL (d).



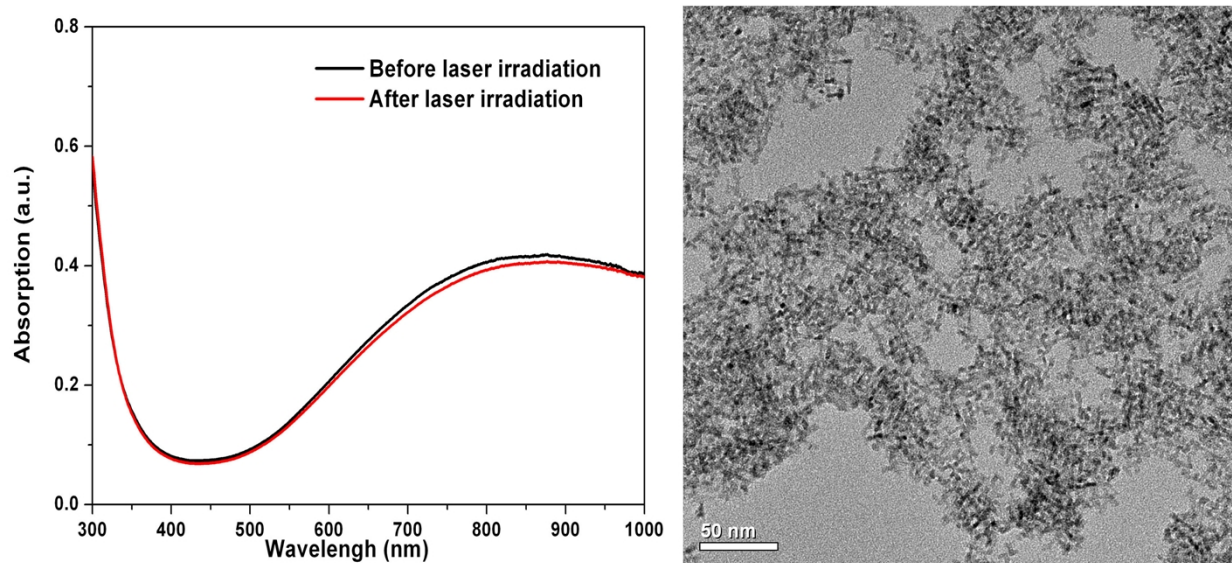
**Fig. S3.** UV-vis absorption spectra of PEGylated  $\text{WO}_{3-x}$  nanoparticles in water with different concentrations.



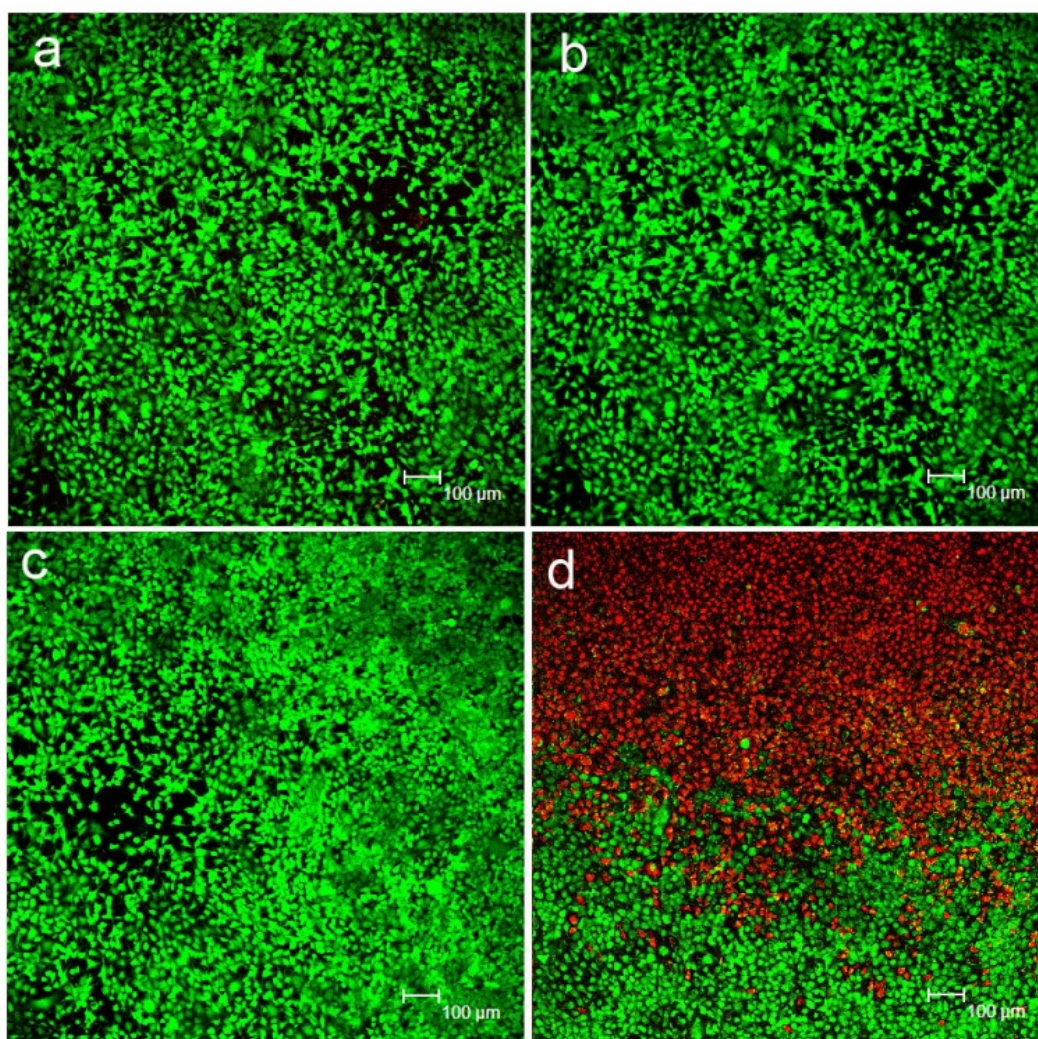
**Fig. S4.** Linear absorption data versus concentration obtained from the Figure S3.



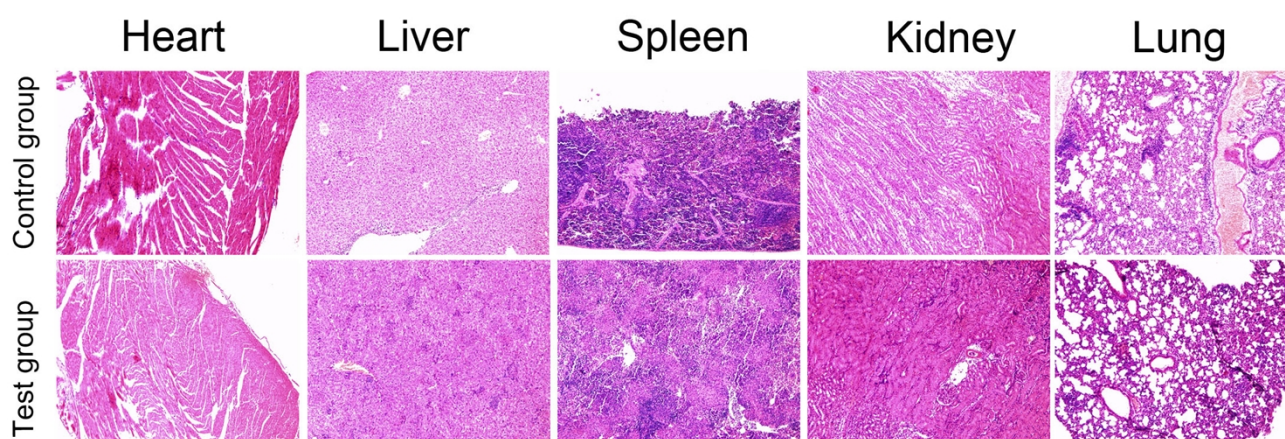
**Fig. S5.** Photothermal conversion capability with PEGylated  $\text{WO}_{3-x}$  nanoparticles at different power density.



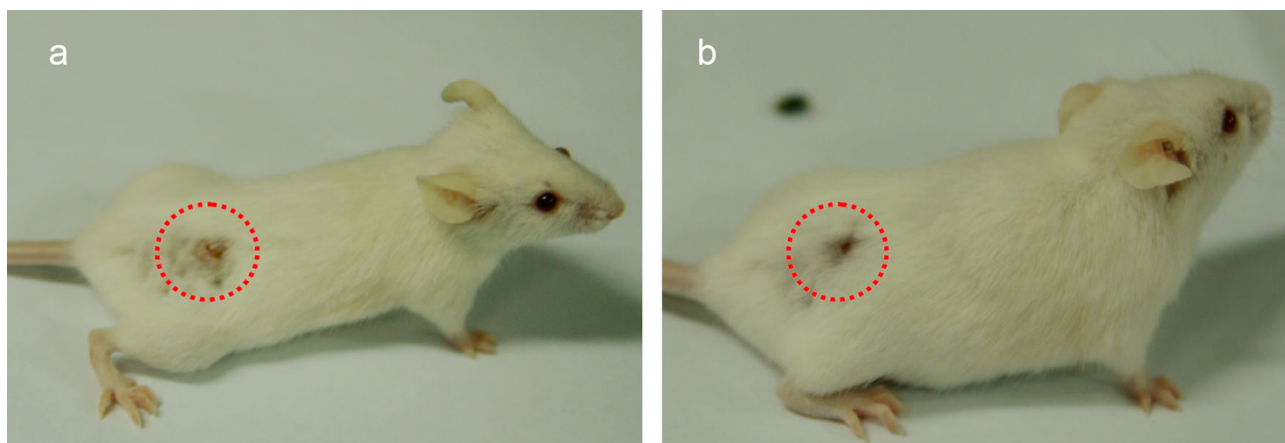
**Fig. S6.** The absorption spectra taken before and after laser irradiation at  $0.5 \text{ w/cm}^2$  (Left image), TEM images of  $\text{WO}_{3-x}$  nanoparticles after laser irradiation (Right image).



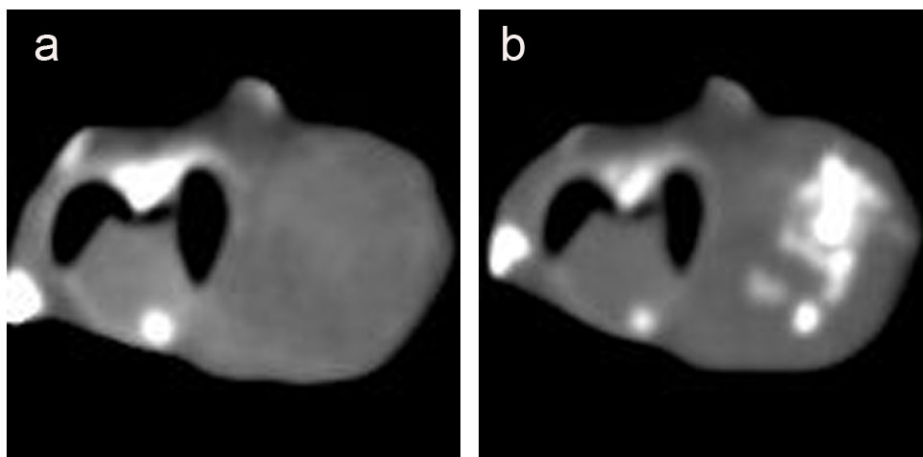
**Fig. S7.** Confocal microscopic images of differently treated 4T1 cells stained with calcein AM and propidium iodide: control (a), laser irradiation only (b), PEGylated  $\text{WO}_{3-x}$  nanoparticles only(c), and with both PEGylated  $\text{WO}_{3-x}$  nanoparticles and laser irradiation (d).



**Fig. S8.** Histological changes in the heart, liver, spleen, kidney, and lung of the rat three weeks after intravenous injection of a single dose of PEGylated  $\text{WO}_{3-x}$  nanoparticles.



**Fig. S9.** Digital photos of a 4T1 tumor-bearing mouse before (a) and after photothermal therapy (b).



**Fig. S10.** The axial tumor images without the WO<sub>3-x</sub> nanoparticles (a) and with the WO<sub>3-x</sub> nanoparticles (b).