

Supporting Information

Improving the stability and reusability of dextranase by immobilization on polyethylenimine modified magnetic particles

Yajie Wang*, Qiang Wang, Xiaoping Song, and Jingjing Cai

Department of Pharmacy, Anhui Medical College
Hefei, 230601, Anhui, P. R. China,
E-mail: cactus0926@hotmail.com
Fax: +086-551-63818357; Tel: +86-551-63818357

Figure and table contents

Fig. S1 (a) SEM and (b) TEM images of $\text{Fe}_3\text{O}_4@\text{SiO}_2$ particles.

Fig. S2 Effects of initial concentration of dextranase on the loading capacities of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ and $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-PEI}$ particles without GA modified.

Fig. S3 Effects of initial concentration of dextranase on the immobilization efficiencies of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ and $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-PEI}$ particles without GA modified.

Fig. S4 Effects of initial concentration of dextranase on the immobilization efficiencies and relative enzyme activities of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2\text{-dextranase}$ particles.

Fig. S5 Effects of reaction time on the immobilization efficiencies and relative enzyme activities of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2\text{-dextranase}$ particles.

Table S1 Elemental analysis result of two kinds of magnetic particles

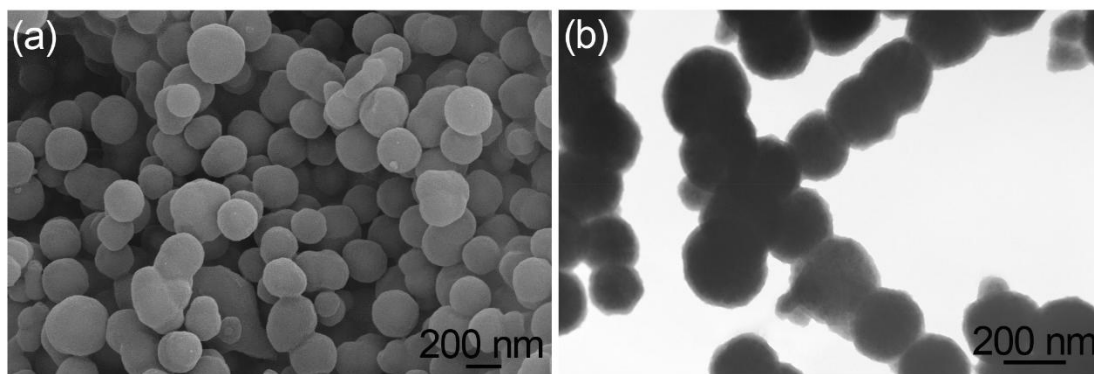


Fig. S1 (a) SEM and (b) TEM images of $\text{Fe}_3\text{O}_4@\text{SiO}_2$ particles

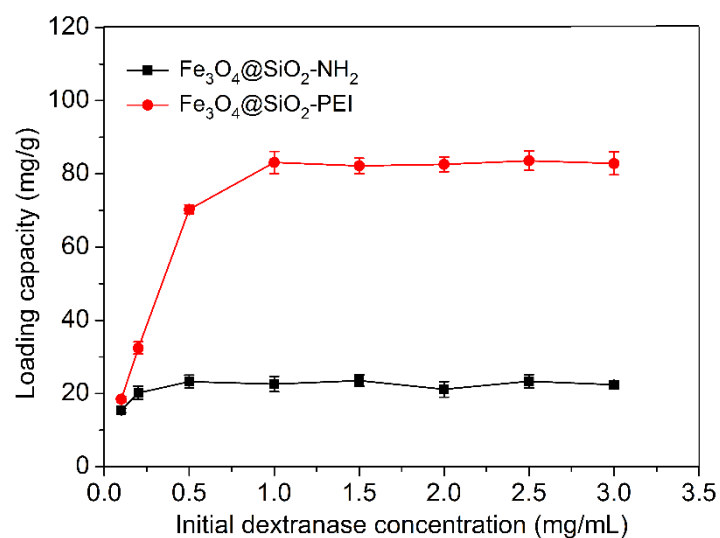


Fig. S2 Effects of initial concentration of dextranase on the loading capacities of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ and $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-PEI}$ particles without GA modified.

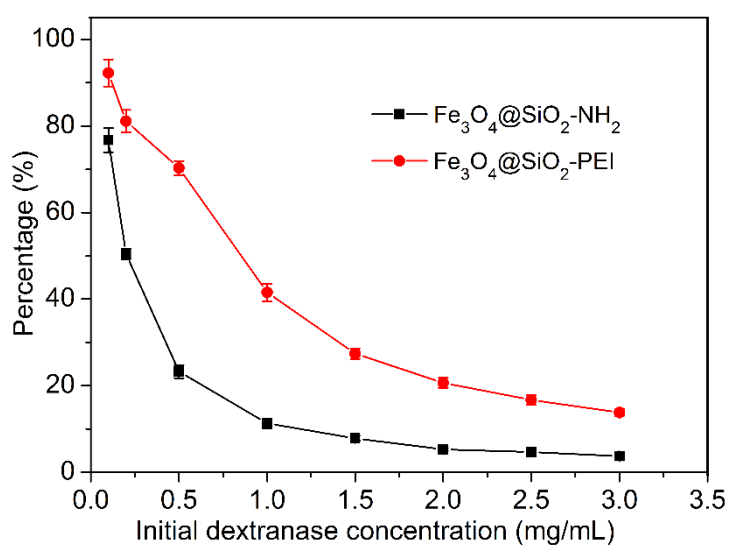


Fig. S3 Effects of initial concentration of dextranase on the immobilization efficiencies of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ and $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-PEI}$ particles without GA modified.

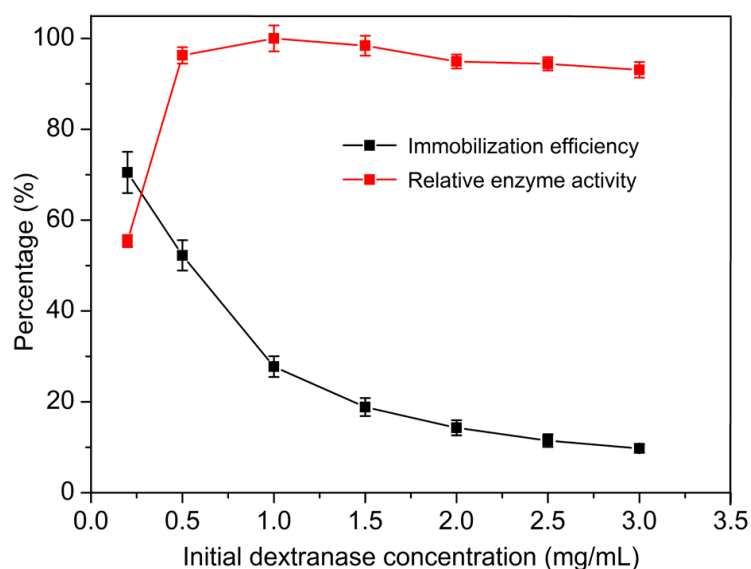


Fig. S4 Effects of initial concentration of dextranase on the immobilization efficiencies and relative enzyme activities of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ -dextranase particles.

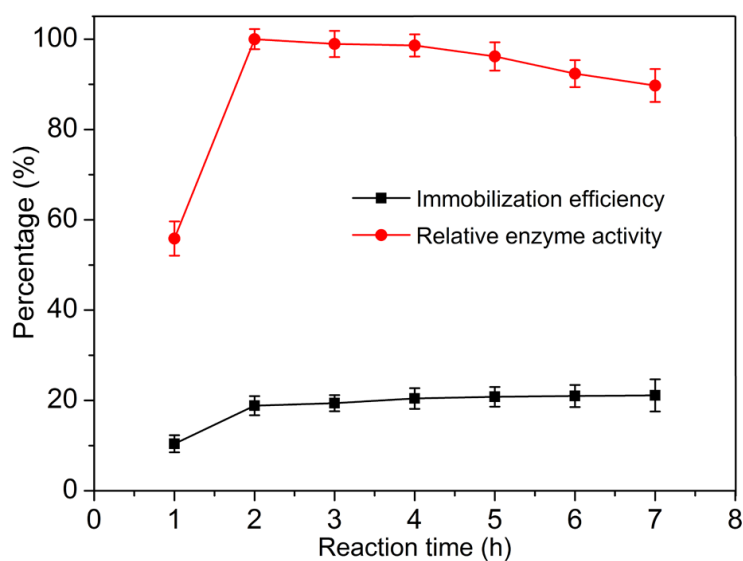


Fig. S5 Effects of reaction time on the immobilization efficiencies and relative enzyme activities of $\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$ -dextranase particles.

Table S1 Elemental analysis result of two kinds of magnetic particles

Magnetic particles	C %	H %	N %
$\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-NH}_2$	2.81	1.12	<0.3
$\text{Fe}_3\text{O}_4@\text{SiO}_2\text{-PEI}$	8.12	1.92	2.48