

Synthesis of Mn₂O₃/poly(styrene-co-butyl methacrylate) resin composites and their oil-absorbing properties

Tao Zhang ^{a,b}, Qian Zhang ^c, Xinpei Wang ^c, Qiurong Li ^{c*}, Jian Rong ^b, Fengxian
Qiu ^{b*}

^a Institute of Green Chemistry and Chemical Technology, Jiangsu University,
Zhenjiang 212013, Jiangsu Province, China.

^b School of Chemistry and Chemical Engineering, Jiangsu University, Zhenjiang
212013, Jiangsu Province, China.

^c Key Laboratory of Applied Chemistry, College of Environmental and Chemical
Engineering, Yanshan University, Qinhuangdao 066004, Hebei Province, China.

*Corresponding authors:

Tel./fax: +86 511 88791800.

E-mail: liqurong63@aliyun.com (Q. Li),

fxqiu@126.com (F. Qiu)

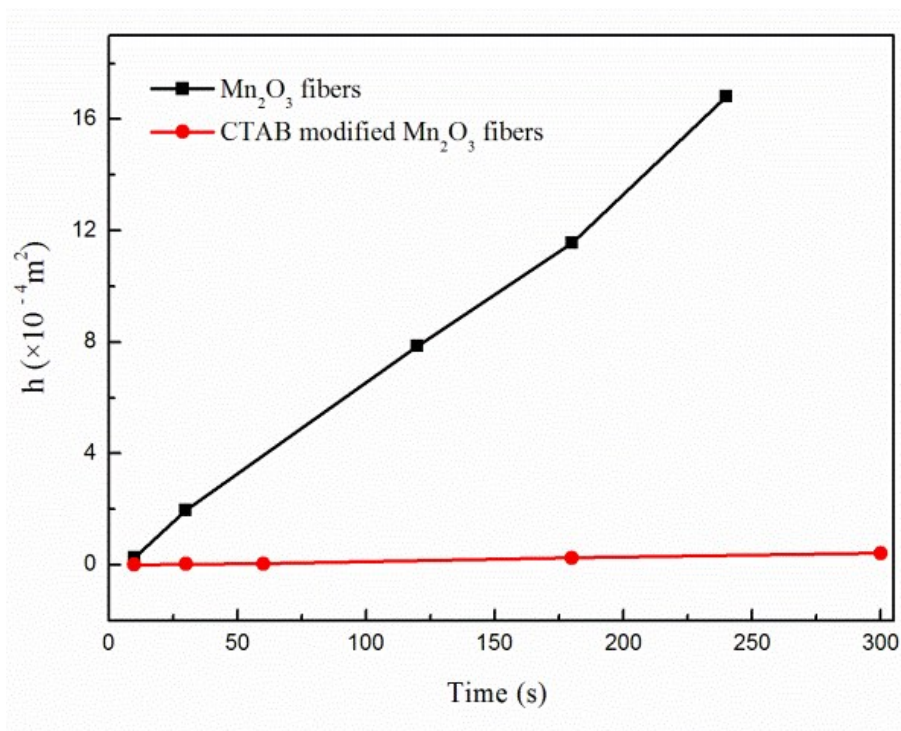


Fig. S1. Penetrating profiles of deionized water through the tubes packed with Mn_2O_3 fibers and CTAB modified Mn_2O_3 fibers (penetration height h^2 verses time t).

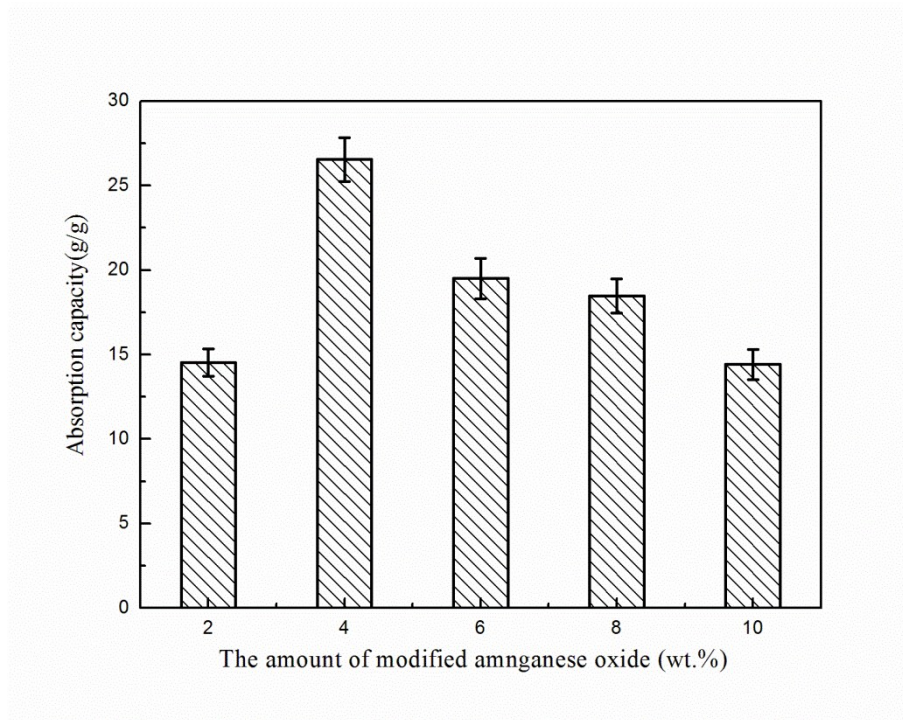


Fig.S2. Oil absorption properties of resin composites affected by the Mn_2O_3 loading.

The optimal amount of Mn_2O_3 fibers was 4%, at which higher oil absorption properties could be reached.

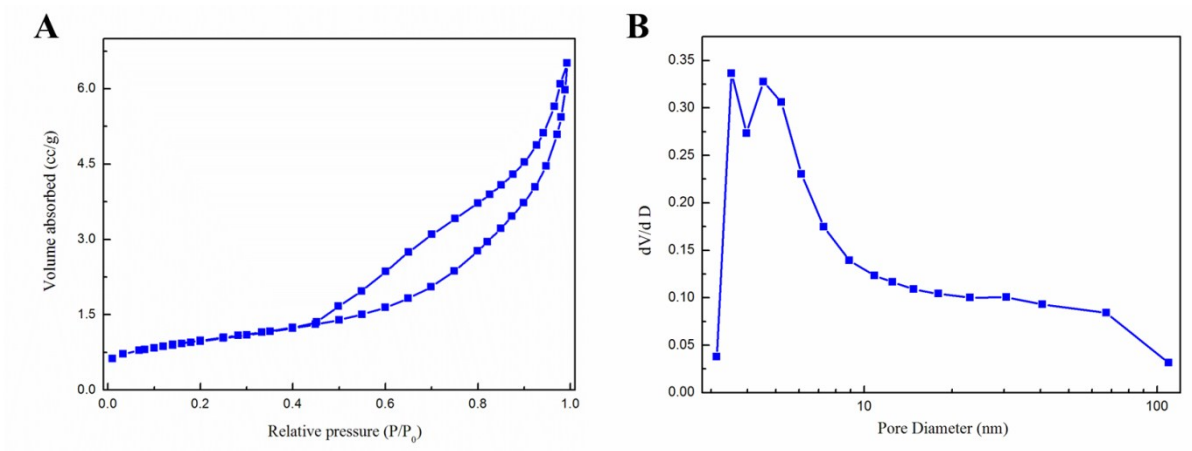


Fig. S3. N₂ adsorption–desorption isotherms and BJH pore size distributions of Mn₂O₃ fibers.

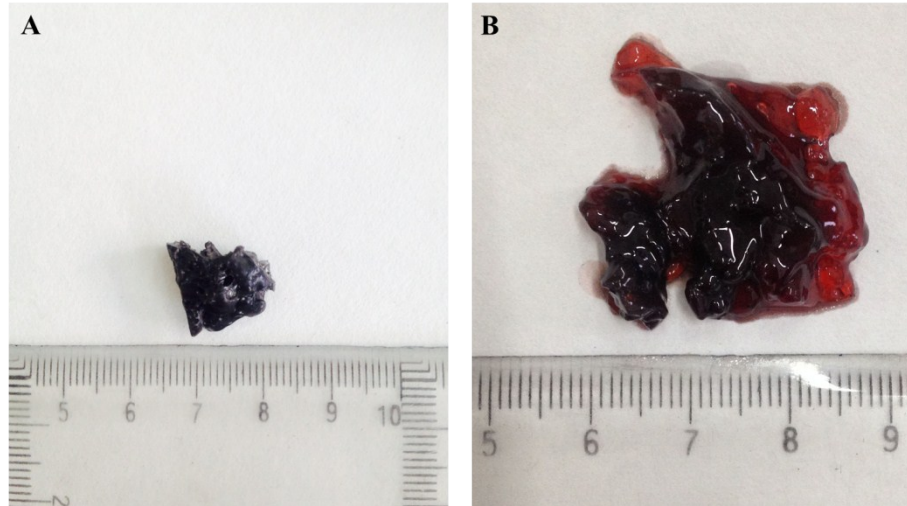


Fig.S4. Optical images of the oil absorption of resin composites (swelling properties).

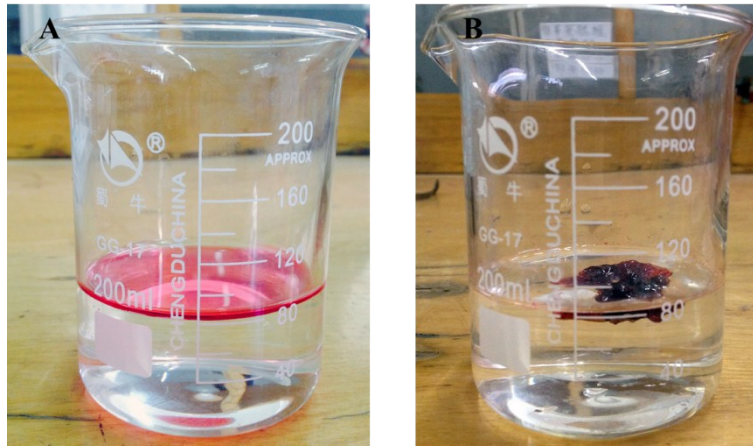


Fig. S5. Optical images of the toluene removal from the surface of water by a piece of resin composites (The toluene was dyed with Sudan II for observation).