Electronic Supplementary Information

One-pot synthesis of magnetite-loaded dual-mesoporous silica spheres for T_2-weighted magnetic resonance imaging and drug delivery

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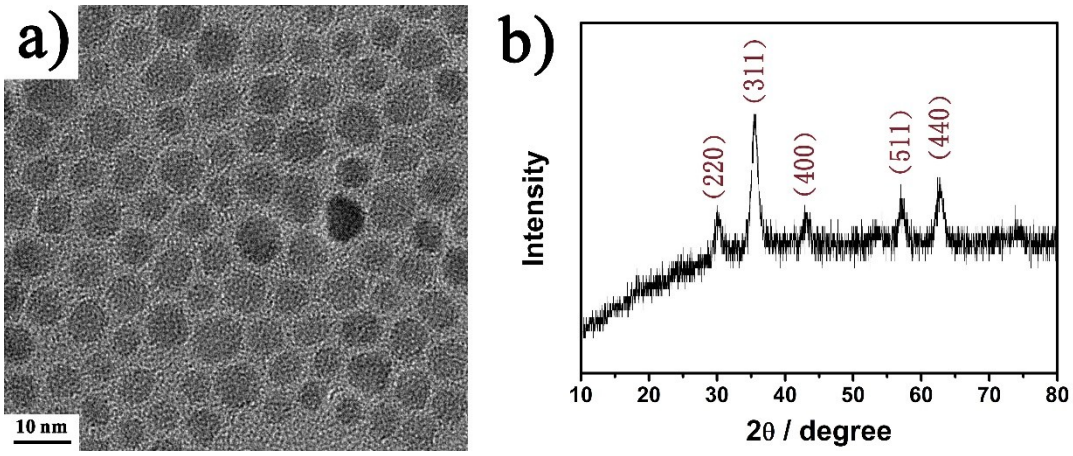

Fig. S1 TEM image (a) and wide angle XRD pattern (b) of as-synthesized Fe_3O_4 nanoparticles.

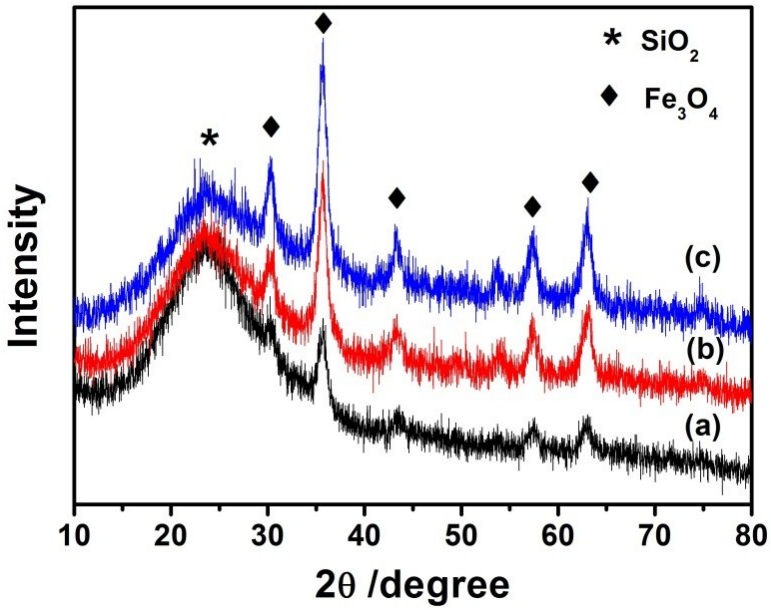

Fig. S2 Wide angle XRD patterns of Fe_3O_4@DMSSs prepared with different amounts of Fe_3O_4 nanoparticles: (a) 5 mg; (b) 15 mg; (c) 30 mg.

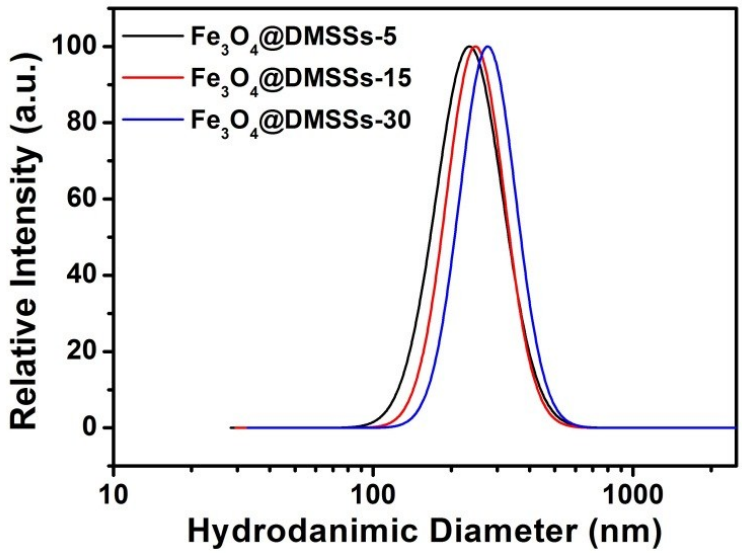

Fig. S3 Hydrodynamic diameter distributions of Fe_3O_4@DMSSs prepared with different amounts of Fe_3O_4 nanoparticles determined by DLS measurements in water.

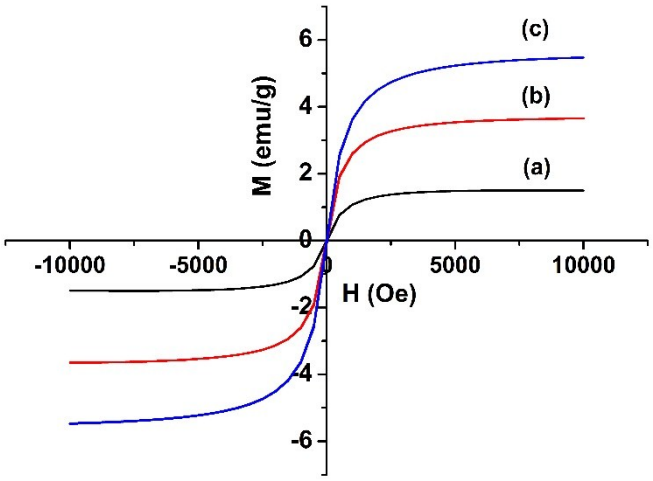

Fig. S4 Field-dependent hysteresis curves at 300 K of the three samples measured by using VSM in the range of 10000 Oe. (a) Fe_3O_4@DMSSs-5, (b) Fe_3O_4@DMSSs-15, (c) Fe_3O_4@DMSSs-30.

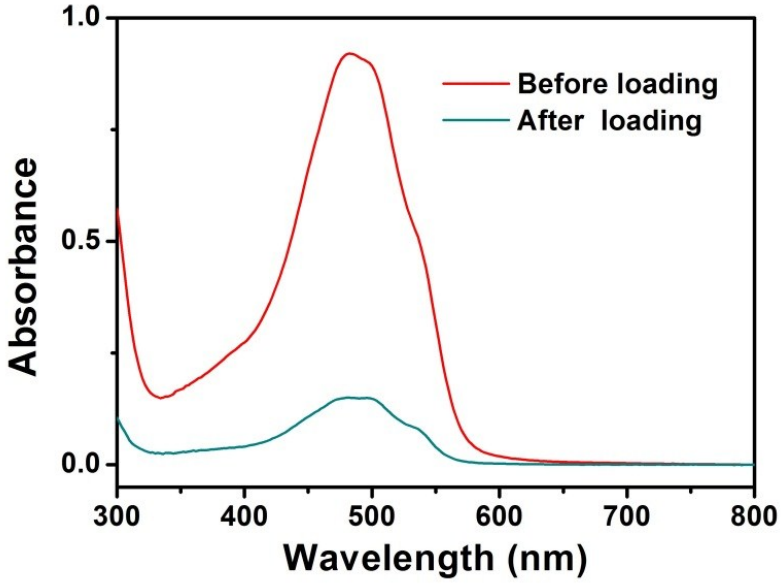

Fig. S5 UV-vis absorbance spectra of DOX solutions before and after stirring with Fe_3O_4@DMSSs-5 for 24h.

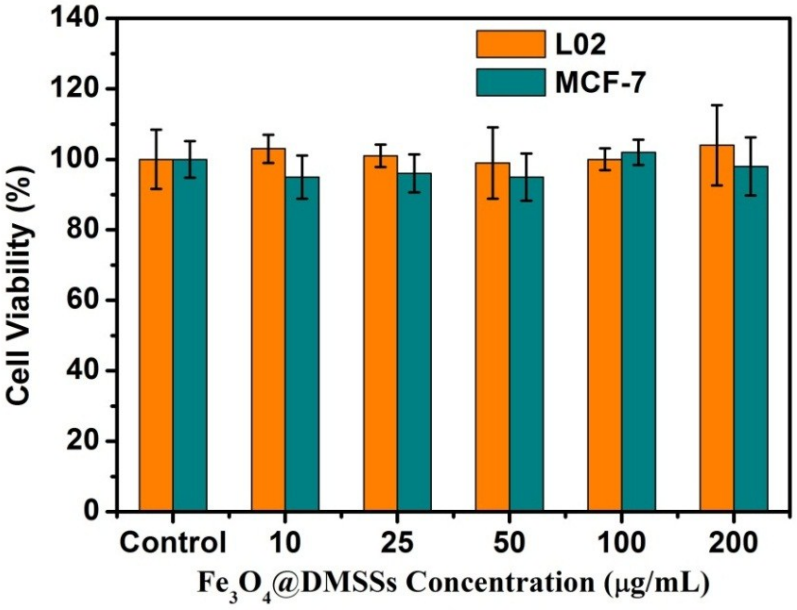

Fig. S6 *In vitro* cell viabilities of L02 cells and MCF-7 cells incubated with Fe_3O_4@DMSSs at different concentrations for 24 h.