

## Supporting Information

# One-pot Synthesis of Porous Magnetic Cellulose Bead for Pollutant Removal

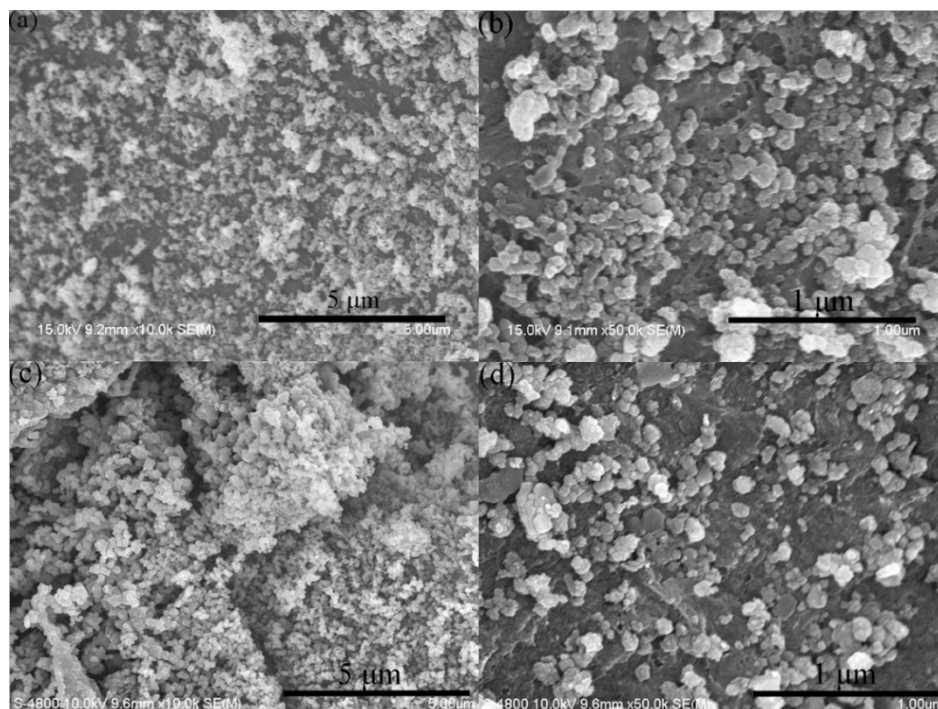
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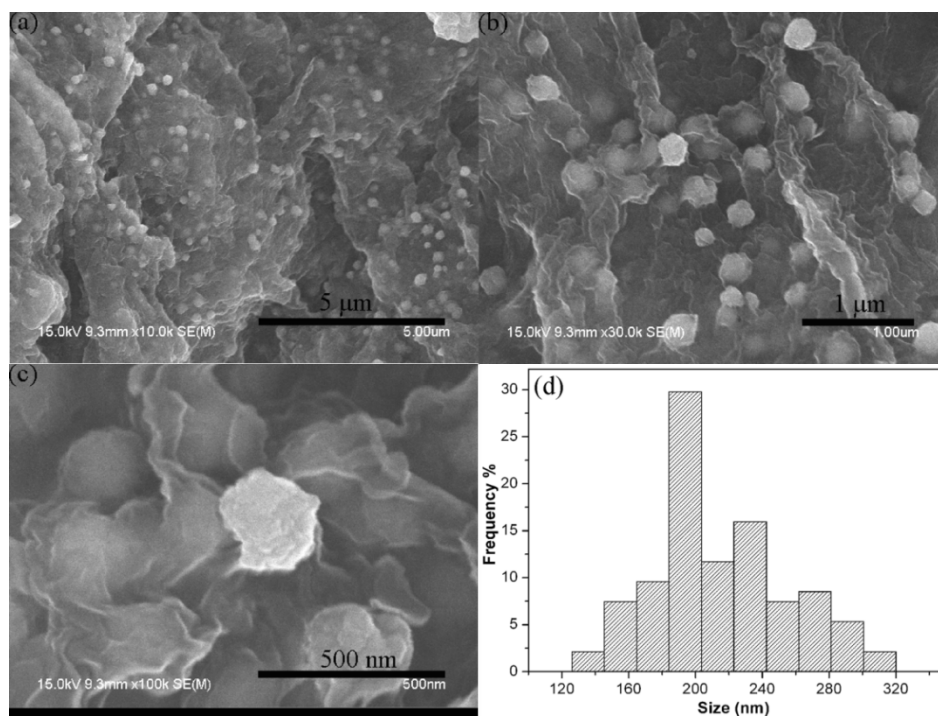
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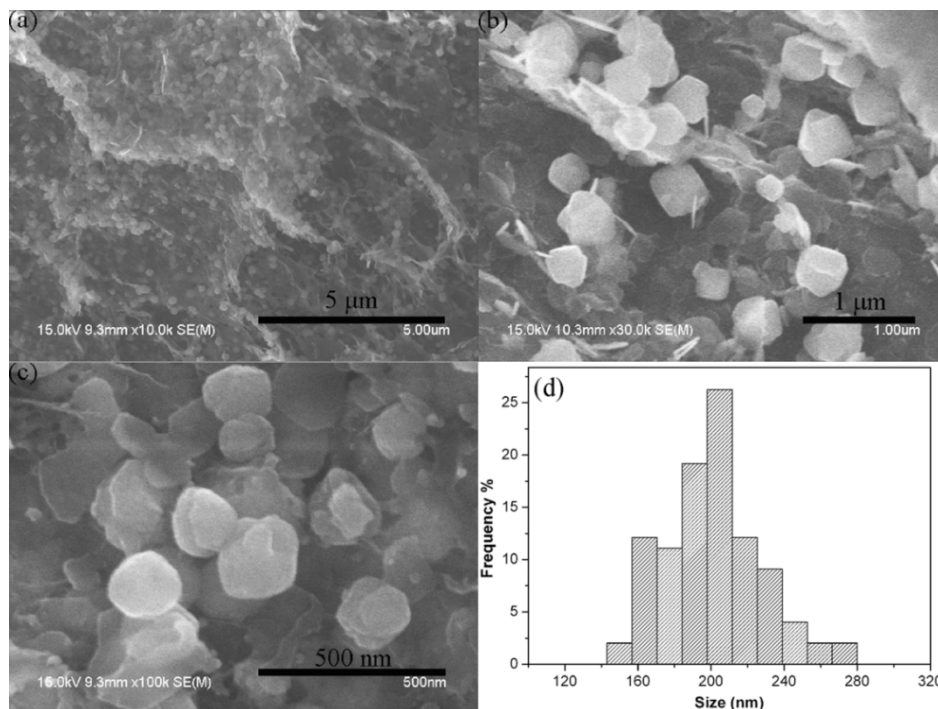
Email: [gemaofa@iccas.ac.cn](mailto:gemaofa@iccas.ac.cn); [tongsr@iccas.ac.cn](mailto:tongsr@iccas.ac.cn)



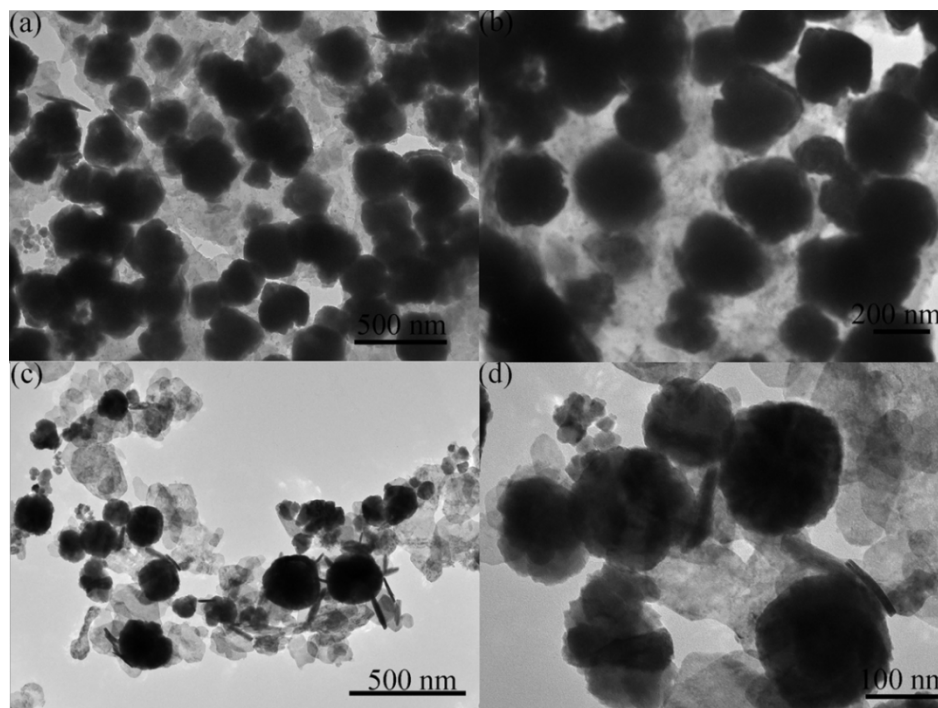
**Fig. S1** SEM images of MCB1 (a and b) and MCB3 (c and d).



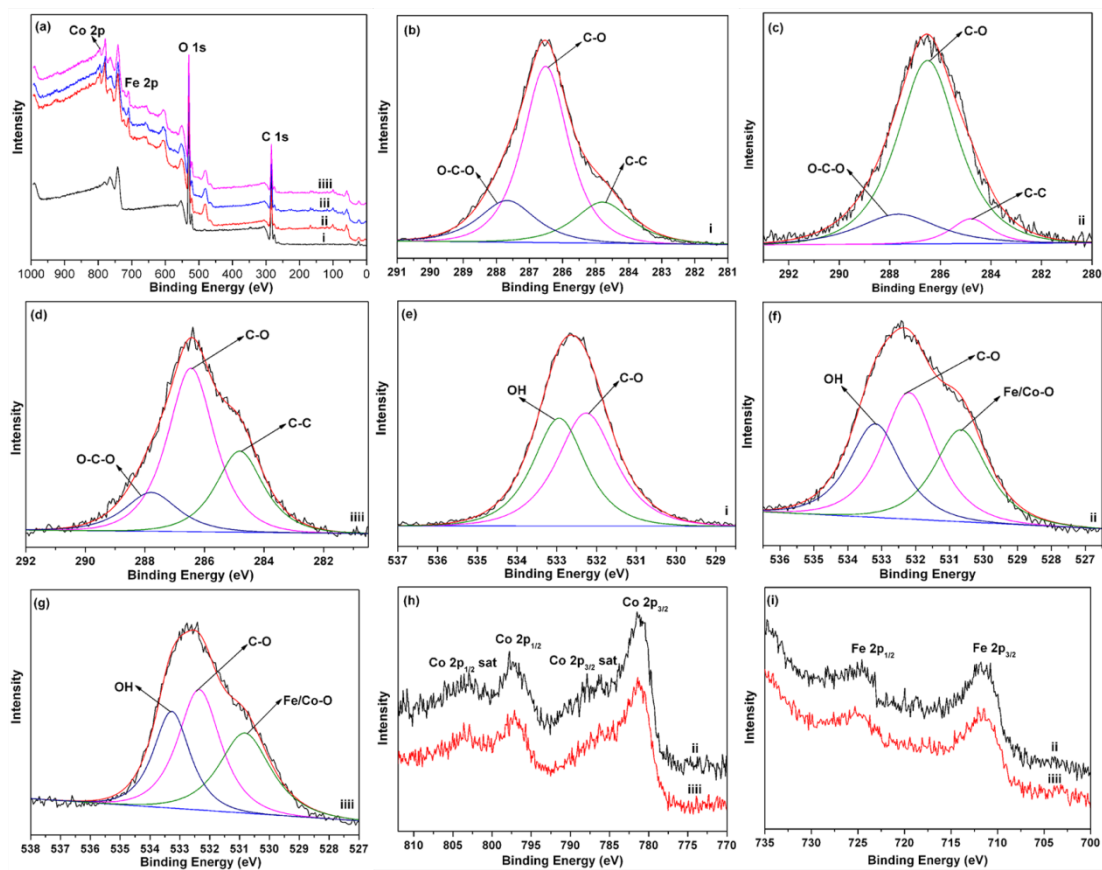
**Fig. S2** Cross-section SEM images of MCB1 (a, b and c) and size distribution of CoFe<sub>2</sub>O<sub>4</sub> nanoparticles (d).



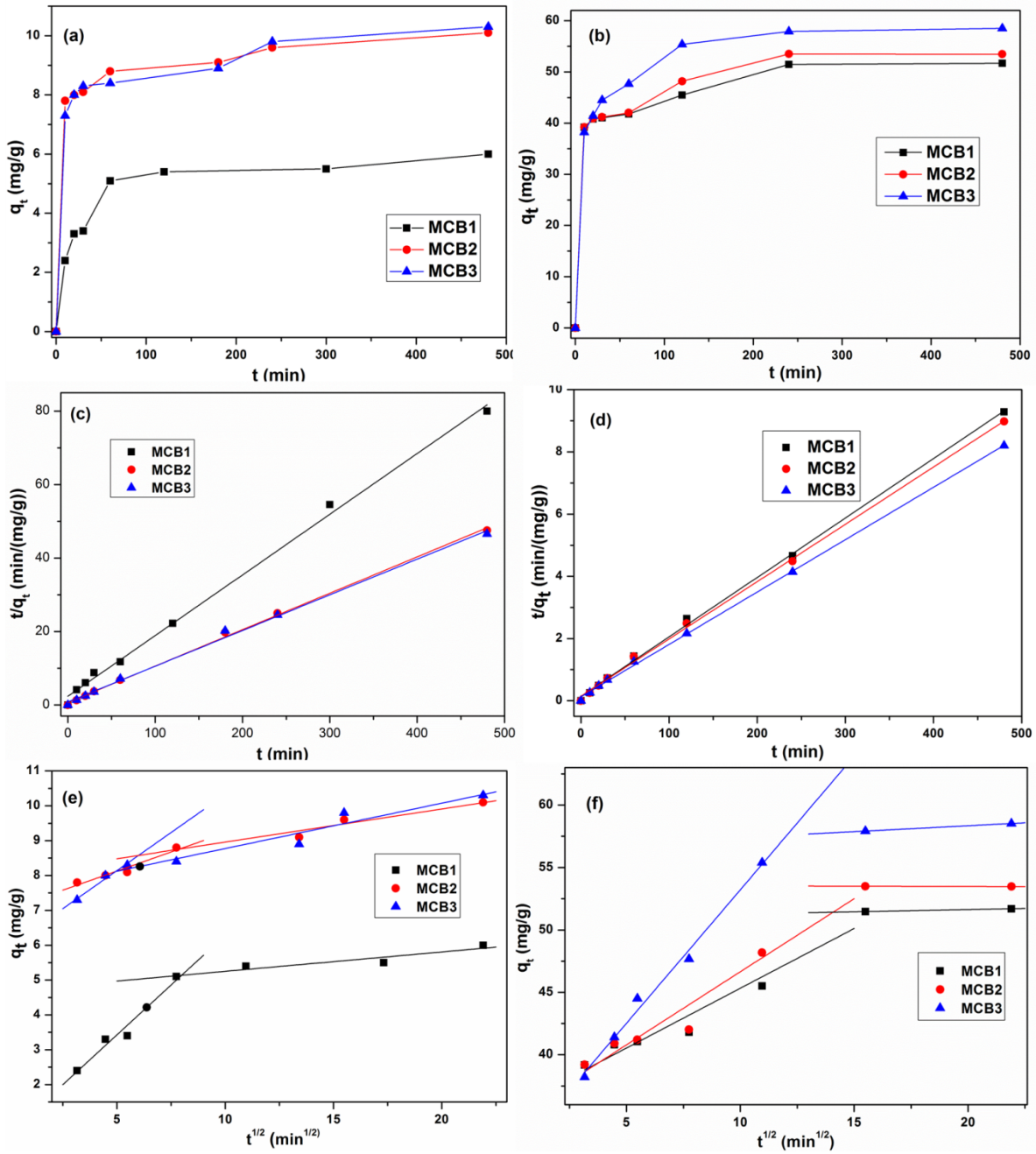
**Fig. S3** Cross-section SEM images of MCB3 (a, b and c) and size distribution of CoFe<sub>2</sub>O<sub>4</sub> nanoparticles (d).



**Fig. S4** Low-magnification TEM images (a and c) and High-magnification TEM images (b and d) of MCB1 (a and b) and MCB3 (c and d).



**Fig S5** The wide scan (a), C 1s (b, c and d), O 1s (e, f and g), Co 2p (h) and Fe 2p (i) XPS spectra of CB (i), MCB1 (ii), MCB2 (iii) and MCB3 (iiii).



**Fig. S6** Effect of contact time on the adsorption of As(V) (a ) and Pb(II) (b); pseudo-second-order kinetic plots for the adsorption of As(V) (c) and Pb(II) (d); intra-particle diffusion plots for the adsorption of As(V) (e) and Pb(II) (f) (initial concentration As(V): 30 mg/L, Pb(II): 100 mg/L)

**Table S1.** Langmuir and Freundlich parameters of As(V) and Pb(II) on the MCB

	Langmuir			Freundlich		
	$Q_{max}$ (mg/g)	$b$ (L/mg)	$R^2$	$K_f$ (mg/g)	$n$	$R^2$
As(V)						
MCB1	12.70	0.047	0.98153	1.08	1.79	0.96227
MCB2	17.90	0.1414	0.97065	3.83	2.54	0.90773
MCB3	20.27	0.080	0.98781	2.65	2.001	0.95731
Pb(II)						
MCB1	70.43	0.42	0.97996	24.82	4.63	0.93679
MCB2	87.30	0.48	0.98542	30.87	4.62	0.89472
MCB3	97.29	0.48	0.97495	33.25	4.47	0.89906