

Supplementary data:

## Solvothermal synthesis of $\text{MnFe}_2\text{O}_4$ colloidal nanocrystal assemblies and their magnetic and electrocatalytic properties

Zhen Li,<sup>a,b</sup> Kai Gao,<sup>a</sup> Guangting Han,<sup>a</sup> Rongyue Wang,<sup>a,b</sup> Meng Lv,<sup>a,b</sup> Hongliang Li,<sup>a,b,\*</sup>

X. S. Zhao<sup>a,b,c</sup> and Peizhi Guo<sup>a,b,\*</sup>

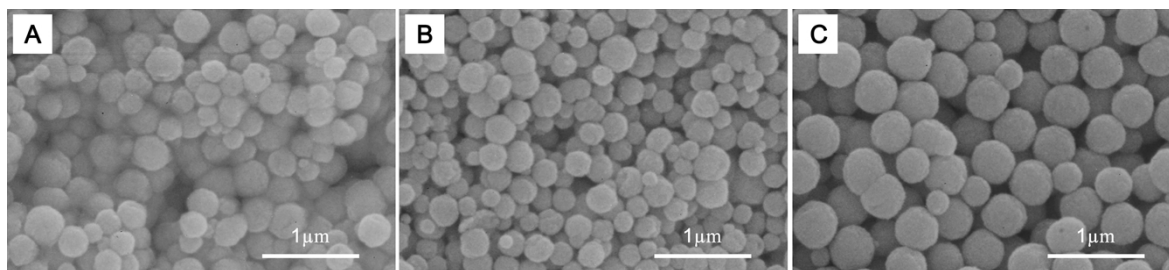
<sup>a</sup> State Key Laboratory Breeding Base of New Fiber Materials and Modern Textile, Collaborative Innovation Center for Marine Biomass Fibers, Materials and Textiles of Shandong Province, Qingdao University, Qingdao, 266071 P. R. China.

<sup>b</sup> School of Chemical Science and Engineering, Qingdao University, Qingdao, 266071 P. R. China.

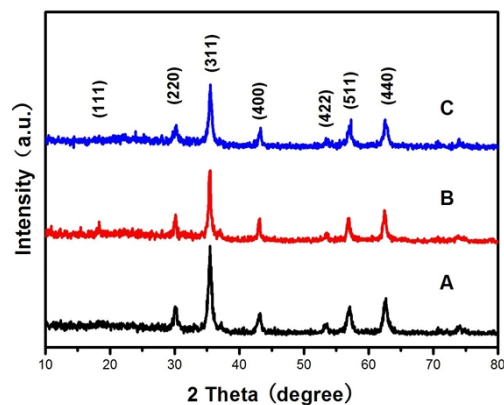
<sup>c</sup> School of Chemical Engineering, The University of Queensland, St Lucia, QLD 4072, Australia

E-mail: pzguo@qdu.edu.cn (P. Guo); guopz77@yahoo.com (P. Guo);  
lhl@qdu.edu.cn (H. Li)

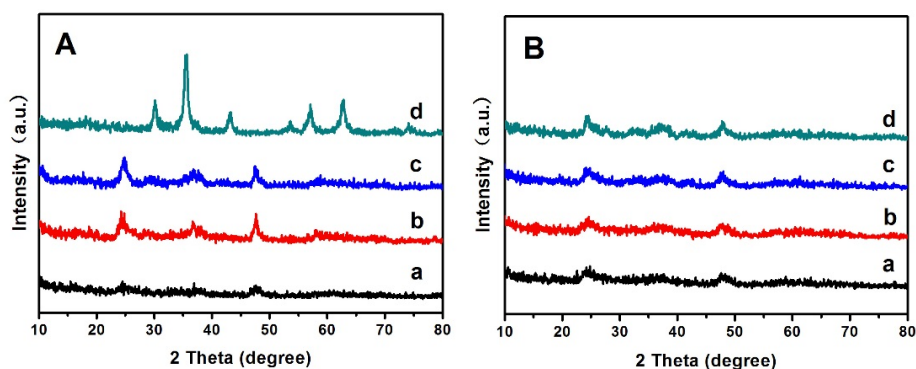
Tel: +86 532 85951290; Fax: +86 532 85955529



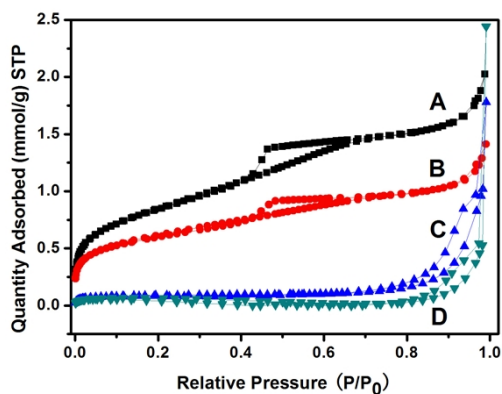
**Fig. S1.** SEM images of samples MnFe-Na5 (A), MnFe-Na15 (B), and MnFe-Na30 (C).



**Fig. S2.** XRD patterns of samples MnFe-Na5 (A), MnFe-Na15 (B), and MnFe-Na30 (C).



**Fig. S3.** XRD patterns of the products obtained from the systems containing HCOONa (A) and NH<sub>4</sub>Ac (B) with the synthetic time of (a) 0.5 h, (b) 1 h, (c) 2 h and (d) 4 h.



**Fig. S4.** Nitrogen adsorption-desorption isotherms of samples MnFe-Na10 (A), MnFe-Na20 (B), MnFe-Ac20 (C) and MnFe-Ac30 (D).