Electronic Supplementary Material (ESI) for Journal of Materials Chemistry
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Electronic Supplementary Information:

Sunlight-Driven Photodegradation of Organic Pollutants Catalyzed by $TiO_2/(ZnS)_x(CuInS_2)_{1-x}$ Nanocomposites

Yuhan Lin,[a] Fang Zhang,[b] Daocheng Pan,[a*] Hexing Li,[b*] Yunfeng Lu[c*]

[a]*State Key Laboratory of Rare Earth Resource Utilization, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, 5625 Renmin Street, Changchun 130022, China;*

[b]*The Education Ministry Key Lab of Resource Chemistry and Shanghai Key Laboratory of Rare Earth Functional Materials, Shanghai Normal University, Shanghai 200234, China*

[c]*Department of Chemical Engineering, University of California, Los Angeles, CA, USA, 90095*

Table S1. Carbon concentration (mol%) of $TiO_2/(ZnS)_{0.8}(CuInS_2)_{0.2}$ nanocomposites before and after sintering with/without water vapor. The data were recorded using the Elementar Analysensysteme (GmbH VarioEL).

	before sintering	N_2+H_2O	N_2
Content of carbon	30.80	5.697	9.33

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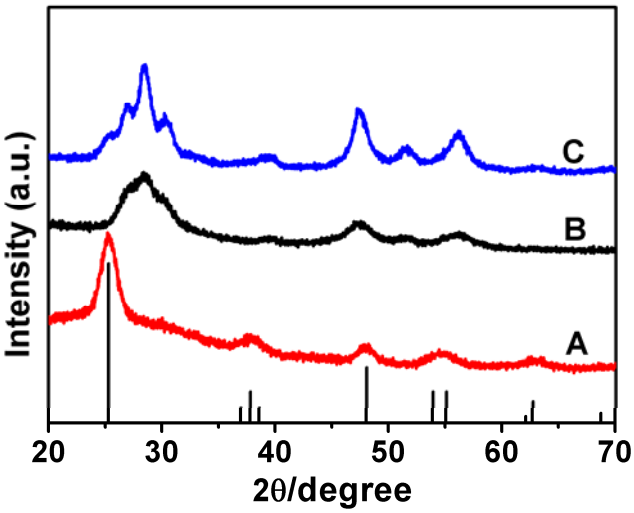

Figure S1. XRD patterns of oleic acid-capped TiO_2 (A) and $(ZnS)_{0.8}(CuInS_2)_{0.2}$ nanocrystals (B) as well as $TiO_2/(ZnS)_{0.8}(CuInS_2)_{0.2}$ (C) nanocomposites after removal of oleic acid. The vertical lines at the bottom correspond to the standard XRD pattern of anatase TiO_2 (JCPDS No.21-1272).

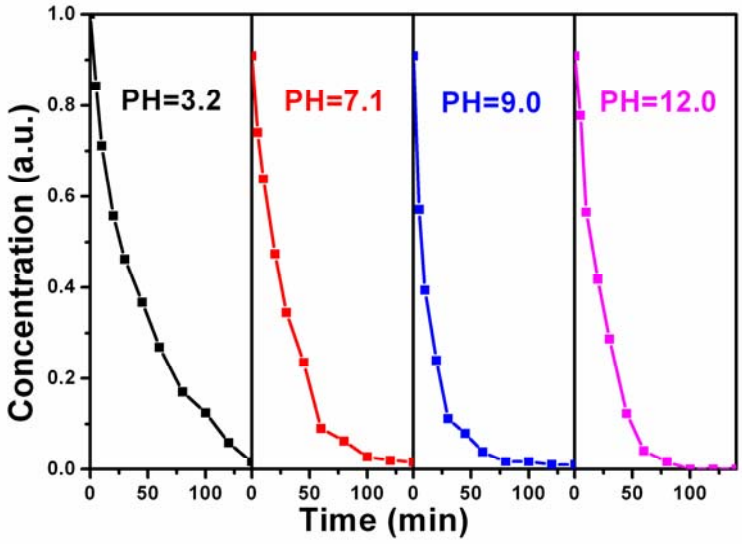

Figure S2. Effect of pH value on the degradation efficiency of R6G catalyzed by $TiO_2/(ZnS)_{0.8}(CuInS_2)_{0.2}$ nanocomposites.

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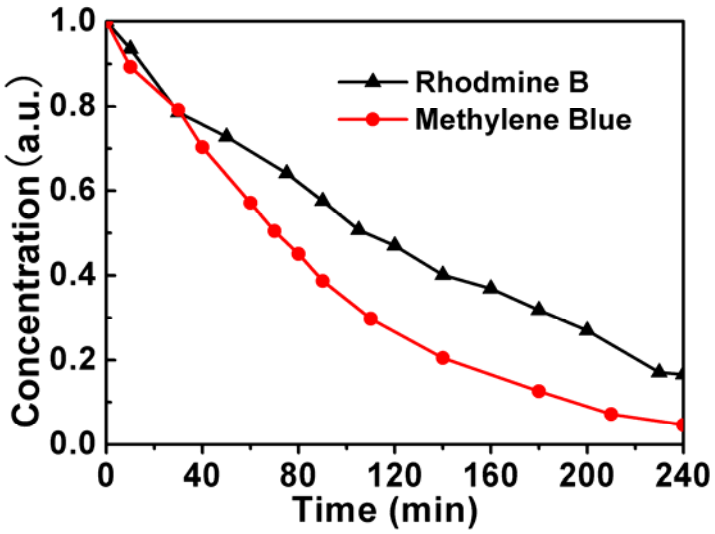

Figure S3. Degradation behavior of rhodamine B and methylene blue by $TiO_2/(ZnS)_{0.8}(CuInS_2)_{0.2}$ nanocomposites, individually. 5.0 mg of photocatalyst powder was added to 30 mL of dye (10 mg/L) aqueous solution in each case, and the experiments were performed under visible light. The UV light (λ<380 nm) was blocked by a UV filter.

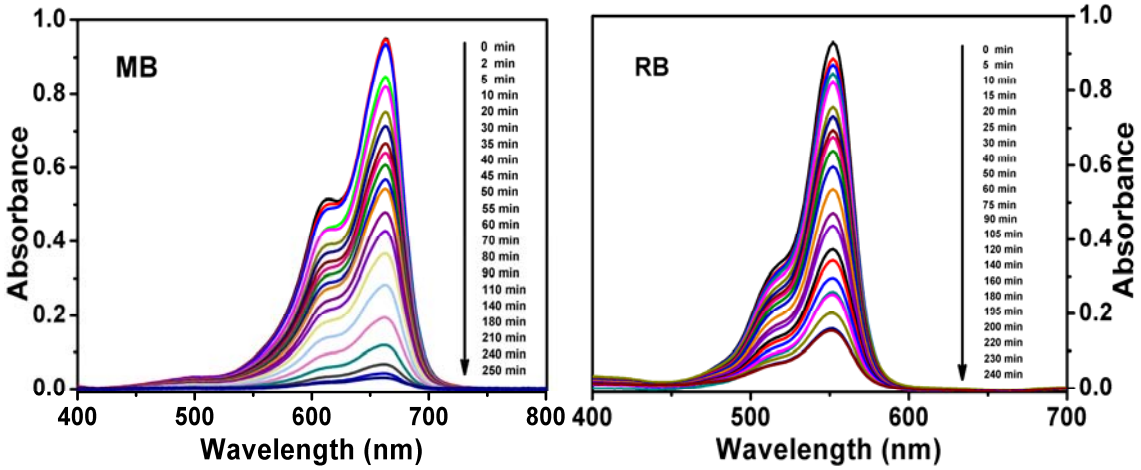

Figure S4. UV/vis absorption spectra of methylene blue (MB) and rhodamine B (RB) as a function of irradiation time in the presence of $TiO_2/(ZnS)_{0.8}(CuInS_2)_{0.2}$ nanocomposites.