

Electronic Supplementary Information

## An improved Stöber method towards uniform and monodisperse $\text{Fe}_3\text{O}_4@C$ nanospheres

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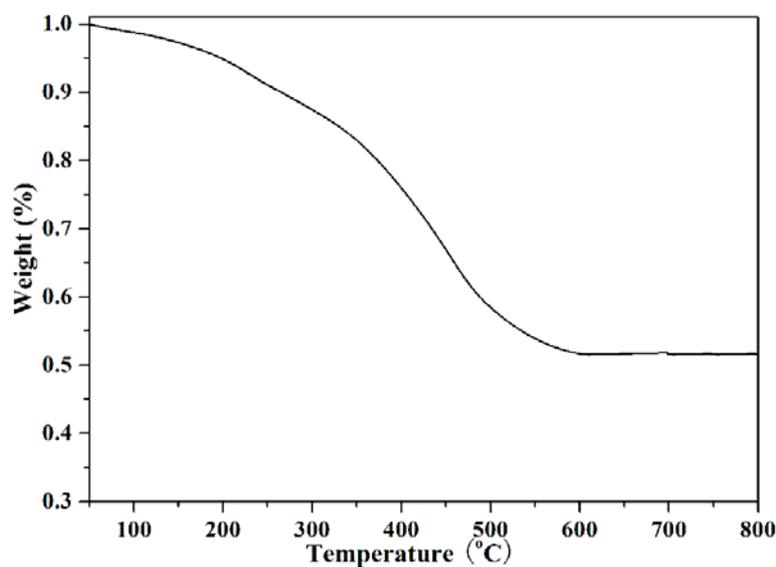


Figure S1. TGA curve of the  $\text{Fe}_3\text{O}_4@$ polymer sample.

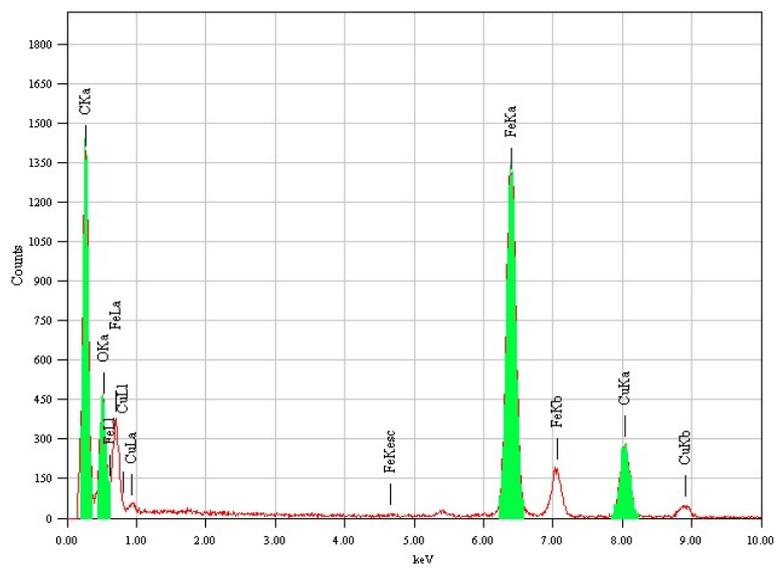


Figure S2. The EDS spectrum of  $\text{Fe}_3\text{O}_4@\text{C}$  sample.

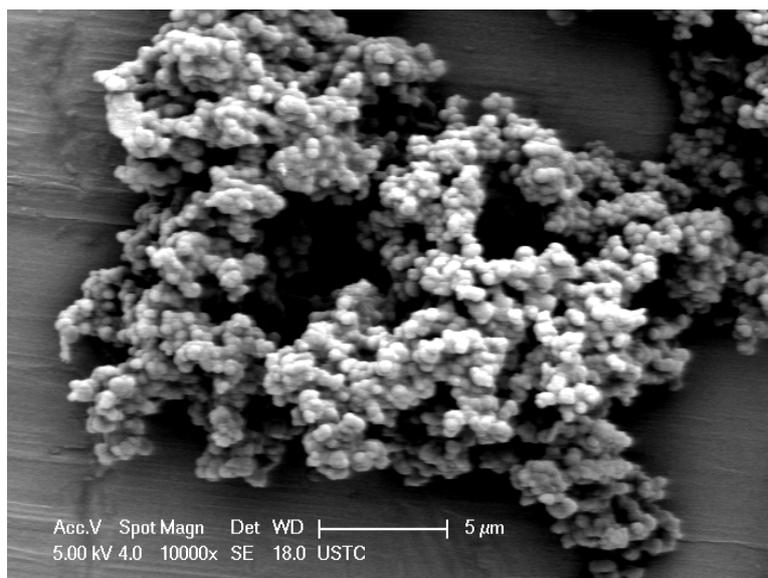


Figure S3. The SEM images of Fe<sub>3</sub>O<sub>4</sub>@polymer prepared without citrate groups outside Fe<sub>3</sub>O<sub>4</sub> surface.

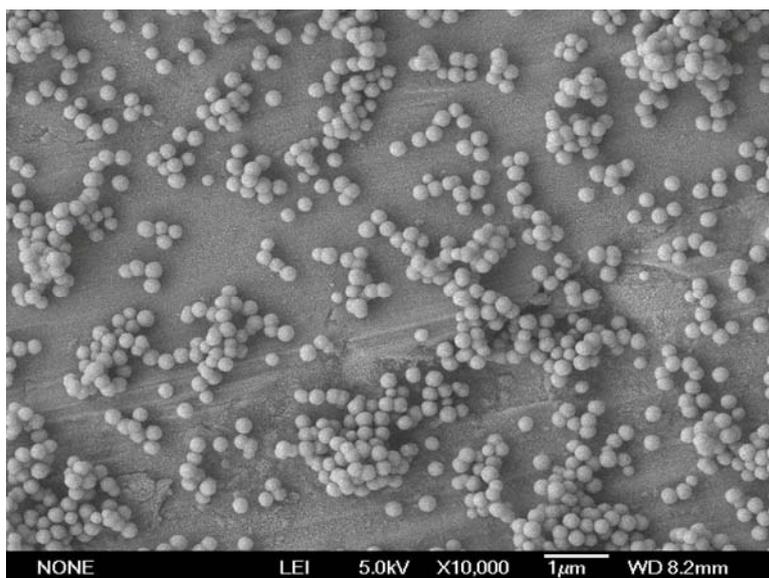


Figure S4. The SEM images of Fe<sub>3</sub>O<sub>4</sub>@polymer prepared in water ethanol mixed solution (water:ethanol=7:3).

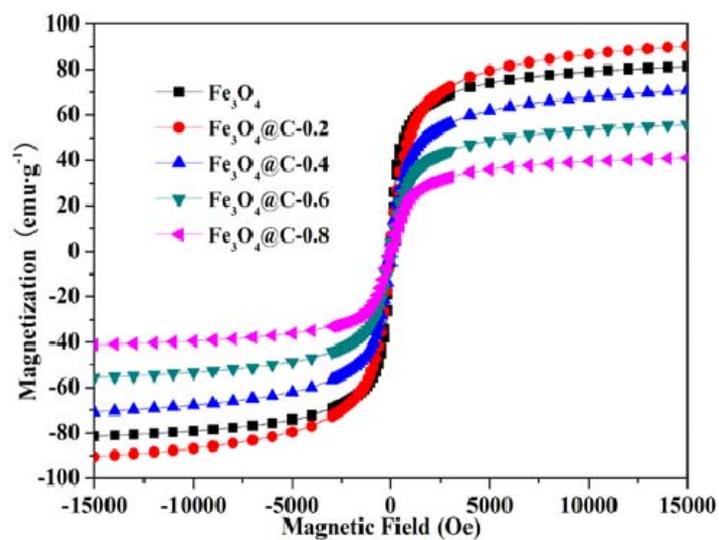


Figure S5 The room temperature hysteresis curves of Fe<sub>3</sub>O<sub>4</sub>, and Fe<sub>3</sub>O<sub>4</sub>@C prepared with different content of resorcinol and formaldehyde.



Figure S6 Photographs of  $\text{Fe}_3\text{O}_4@\text{C}$  magnetic separation phenomenon.