Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information

Visualization of Size-Dependent Tumour Retention of PEGylated Nanographene Oxide via SPECT Imaging

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Table S1. The sizes of usNGO, usNGO-PEG, NGO and NGO-PEG measured by AFM (corresponding to Fig. 1), TEM (corresponding to Figure S1), DLS (corresponding to Fig. 3b) with PDI, and the ζ-potential values in deionized water, respectively.

	AFM (nm)	TEM (nm)	DLS (nm)	PDI	ζ-potential (mV)
usNGO	26 ± 10	20 ± 4	173 ± 54$^{\nabla}$	0.768	-20.8
usNGO-PEG	-	28 ± 5	28 ± 10	0.139	-1.16
NGO	70 ± 36	80 ± 40	244 ± 137$^{\nabla}$	0.79	-25.7
NGO-PEG	-	80 ± 45	91 ± 34	0.234	-2.38

$^{\nabla}$*The size of usNGO and NGO measured by DLS was very large because they aggregated.*

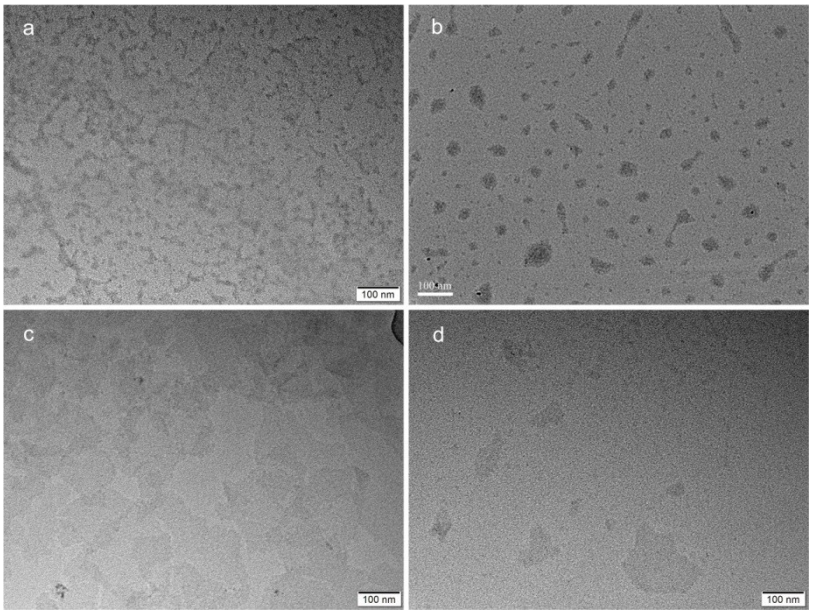

Fig. S1 TEM images of usNGO (a), usNGO-PEG (b), NGO (c) and NGO-PEG (d), respectively, dispersed in H_2O.

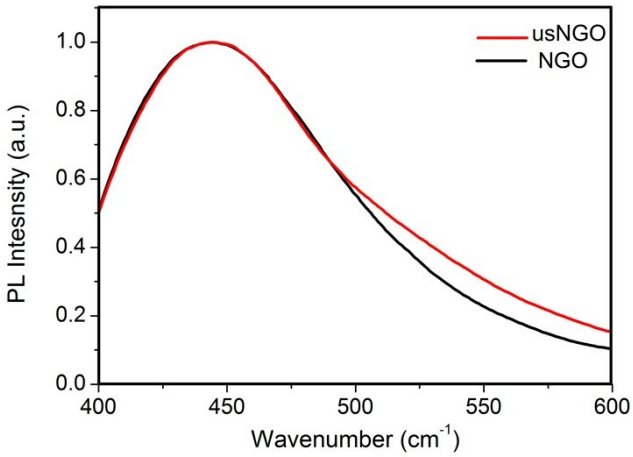

Fig. S2. PL emission spectra of usNGO and NGO (λ_{ex} = 360 nm).

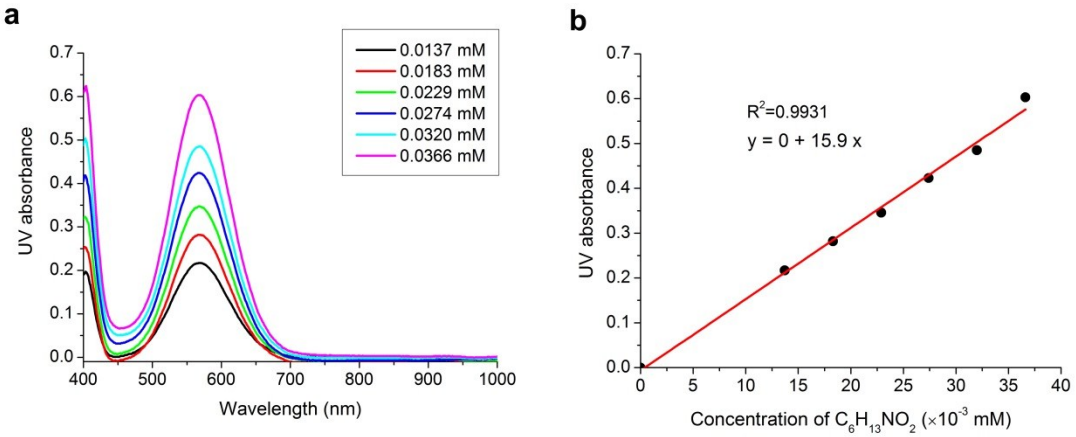

Fig. S3. The standard ninhydrin quantification protocol. The UV absorbance (570 nm) of L-leucine with different concentration (a) and the fit linear (b).

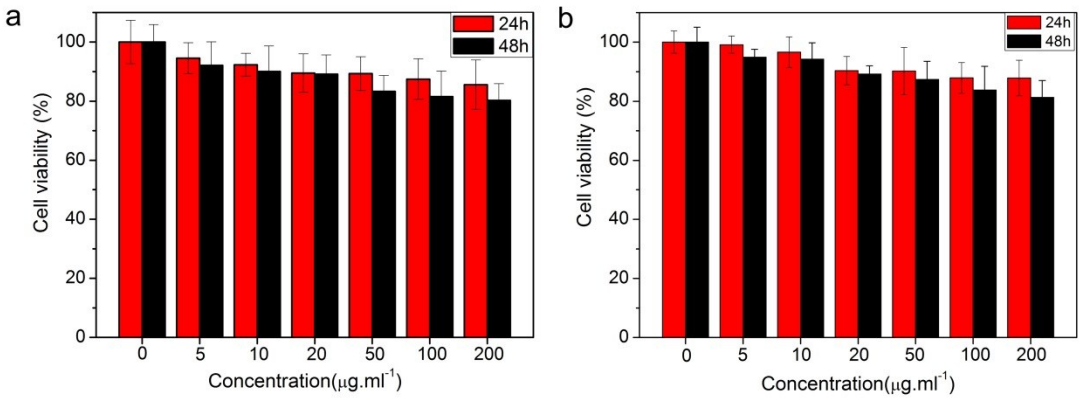

Fig. S4 Relative cell viability of 4T1 after 24 h and 48 h incubation with usNGO-PEG (a) and NGO-PEG (b). Error bars were based on triple samples.

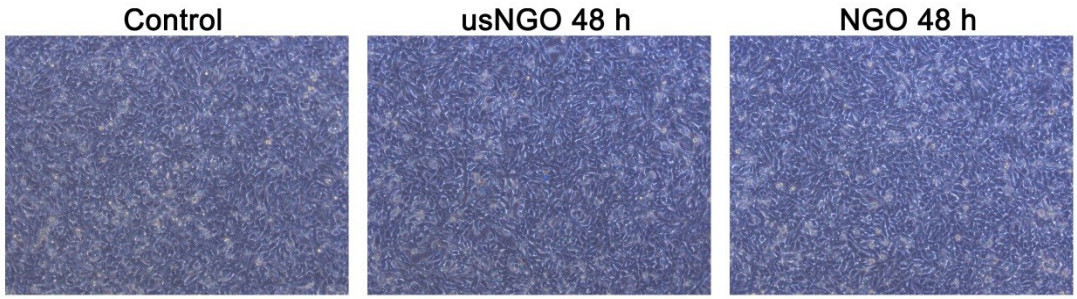

Fig. S5 The 4T1 cell morphology visualized by confocal microscopy after incubated at 37 °C for 48 h with usNGO-PEG and NGO-PEG (the concentration of 200 μg/mL), respectively. Microscope objective: ×10. White light.

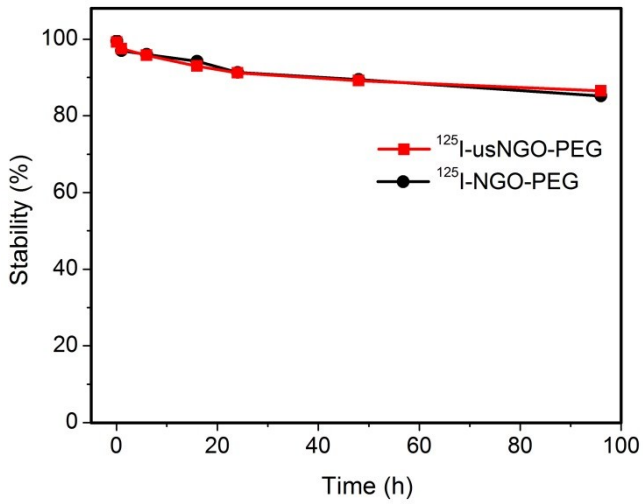

Fig. S6 The stability of ^{125}I-radiolabeled usNGO-PEG and NGO-PEG in serum solution (50%, pH 7.4). The mixtures were incubated at 37 ºC for 1, 6, 16, 24, 48 and 96 h, and the solution was determined by radioactive thin layer chromatography (Radio-TLC).