

# Z-scheme mechanism for methylene blue degradation over Fe<sub>2</sub>O<sub>3</sub>/g-C<sub>3</sub>N<sub>4</sub> nanocomposite prepared via one-pot exfoliation and magnetization of g-C<sub>3</sub>N<sub>4</sub>

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## Supplementary materials

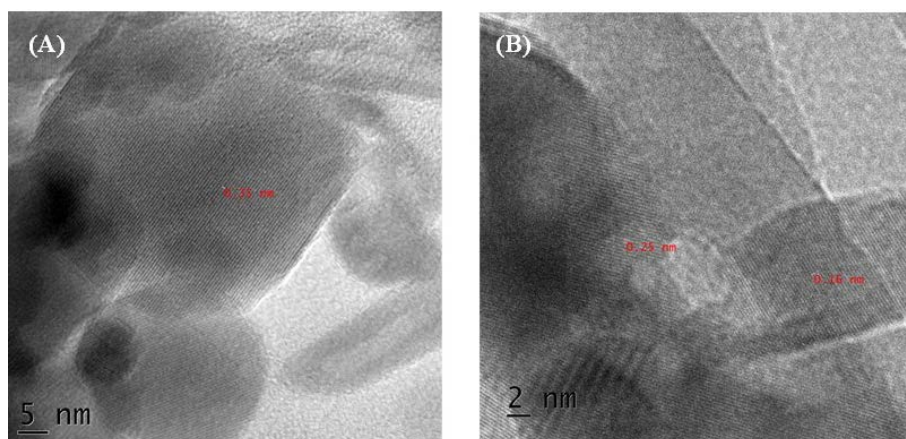


Fig. S1 HRTEM images of (A) the Fe<sub>2</sub>O<sub>3</sub>/g-C<sub>3</sub>N<sub>4</sub> nanocomposite and (B) bare Fe<sub>2</sub>O<sub>3</sub>.

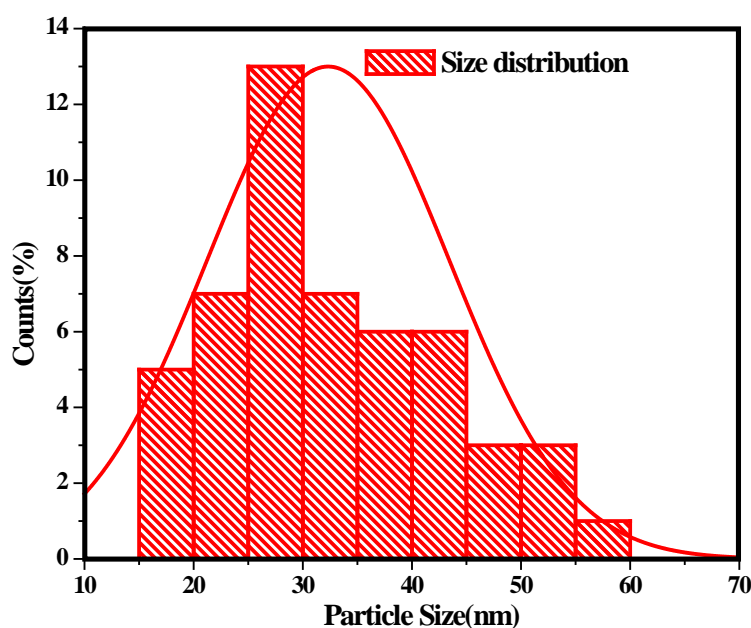
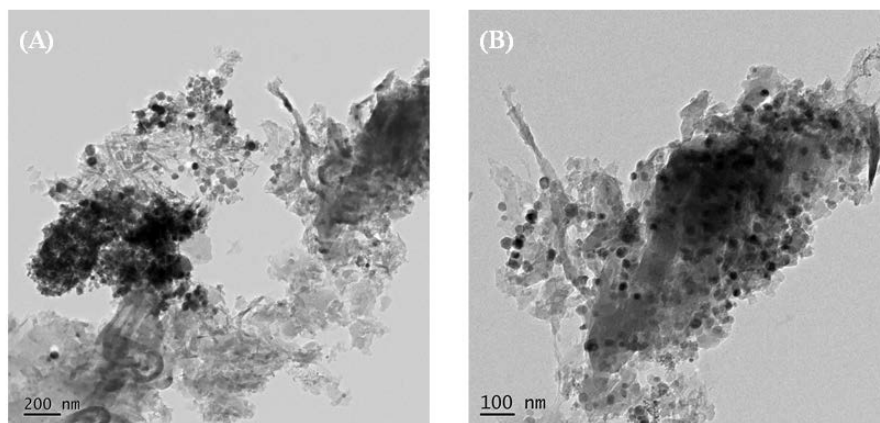
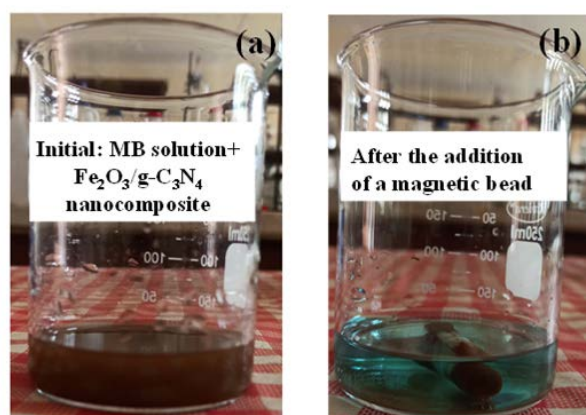


Fig. S2 The Fe<sub>2</sub>O<sub>3</sub> particle size analysis of TEM micrograph (histogram).



**Fig. S3** TEM images of the  $\text{Fe}_2\text{O}_3/\text{g-C}_3\text{N}_4$  nanocomposite.



**Fig. S4** The photodegradation system (a) before and (b) after the addition of a magnetic bead.