Electronic Supplementary Material (ESI) for RSC Advances

Supporting Information

Multifunctional Graphene Quantum Dots-Conjugated Titanate Nanoflowers for Fluorescence-trackable Targeted Drug Delivery

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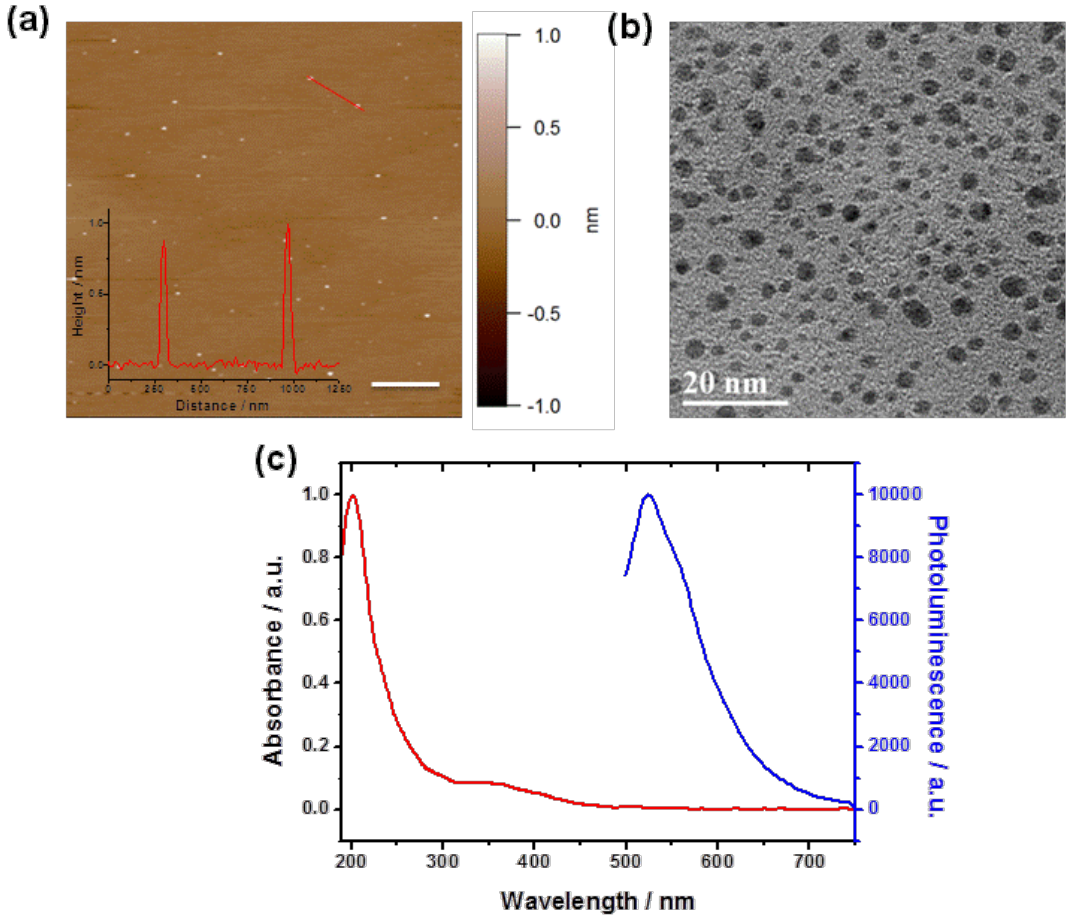

Fig. S1 (a) AFM image of GQDs. Scale bar = 1 μm; Inset shows the height profile. (b) TEM image of GQDs. (c) Absorbance spectrum of GQD (16.5 μg/mL) and photoluminescence spectrum of GQD (0.5 mg/mL) at room temperature in H_2O. Excitation wavelength is 488 nm for photoluminescence measurement.

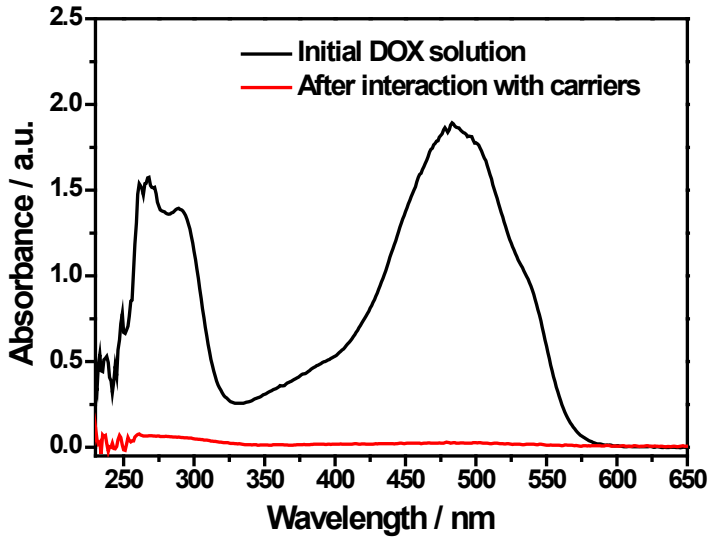

Fig. S2 Absorbance spectra of 0.2 mg DOX in 2 mL PBS before and after interaction with 2 mg of nanocarriers at room temperature. The disappearance of characteristic DOX absorption peak at 490 nm in the supernatant indicates the nearly complete loading of initial DOX (0.2 mg) onto the nanocarriers (2 mg), giving rise to a loading capacity of close to10%.

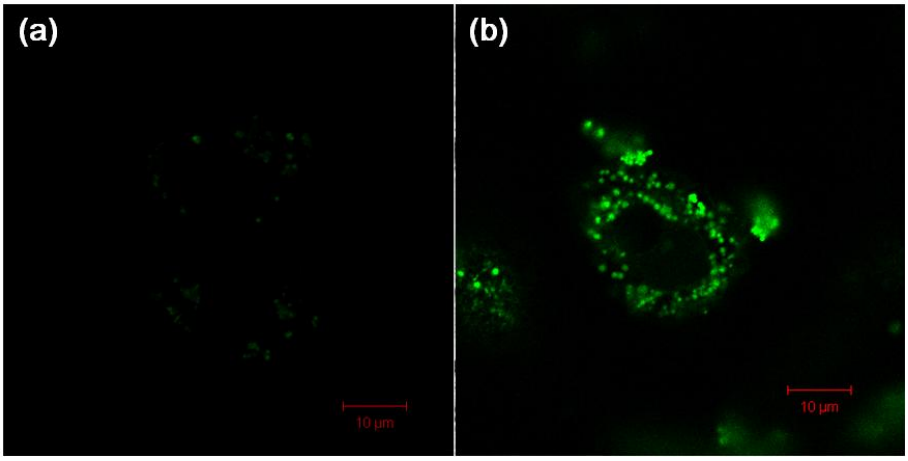

Fig. S3 The uptake of (a) GQD-LPT & (b) Anti-HER2-GQD-LPT into MCF7/HER2 cells after 12 h incubation. The excitation wavelength is 488 nm.

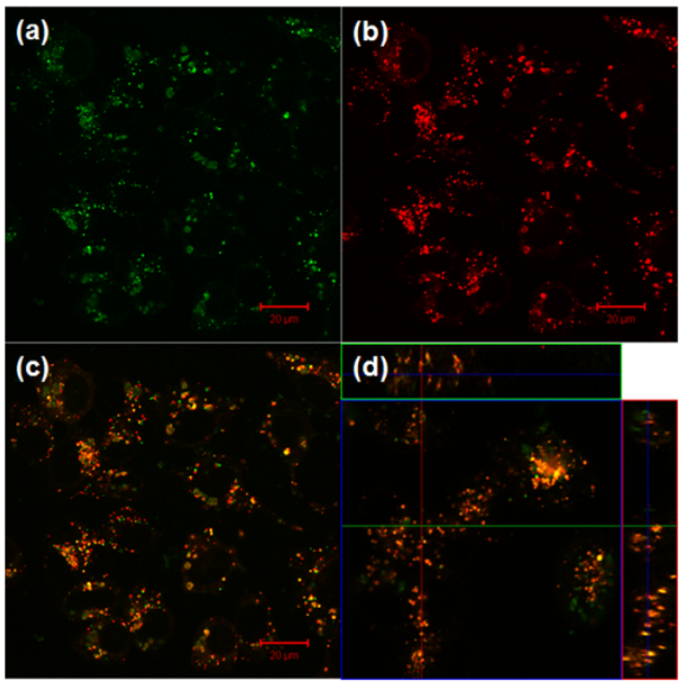

Fig. S4 The intracellular localization of (a) Anti-HER2-GQD-LPT nanocarriers (green) The excitation wavelength is 488 nm. (b) lysosomes (red) The excitation wavelength is 543 nm. (c) merged images and (d) cross-section image indicating that the nanocarriers co-localize with the lysosome in MCF7/HER2 cells after 24 h incubation.