

Supporting information

One-Step Synthesis of Superparamagnetic Monodisperse Porous Fe₃O₄

Hollow and Core-Shell Spheres

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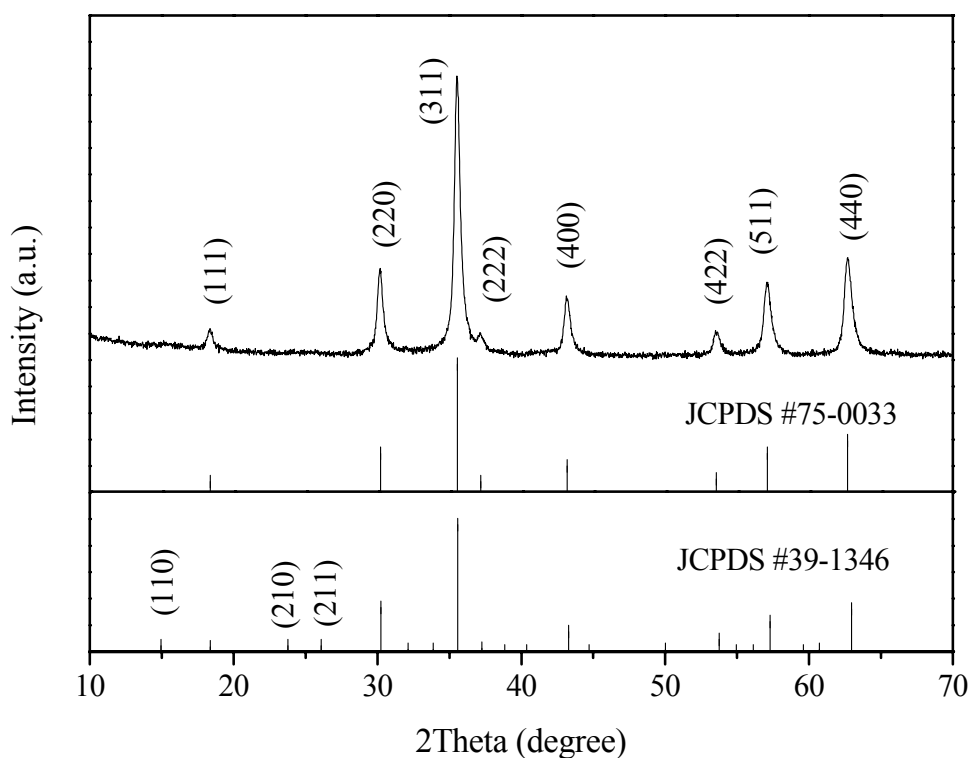


Figure S1. XRD pattern of the typical sample and the JCPDS cards #75-0033 (Fe₃O₄), # 39-1346 (γ-Fe₂O₃)

Table S1. The d values, intensities of the peaks in the XRD pattern of the typical sample and the JCPDS cards #75-0033 (Fe_3O_4), # 39-1346 ($\gamma\text{-Fe}_2\text{O}_3$).

Sample			JCPDS #75-0033		JCPDS #39-1346	
(hkl)	d value [$\text{\AA}$]	Intensity [%]	d value [$\text{\AA}$]	Intensity [%]	d value [$\text{\AA}$]	Intensity [%]
(111)	4.8387	7	4.8405	7	4.8220	4
)	2.9626	30	2.9641	29	2.9530	35
(220)	2.5248	100	2.5278	100	2.5177	100
)	2.4190	6	2.4202	7	2.4119	3
(311)	2.0943	20	2.0960	20	2.0886	16
)	1.7093	8	1.7113	8	1.7045	10
(222)	1.6118	26	1.6135	24	1.6073	24
)	1.4808	35	1.4821	34	1.4758	34
(422)						
)						
(511)						
)						
(440)						
)						

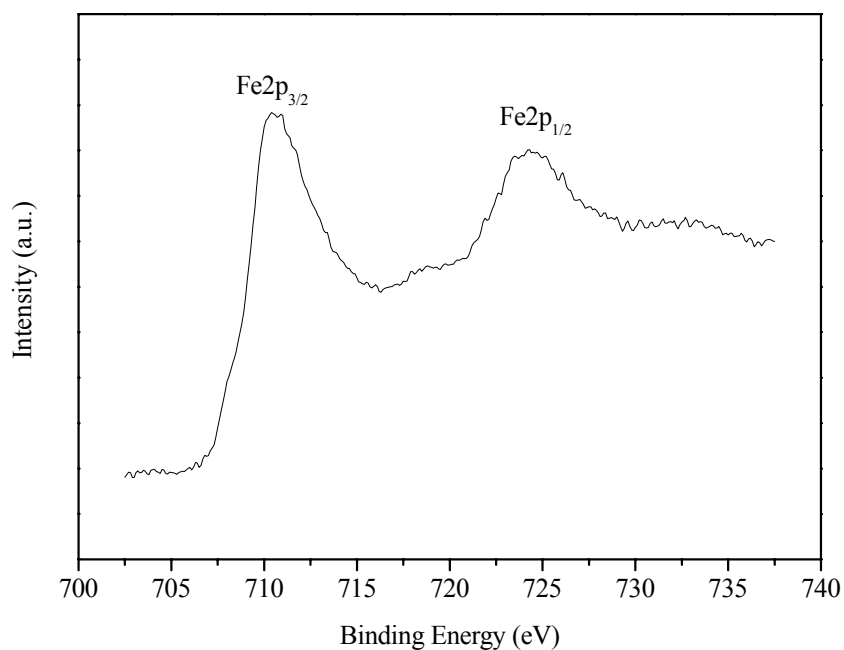


Figure S2. XPS spectra of the typical sample.

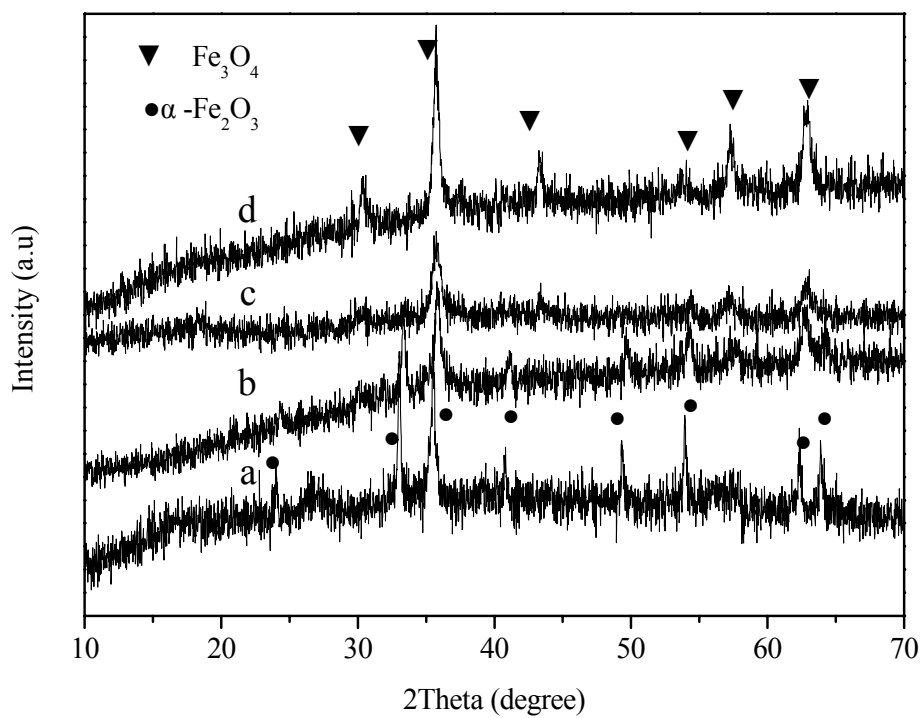


Figure S3. XRD pattern of the product prepared with different concentration of citrate: (a) 0, (b) 0.0125 M, (c) 0.025 M, (d) 0.05 M. Other parameters are the same with typical synthesis.

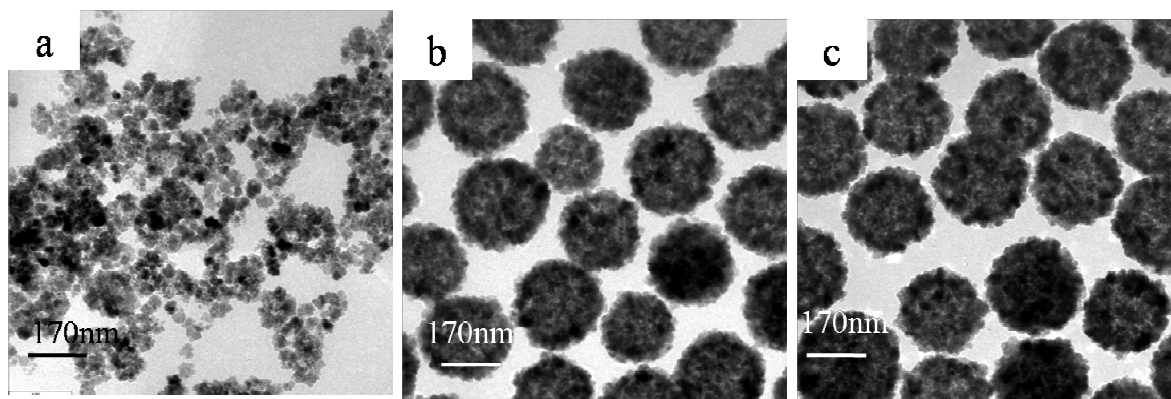


Figure S4. TEM images of the product synthesized with different concentration of citrate: (a) 0.075 M, (b) 0.125 M, (c) 0.15 M. Other experimental parameters are the same with typical synthesis.

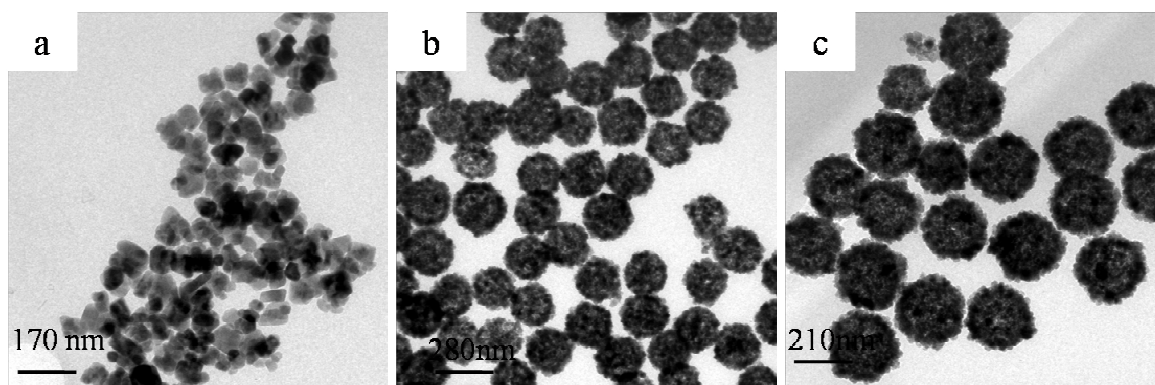


Figure S5. TEM images of the product synthesized with different concentration of PAM: (a) 0, (b) 10 g/L, (c) 15 g/L. Other conditions were kept constant with typical synthesis.