

**Highly Efficient In₂S₃/WO₃ Photocatalysts: Z-Scheme Photocatalytic
Mechanism for Their Enhanced Photocatalytic Water Pollutants
Degradation under Visible Light Irradiation**

Qingqing Qiu^a, Peng Zhu^a, Yao Liu^b, Tongxiang Liang^{*a}, Tengfeng Xie^{*c}, Yanhong
Lin^c

^aEngineering Research Center for Hydrogen Energy Materials and Devices, College
of Rare Earths, Jiangxi University of Science and Technology, 86 Hong Qi Road,
Ganzhou 341000, PR China

^bFaculty of Materials Metallurgy and Chemistry, Jiangxi University of Science and
Technology, 86 Hong Qi Road, Ganzhou 341000, PR China

^cCollege of Chemistry, Jilin University, Changchun 130012, P. R. China

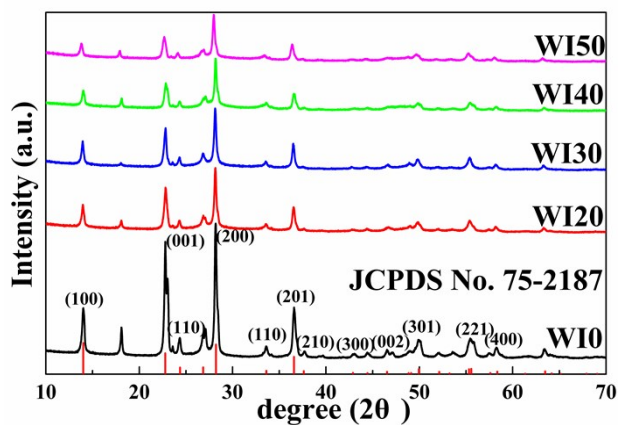


Figure. S1 XRD patterns of WI10, WI20, WI30, WI40 and WI50.

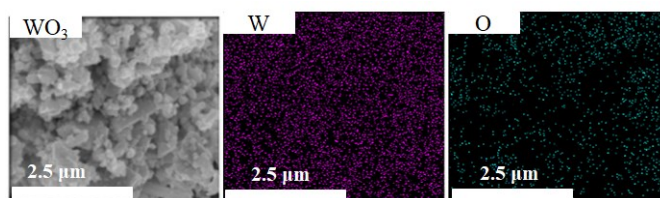


Figure. S2 The EDX mappings of WO_3 .

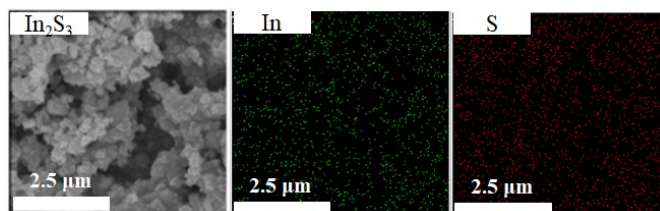


Figure. S3 The EDX mappings of In_2S_3 .

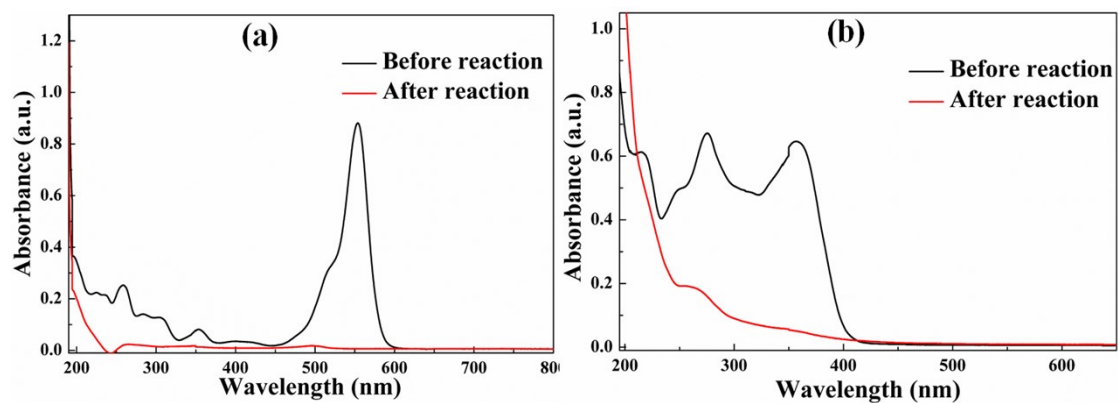


Figure S4. (a) UV-visible absorption spectra of Rh B solutions before and after photocatalytic degradation reaction under visible light irradiation in the presence of

WI40; (b) UV-visible absorption spectra of TCH solutions before and after photocatalytic degradation reaction under visible light irradiation in the presence of WI40.

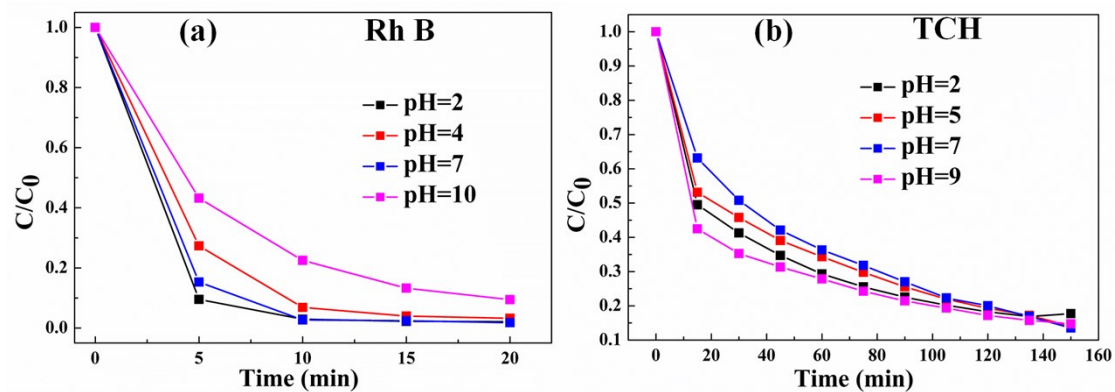


Figure S5. The solution pH for (a) Rh B and (b) TCH degradation by WI40 under visible light irradiation.

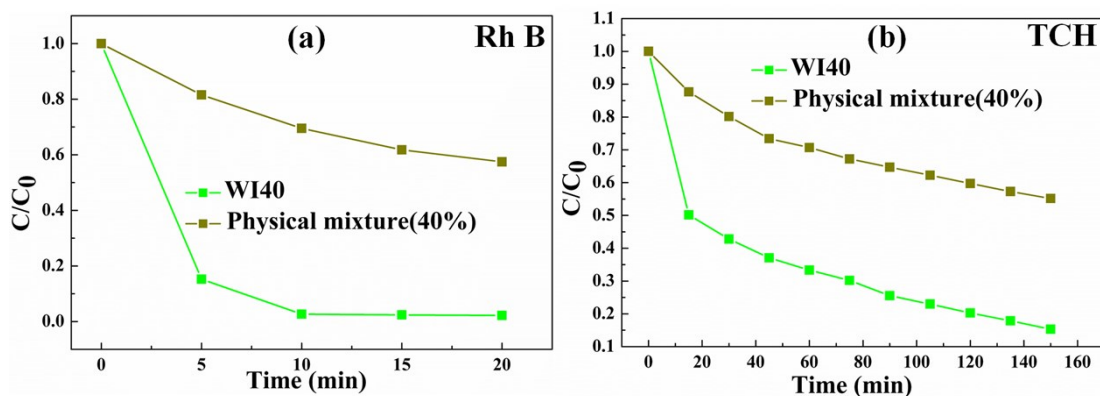


Figure S6. Photocatalytic degradation performance of (a) WI40 and (b) the physical mixture of $\text{In}_2\text{S}_3(40 \text{ wt } \%) / \text{WO}_3$ for Rh B and TCH under visible light irradiation.

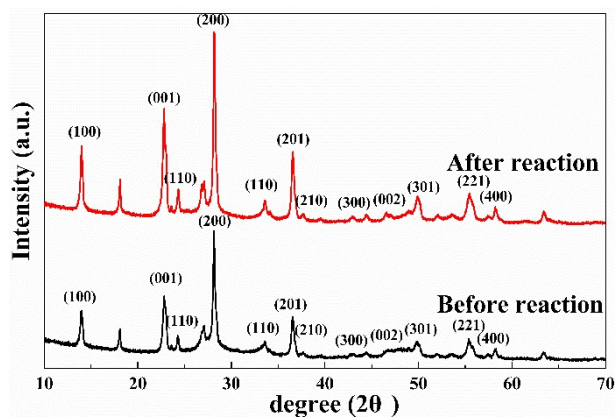


Figure S7. XRD patterns of WI40 before and after photocatalytic degradation reaction.