Supporting information

Multifunctional nanocarriers for cell Imaging, drug delivery and near-IR photothermal therapy

Rui Guo, Leyang Zhang, Hanqing Qian, Rutian Li, Xiqun Jiang, and Baorui Liu*

1. UV-Vis spectra of gold nanorods used in this work.

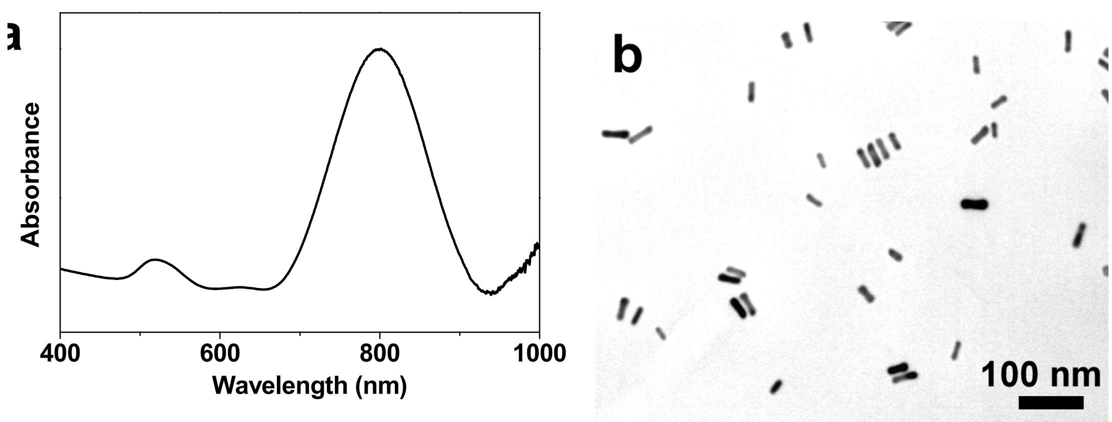

Figure S1. (a) UV-Vis spectra and (b) TEM micrograph of the gold nanorods used in the construction of CS-AuNR hybrid nanospheres.

2. Release profile of free cisplatin solution

In vitro release of cisplatin from free cisplatin solution was evaluated using a dialysis bag diffusion technique. 0.5 mL of free cisplatin solution (300 μg/mL) was placed into a pre-swelled dialysis bag with a 12 kDa molecular weight cut off and immersed into 10 mL 0.1 mol L^{-1} PBS, pH 7.4, at 37 °C with gentle agitation. Periodically, 5 mL of the release medium was withdrawn and then 5 mL of fresh PBS was added to the system. Cisplatin concentration in the sampled medium was measured by the colorimetric method with appropriate dilution.

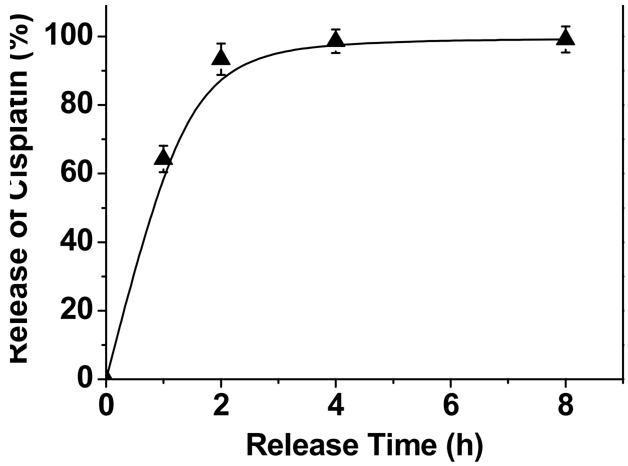

Figure S2. Release profile of free cisplatin solution in PBS at 37 °C, pH = 7.4.

3. Extendability of the nonsolvent aided counter-ion complexation method.

The nonsolvent aided counter-ion complexation method used in this study is very versatile. It can not only be used for the preparation of CS-AuNR hybrid nanospheres, but also be easily adapted to the preparation of hybrid nanospheres entrapping other functional nanomaterials. For example, CS-Fe_3O_4 hybrid nanospheres can be synthesized also using this method by simply changing the gold nanorods to Fe_3O_4 magnetic nanoparticles (the synthesis of Fe_3O_4 magnetic nanoparticles see Ref. SR1), highlighting the extendability of the nonsolvent aided counter-ion complexation method. Figure S3 (a) and (b) show the TEM micrographs of Fe_3O_4 magnetic nanoparticles and CS-Fe_3O_4 hybrid nanospheres. It can be seen that Fe_3O_4 magnetic nanoparticles have been successfully encapsulated inside the nanospheres.

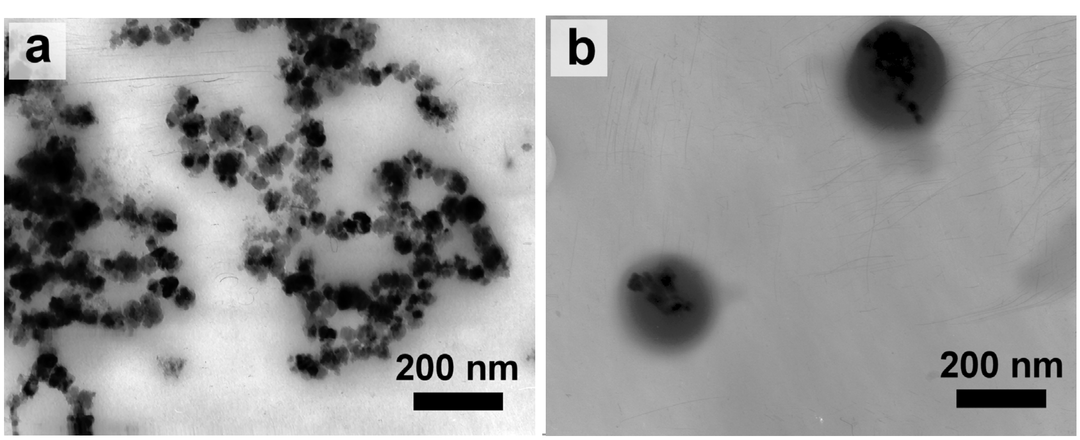

Figure S3. TEM micrograph of (a) Fe_3O_4 magnetic nanoparticles and (b) CS-Fe_3O_4 nanospheres.

(SR1) Ding, Y.; Hu, Y.; Zhang, L. Y.; Jiang X. Q. *Biomacromolecules* **2006**, *7*, 1766-1772.