

Supplementary Information for

Facile synthesis of magnetic hierarchical MgO-MgFe₂O₄ composites and their adsorption performance towards Congo red

Xiuying Han, Peng Tian, Hongchang Pang, Qiang Song, Guiling Ning, Yanhao Yu, and Haixia Fang*

State Key Laboratory of Fine Chemicals and School of Chemical Engineering, Dalian University of Technology, Dalian 116023, China

E-mail: ninggl@dlut.edu.cn

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Experimental

Preparation of hierarchical MCH

The ethanol (95%, 50 mL) was transferred to a 250 mL three-necked flask. And $\text{MgCl}_2\text{-NH}_4\text{HCO}_3$ mixed aqueous solution (60mL, containing 0.4mol/L of $\text{Mg}(\text{HCO}_3)_2$) was added into the vigorously stirred ethanol. Then a white precipitation was collected, filtered off, and washed with water, then dispersed in 120 mL of deionized water in a 250 mL beaker. Subsequently, the suspension was maintained at the 80 °C for 2 h. After that, the white powder was collected, filtered off, washed with water and ethanol three times, and dried in blast drying oven at 60 °C for 4h

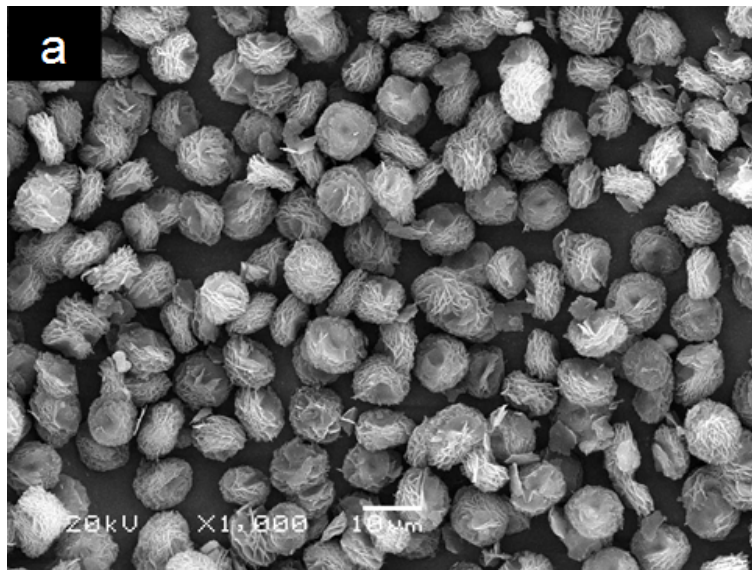


Fig. S1 SEM images of the as-synthesized MCH template.

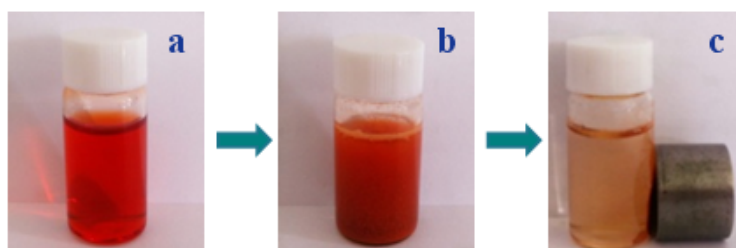


Fig.S2. Illustration of the application process of MgO-MgFe₂O₄ composites (a) CR solution (500mg/L), (b) after dispersing and shaking, (c) Magnetic separation under an external magnetic field.