

## Electronic Supplementary Information For

# Novel Strategy to Fabricate Multifunctional $\text{Fe}_3\text{O}_4@\text{C}@\text{TiO}_2$ Yolk-Shell Structures as a Magnetically Recyclable Photocatalyst

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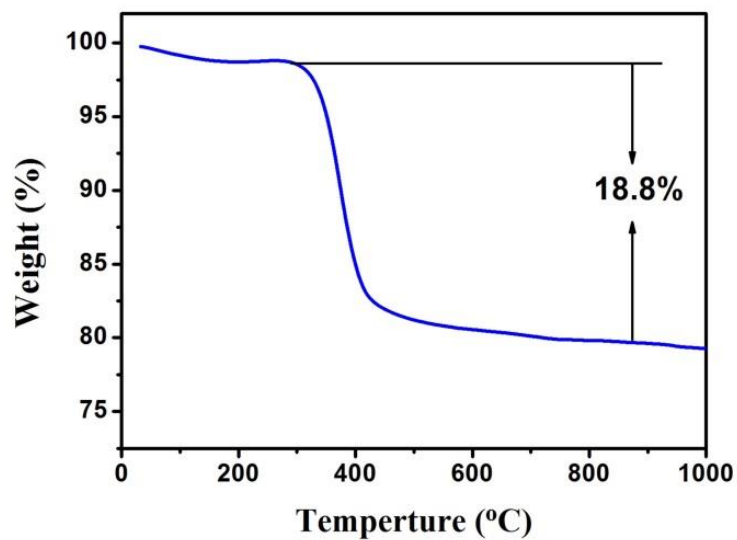


Figure S1. Thermogravimetric analysis (TG) curve of the  $\text{Fe}_3\text{O}_4@\text{C}@\text{TiO}_2$  yolk-shell NCs.

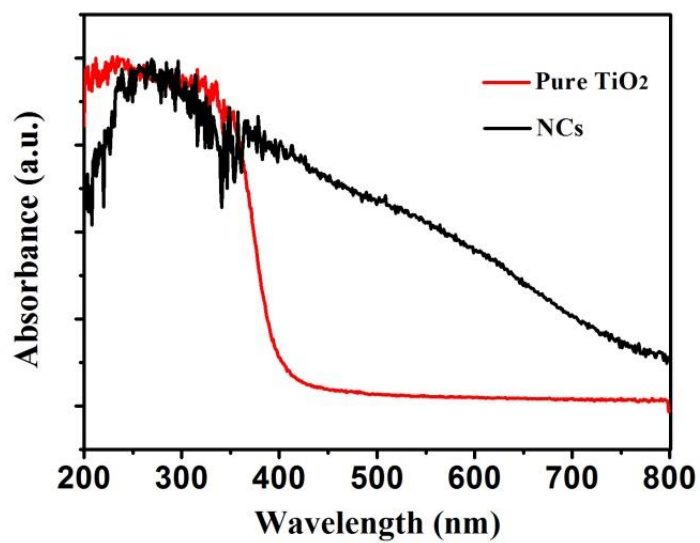


Figure S2. UV-vis diffuse reflectance spectra (DRS) of pure  $\text{TiO}_2$  and  $\text{Fe}_3\text{O}_4@\text{C}@\text{TiO}_2$  yolk-shell NCs.

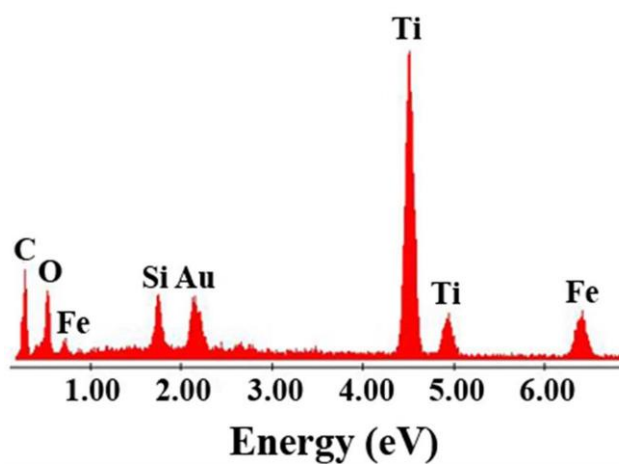


Figure S3. Energy dispersive X-ray (EDX) spectrum of  $\text{Fe}_3\text{O}_4@\text{C}@\text{TiO}_2$  yolk-shell NCs.

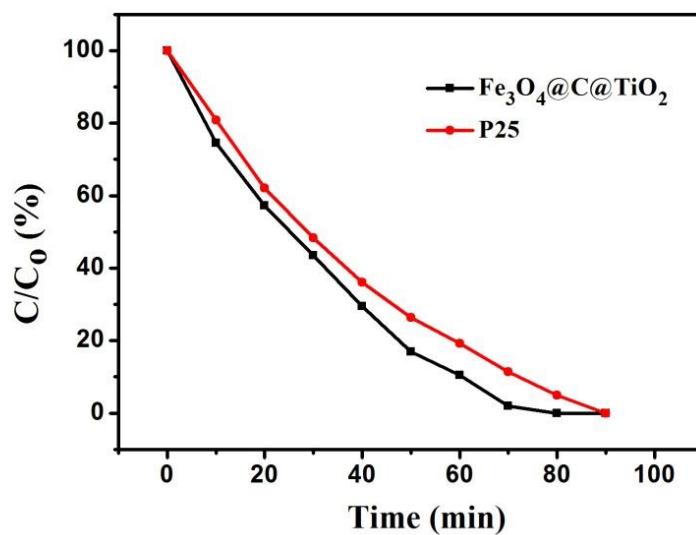


Figure S4. The photodegradation of RhB by using the  $\text{Fe}_3\text{O}_4@\text{C}@\text{TiO}_2$  yolk-shell NCs and Degussa P25  $\text{TiO}_2$ .