

Supporting Information for

Superparamagnetic Core-Shell Polymer Particles for Efficient Purification of His-Tagged Proteins**

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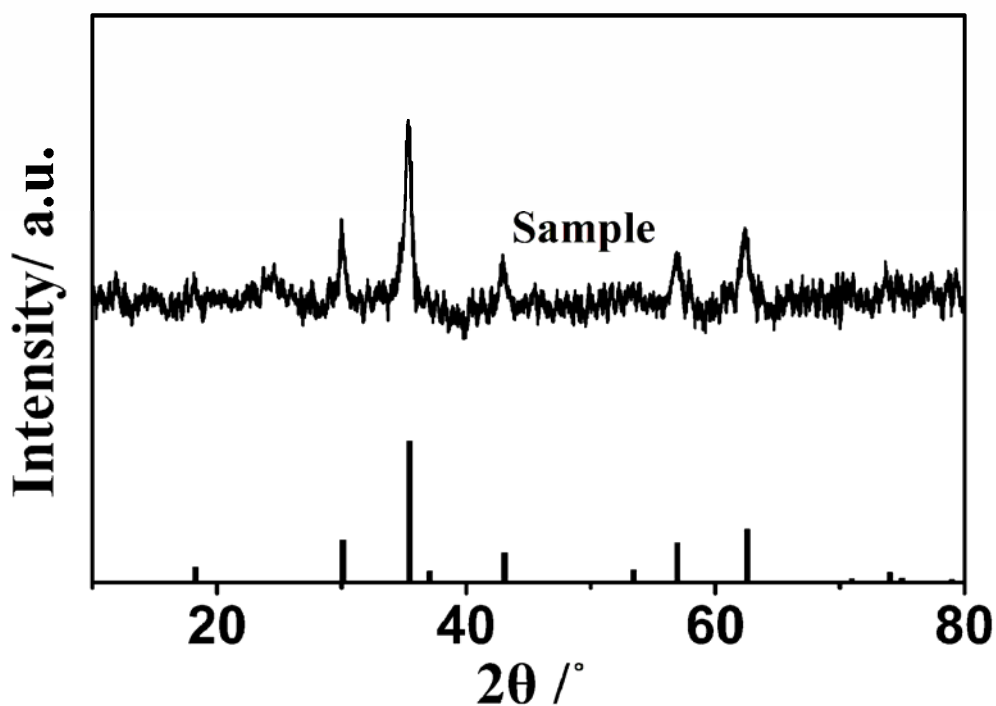


Figure S1. The XRD pattern of the as-prepared Fe_3O_4 spheres. The pattern matches that of inverse spinel magnetite (Fe_3O_4) (JCPDS 82-1533) shown at the bottom.

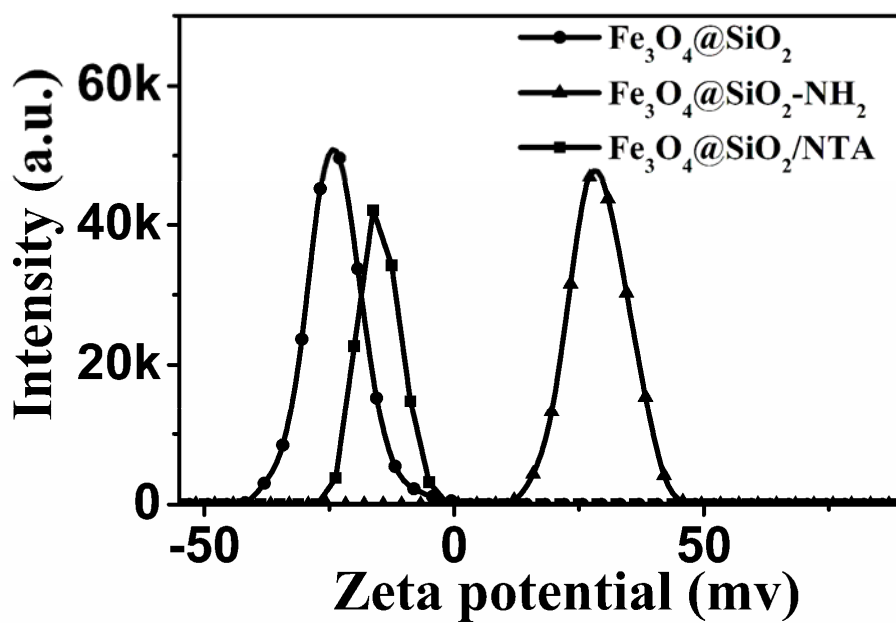


Figure S2. Zeta potentials of $\text{Fe}_3\text{O}_4@\text{SiO}_2$ spheres, $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ spheres and $\text{Fe}_3\text{O}_4@\text{SiO}_2/\text{NTA}$ spheres in ultra-pure water.

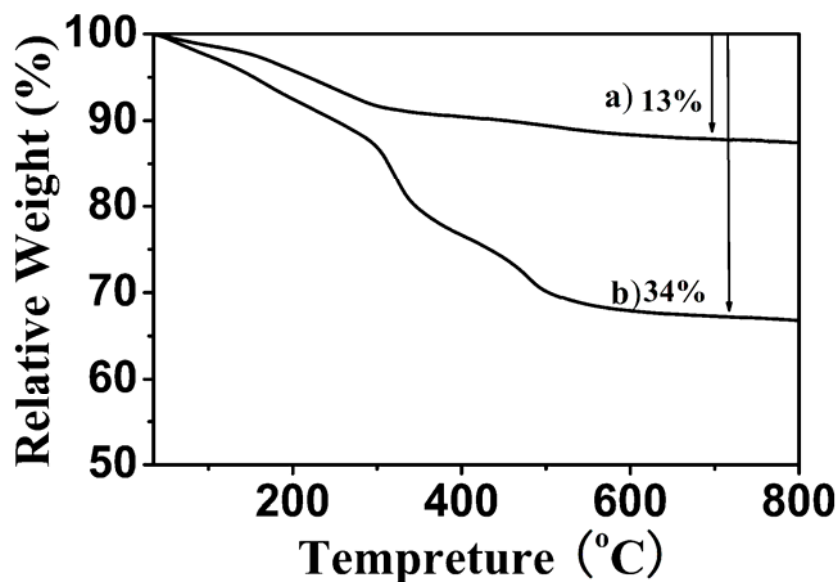


Figure S3. TGA curves of a) $\text{Fe}_3\text{O}_4@\text{SiO}_2/\text{MA}$ spheres and b) $\text{Fe}_3\text{O}_4@\text{SiO}_2/\text{P(St-alt-MAN)}$ spheres.

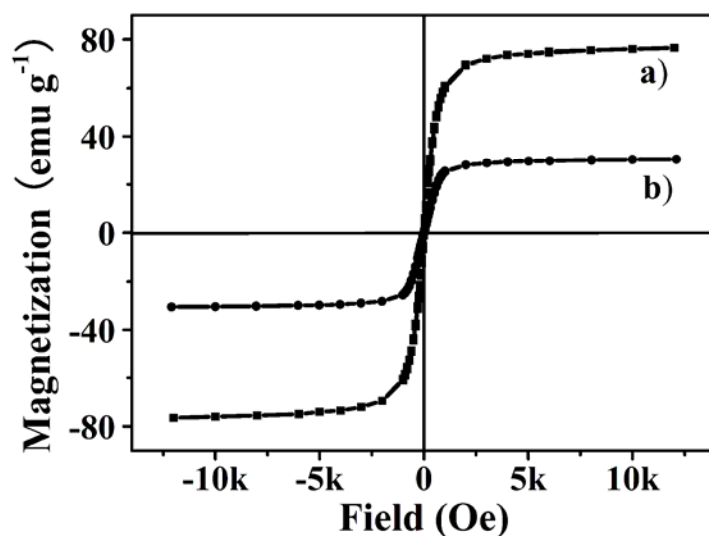


Figure S4. The hysteresis loops of a) Fe₃O₄ spheres, b) Fe₃O₄@SiO₂/P(St-alt-MAA)/ Ni-NTA spheres.

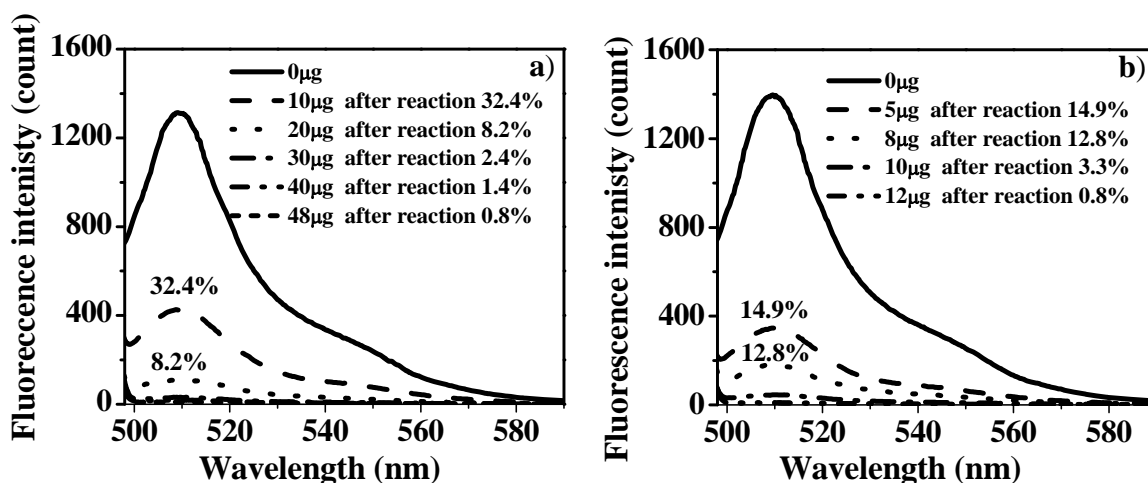


Figure S5. The fluorescence spectra showing the change of emission intensity in the GFP capturing experiments with different amount of magnetic spheres. a) 6.0 μg of His-tagged GFP was mixed with 10μg, 20μg, 30μg, 40μg and 48μg of Fe₃O₄@SiO₂/ Ni-NTA spheres in PBS buffer. b) 6.0 μg of His-tagged GFP was mixed with 5μg, 8μg, 10μg and 12μg of Fe₃O₄@SiO₂/P(St-alt-MAA)/ Ni-NTA spheres in PBS buffer. The spectra were measured from the supernatants after the separation of magnetic spheres.