Supplementary Information

Porous CuO nanofibers derived from a Cu-based coordination polymer as photocatalyst for the degradation of rhodamine B

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Table S1

The photodegradation performances of CuO or CuO heterostructures for organic dyes in the reported liteature.

photocatalyst	photocatalyst mass	Inicial dye concentration	Experimental conditions	Dye degradation rate	Repeated photocatalytic degradation	Ref
CuO	100 mg	10 mg/L	A 300 W Xe lamp with an UV cutoff filter ($\lambda \geq 420$ nm)	After 40 min of irradiation: 92% of RhB	No cycle test	7(a)
CuO	100 mg	1 mg/L	under visible light ($\lambda \geq 420$ nm)	After 60 min of irradiation: 67% of RhB	No cycle test	7(b)
CuO	20 mg	10 mg/L	A 365 nm ultraviolet (UV) light (300 W)	After 105 min of irradiation: 86% of RhB	86% degradation efficiency after the fifth cycling	7(c)
CuO-g-C_3N_4	40 mg	10 mg/L	under visible light ($\lambda \geq 400$ nm)	After 20 min of irradiation: 94% of RhB	94% degradation efficiency after the third cycling	7(d)
CuO/GNS	20 mg	5 mg/L	A 500 W Xe lamp with an UV cutoff filter ($\lambda \geq 400$ nm)	After 15 min of irradiation: 97.22% of RhB	90% degradation efficiency after the fifth cycling	44
CuO	5 mg	10 mg/L	under visible light ($\lambda \geq 420$ nm)	After 160 min of irradiation: 96% of RhB	96% degradation efficiency after the fifth cycling	Our work

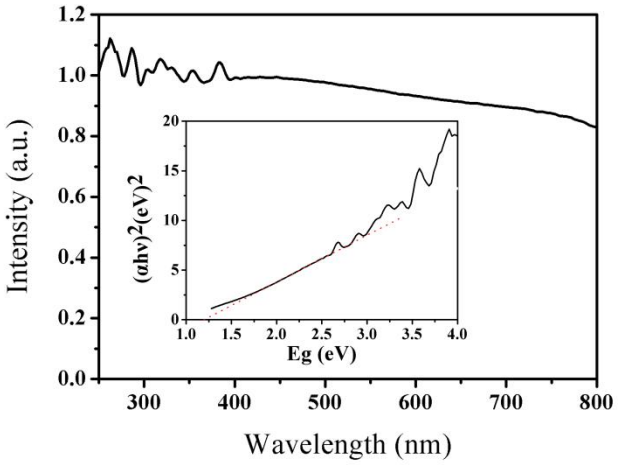

Fig. S1. UV-vis diffuse reflectance spectrum and the energy band gap (insert) of commercial CuO.

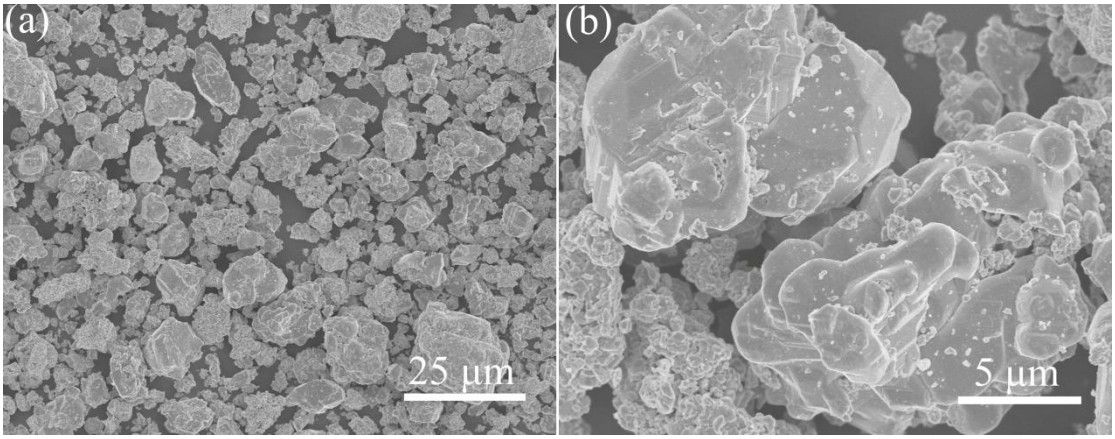

Fig. S2. SEM images of commercial CuO (a, b).

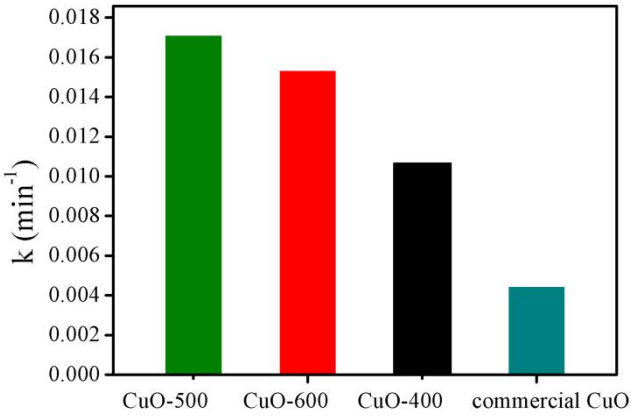

Fig. S3. Degradation rate constants of the CuO-T nanofibers and commercial CuO

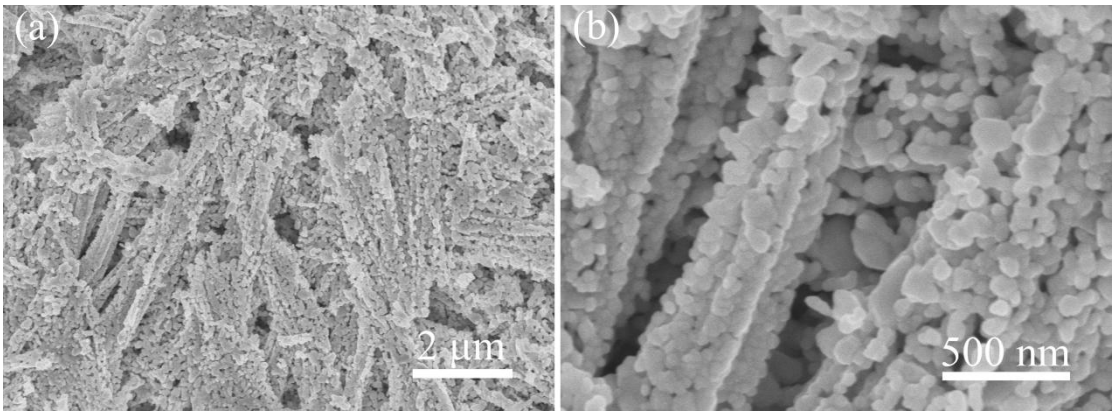

Fig. S4. SEM images of CuO-500 nanofibers after four cycles photocatalytic reaction (a, b).