

Supplementary Information



## Ag<sub>2</sub>O and NiO Decorated CuFe<sub>2</sub>O<sub>4</sub> with Enhanced Photocatalytic Performance to Improve the Degradation Efficiency of Methylene Blue

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**Figure S1.** Dependance of photodegradation of MB dye on sintering temperature in Muffle furnace. (a) Degradation of MB in samples sintered at different temperatures; (b) The pseudo-first-order reaction kinetics for MB degradation with different samples.



**Figure S2.** Degradation of MB with Ni/CuFe<sub>2</sub>O<sub>4</sub> and Ag<sub>2</sub>O/CuFe<sub>2</sub>O<sub>4</sub> under simulated solar irradiation. Experimental conditions: H<sub>2</sub>O<sub>2</sub> 100 uL, Catalyst 10 mg. The degradation rates of MB by Ni/CuFe<sub>2</sub>O<sub>4</sub> and Ag<sub>2</sub>O/CuFe<sub>2</sub>O<sub>4</sub> were 58.92% and 68.91% respectively, which are both higher than CuFe<sub>2</sub>O<sub>4</sub>(57.88%).



**Figure S3.** Effect of  $H_2O_2$  dosage on the degradation rate of MB. (a) MB degradation with different  $H_2O_2$  dosage; (b) The pseudo-first-order reaction kinetics for MB degradation with different  $H_2O_2$  dosage.

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