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Supporting Information

Controllable preparation of CuO/Cu₂O Composite particles with enhanced photocatalytic performance

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Table S1. Synthetic methods and photocatalytic properties of copper-based composites.

product	Size	shape	Synthesis method	dye	Light source	Degradation Amount(g/g)	Time (min)	cocatalyst	Ref
CuO/Cu ₂ O	300-800nm	Nanosheets, octahedrons	low-temperature solution	MO, RhB	visible-light	0.0273, 0.0013	300, 180	H ₂ O ₂ , without H ₂ O ₂	¹
CuO/Cu ₂ O	1.5-3 μ m	mesoporous, hollow microsphere	hydrothermal	RhB	UV-light	~0.0017	120	/	²
CuO/Cu ₂ O	3-5 μ m	mesoporous, hollow microsphere	hydrothermal	MO	visible-light	0.0123	300	/	³
CuO/Cu ₂ O	~2 μ m	CuO flakes encloses hollow Cu ₂ O cube	wet-etching (hydrothermal)	4-NP	/	0.557	15	NaBH ₄	⁴
CuO/Cu ₂ O	~1 μ m	nanosphere of CuO on Cu ₂ O surface	wet chemical	MO	visible-light	0.030	120	/	⁵
CuO/Cu ₂ O	100nm	sphere	thermal decomposition	RhB	Visible light	0.0485	5	H ₂ O ₂	our work

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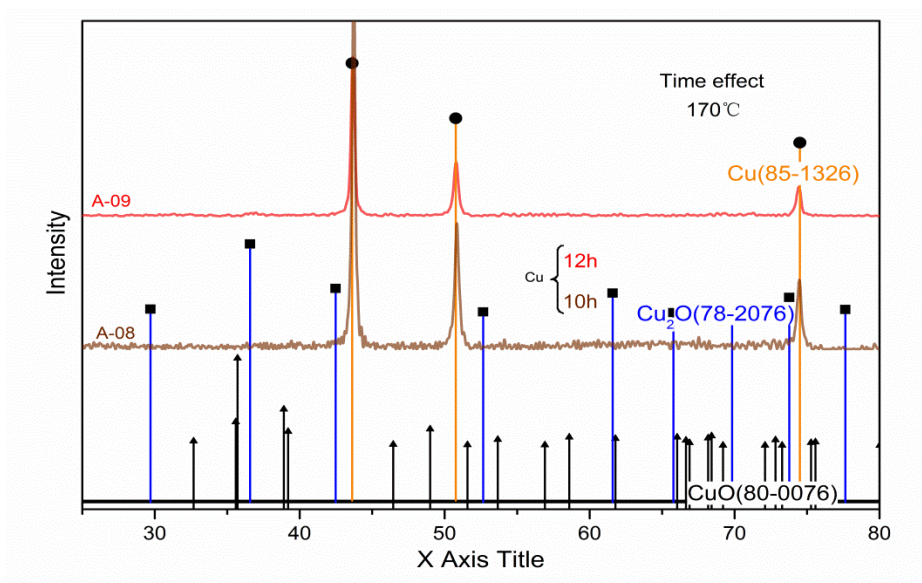


Fig. S1 The XRD patterns of A-08 and A-09 at 170°C.

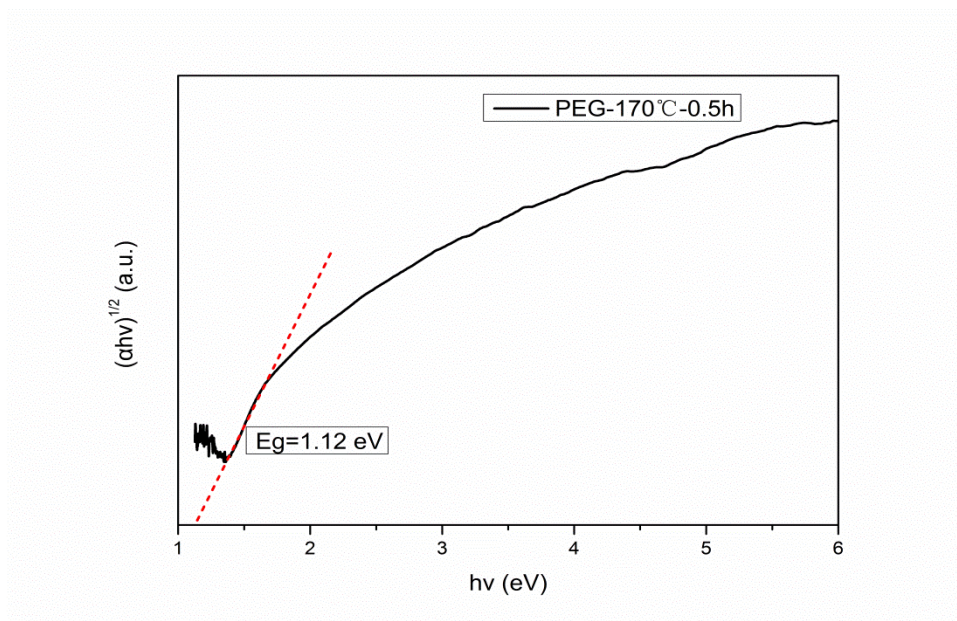


Fig. S2 The band gap (E_g) of A-01(0.5h) at 170°C.

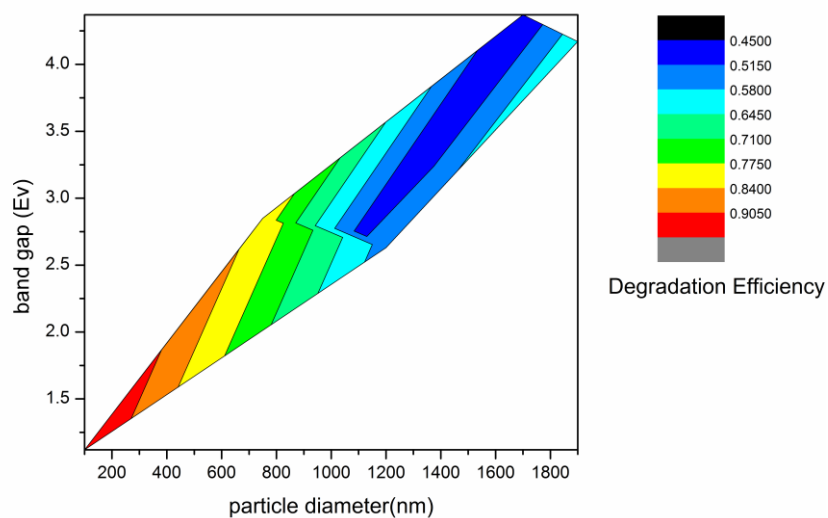


Fig. S3 The influence of band gap and morphology on the photocatalytic performance.

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