

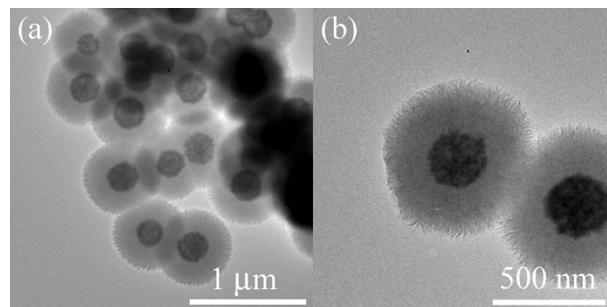
## Amino-functionalized Magnetic Magnesium Silicate Double-shelled Hollow Microspheres for Enhanced Removal of Lead Ions

Bingfang Zou,<sup>a,b</sup> Ke Chen,<sup>a</sup> Yongqiang Wang,<sup>\*a</sup> Chunyu Niu<sup>a</sup> and Shaomin Zhou<sup>a</sup>

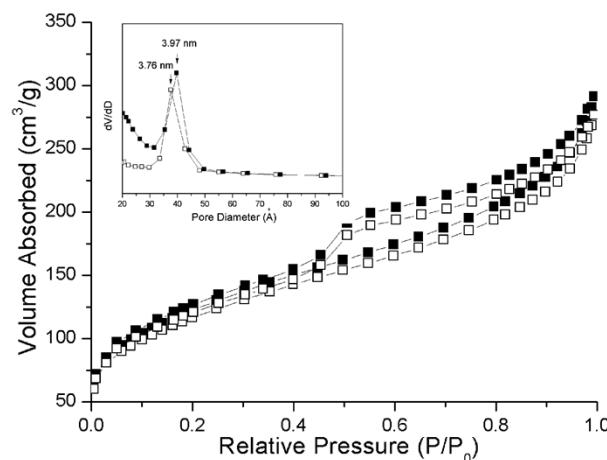
<sup>a</sup> Key Laboratory for Special Functional Materials of the Ministry of Education, Henan University, Kaifeng 475004, P. R. China.  
Email: wangyq@henu.edu.cn

<sup>b</sup> School of Physics and Electronics, Henan University, Kaifeng 475004, P. R. China.

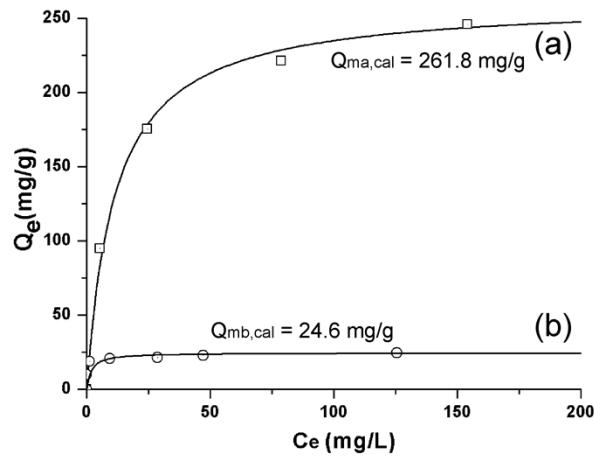
### Supporting Information:



**Fig. S1** DS-Fe<sub>3</sub>O<sub>4</sub>/MS hollow microspheres with shell thickness about 200 nm.



**Fig. S2** N<sub>2</sub> adsorption/desorption isotherm of DS-Fe<sub>3</sub>O<sub>4</sub>/MS (■) and DS-Fe<sub>3</sub>O<sub>4</sub>/MS-AG (□) hollow microspheres. (Inset: pore-size distribution.)



**Fig. S3** The  $\text{Pb}^{2+}$  adsorption isotherm of (a) DS- $\text{Fe}_3\text{O}_4/\text{MS}$  hollow microspheres and (b)  $\text{Fe}_3\text{O}_4$  hollow microspheres.

**Table S1** Langmuir and Freundlich isothermal parameters for  $\text{Pb}^{2+}$  adsorption on DS- $\text{Fe}_3\text{O}_4/\text{MS-AG}$  hollow microspheres.

Langmuir			Freundlich		
$Q_m$	b	$R^2$	k	$1/n$	$R^2$
315.475	0.137	0.99	103.33	0.217	0.78