

Quaternary ammonium functionalized Fe₃O₄@P(GMA-EGDMA) composite particles as high efficiency and dispersibility catalysts for phase transfer reaction

Xiangkun Jia^a, Xinlong Fan^a, Yin Liu^a, Wei Li^a, Lei Tian^a, Lili Fan^a, Baoliang Zhang^a, Hepeng Zhang^a and Qiyu Zhang^{*a}

Table S1. The detailed experimental conditions of the preparation of Fe₃O₄@P(GMA-EGDMA) particles

Entr	MPS modified Fe ₃ O ₄ (g)	GMA(g)	EGDMA(g)	CTAB(g)	V-50(g)	EtOH(mL)	H ₂ O(mL)
Y							
1	0.05	0.2	0.02	0.02	0.02	8	60
2	0.05	0.4	0.04	0.02	0.02	8	60
3	0.05	0.6	0.06	0.02	0.02	8	60
4	0.05	0.8	0.08	0.02	0.02	8	60
5	0.05	1.0	0.10	0.02	0.02	8	60

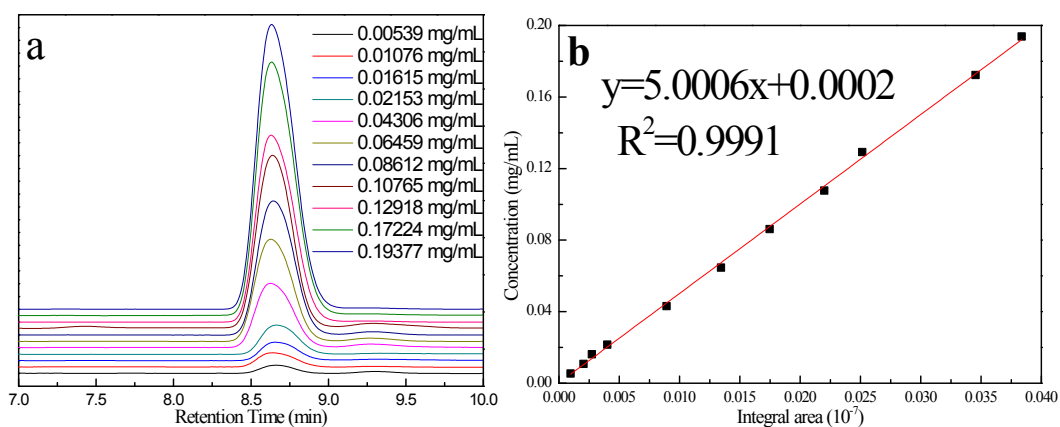


Fig. S1. (a) The curves of different concentrations of dibenzyl ether measured by HPLC; (b) the standard curve of concentration of dibenzyl ether vs. integral area measured by HPLC.

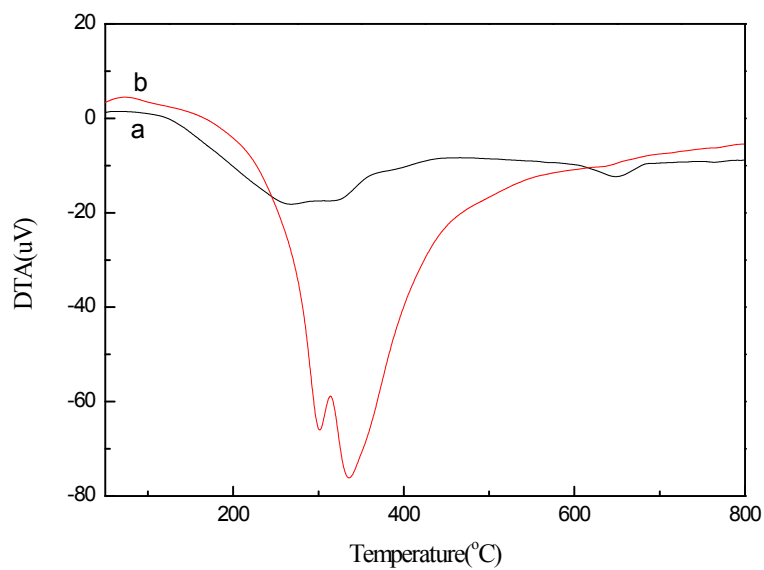


Fig. S2. The DTA curves of Fe_3O_4 (a) and $\text{Fe}_3\text{O}_4@\text{PGMA}$ (b).

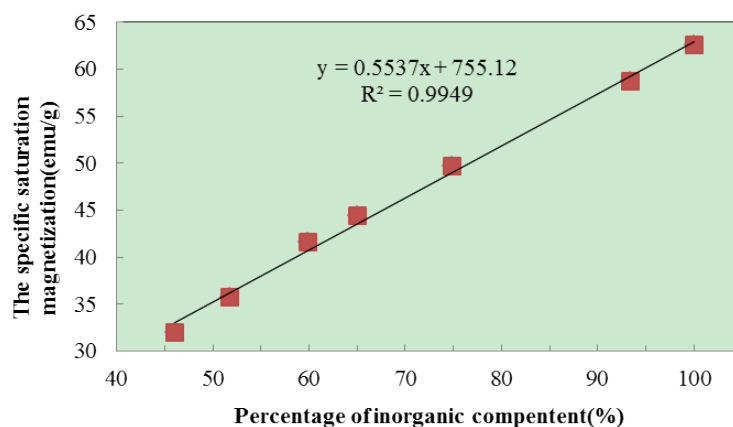


Fig. S3. The linear relationship between the percentages of inorganic component and the specific saturation magnetizations.

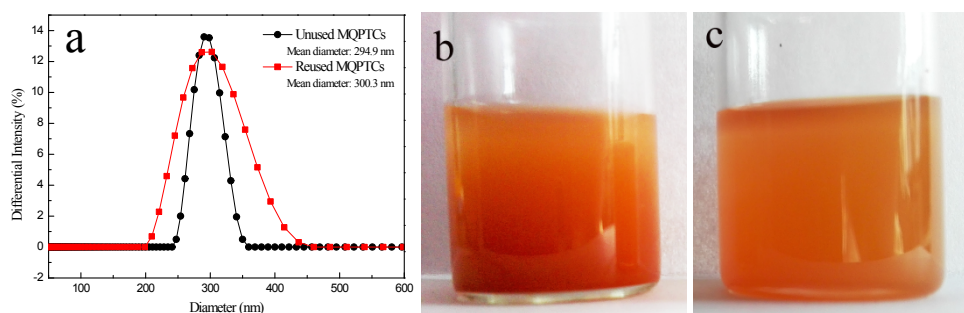


Fig. S4. (a) The particle size distributions of unused MQPTCs and MQPTCs reused for 8 times; Photographs of MQPTCs(b) and MQPTCs reused for 8 times(c) dispersed in water after standing for 6 h.