Electronic Supplementary Information (ESI)

One-step synthesis of biocompatible magnetite/silk fibroin core shell nanoparticles

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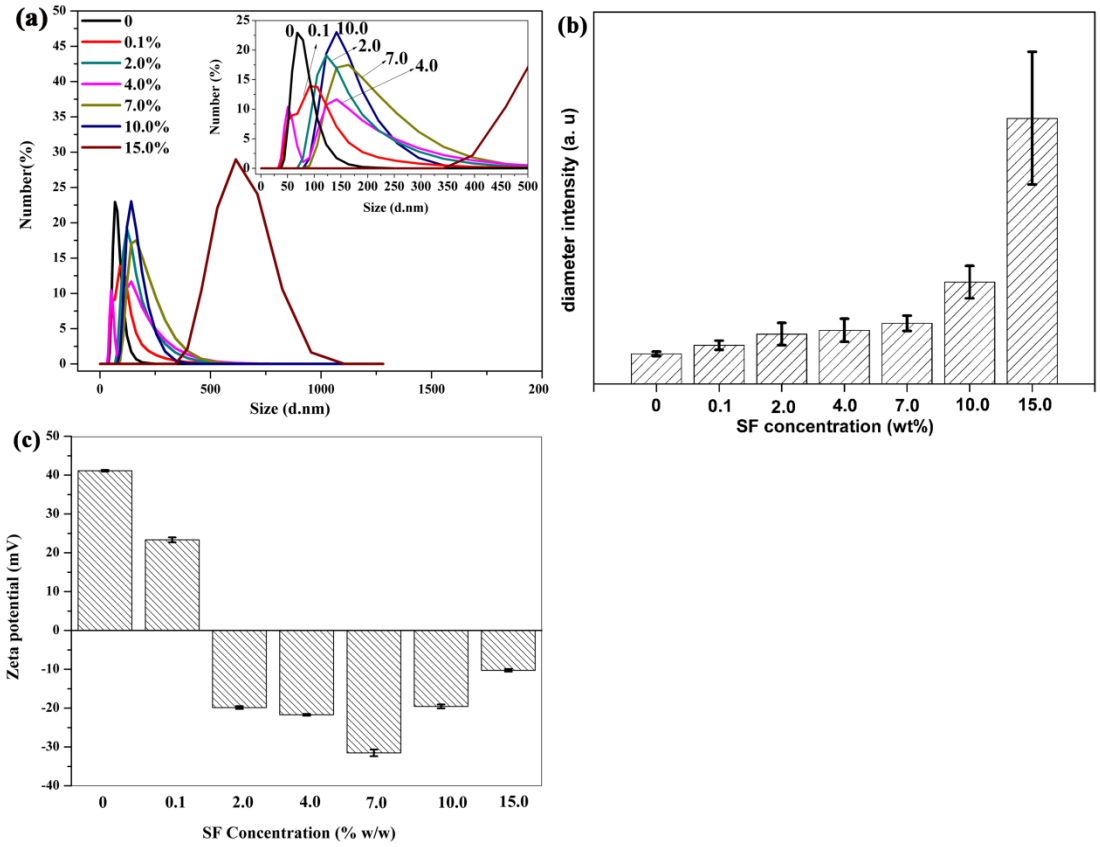

Figure S1 Size distribution(a), Normalised diameter's histogram (b) and zeta potential (c) of Fe_3O_4/SF nanospheres prepared under different silk fibroin contents.

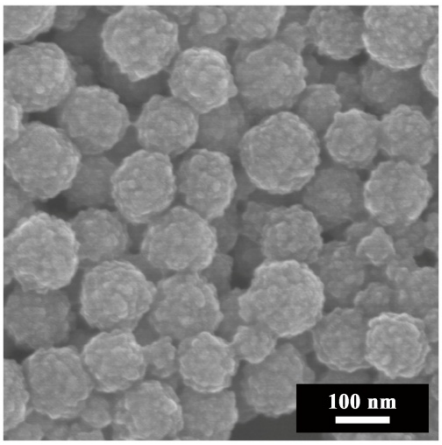

Figure S2 High-magnification SEM image of the prepared Fe_3O_4/SF nanospheres when the concentration of silk fibroin was 7 wt%

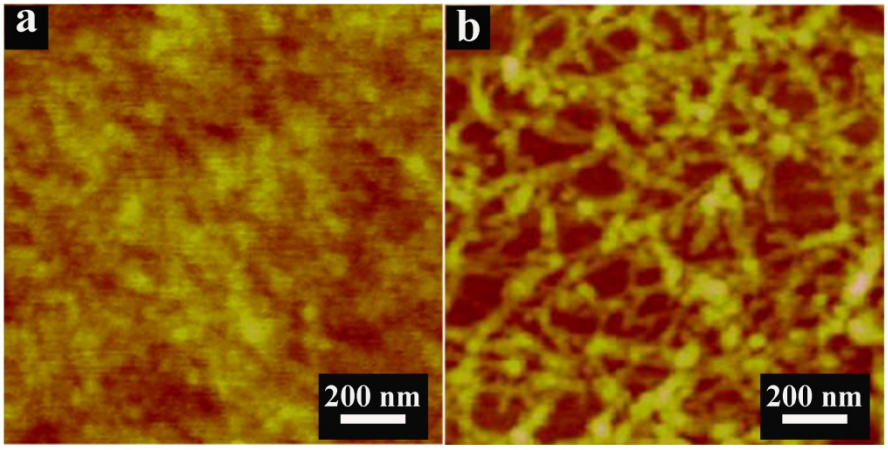

Figure S3 the AFM images of the silk fibroin: (a) before addition of ethylene glycol (EG), and (b) after addition of EG. Silk fibroin changed from nanoparticles to nanofibers after the addition of ethylene glycol.

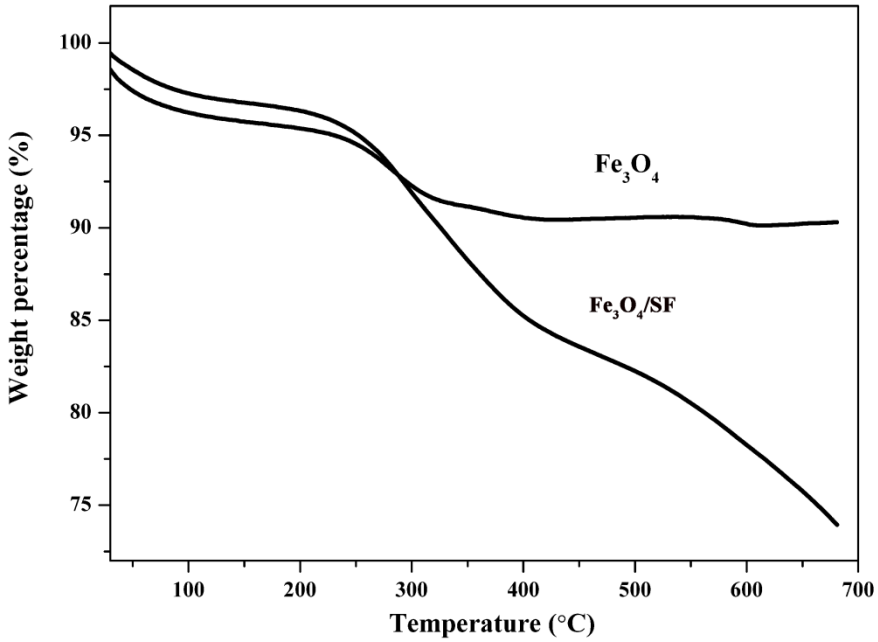

Figure S4 TGA curves of the obtained Fe_3O_4/SF microspheres and pure Fe_3O_4**.**

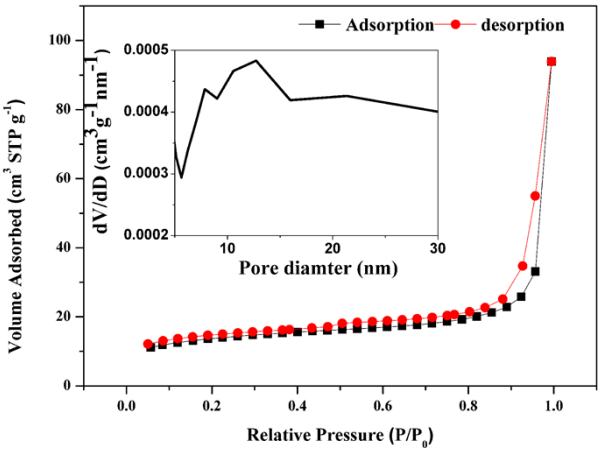

Figure S5 Nitrogen adsorption-desorption isotherm curve of the obtained Fe_3O_4/SF microspheres. The concentration of SF that added in the reaction system is 7%.