

**A Direct Z-scheme Mechanism for Selective Hydrogenation of Aromatic Nitro Compounds  
over a hybrid photocatalyst composed of ZnIn<sub>2</sub>S<sub>4</sub> and WO<sub>3</sub> Nanorods**

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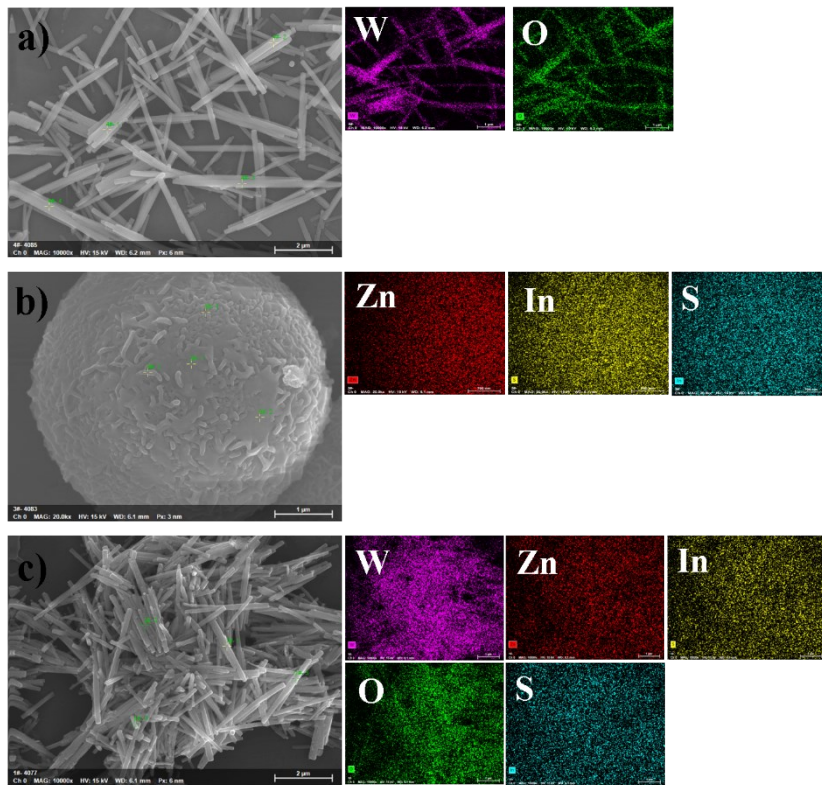
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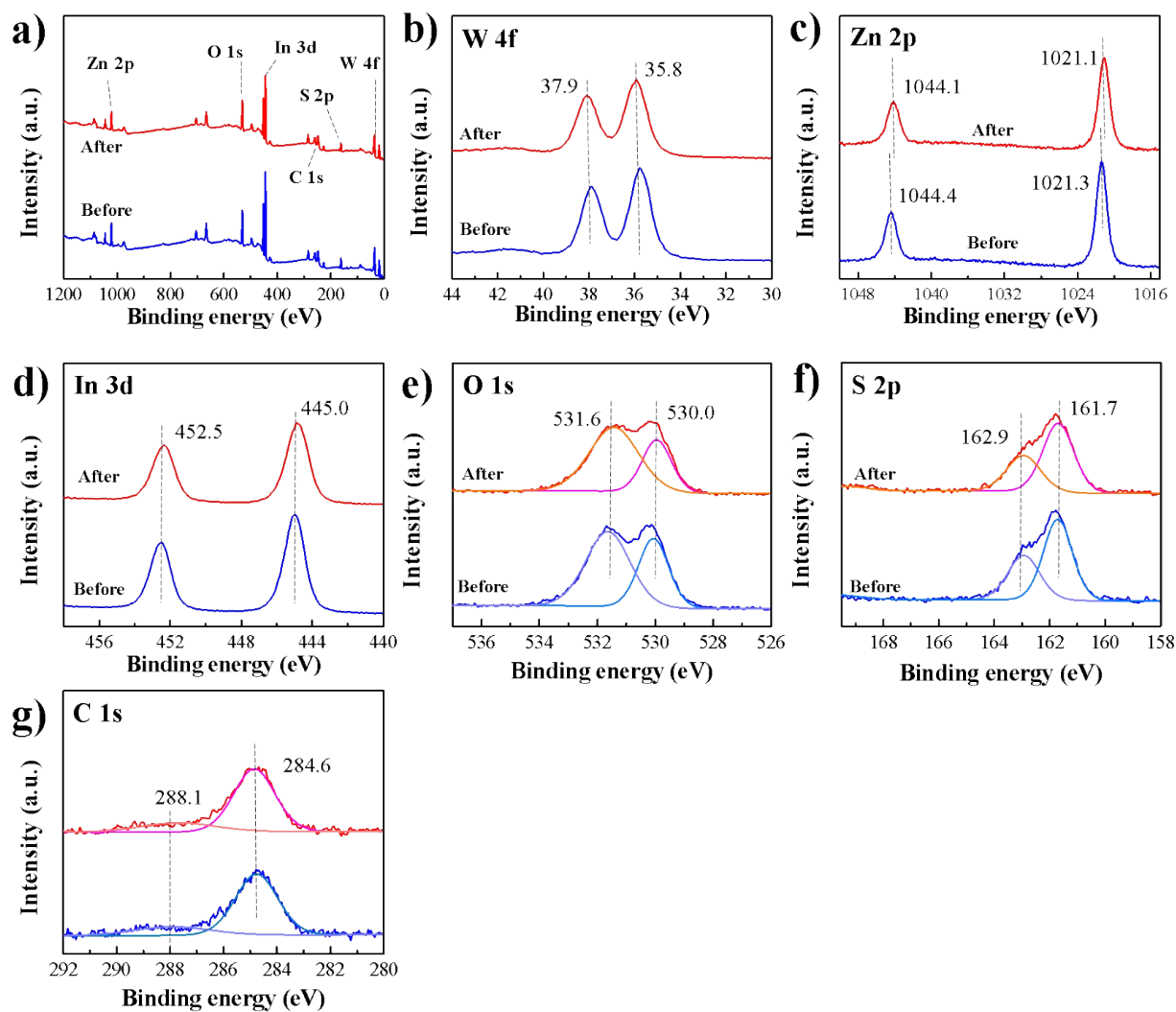
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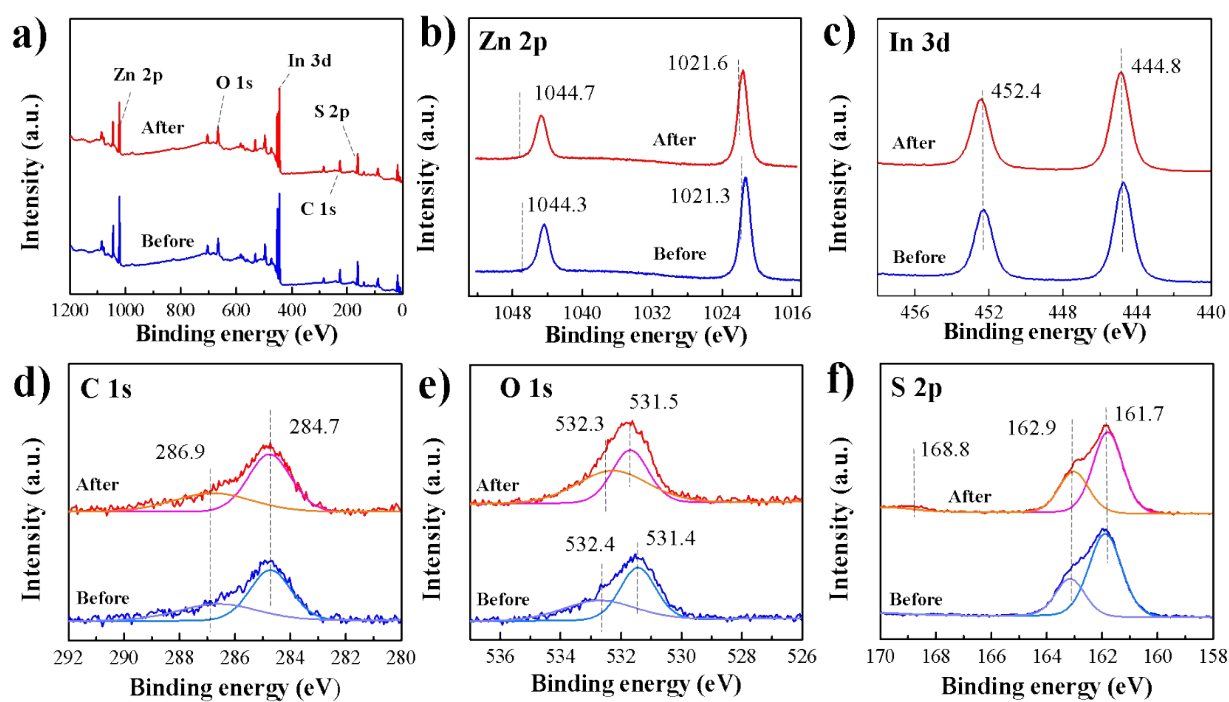
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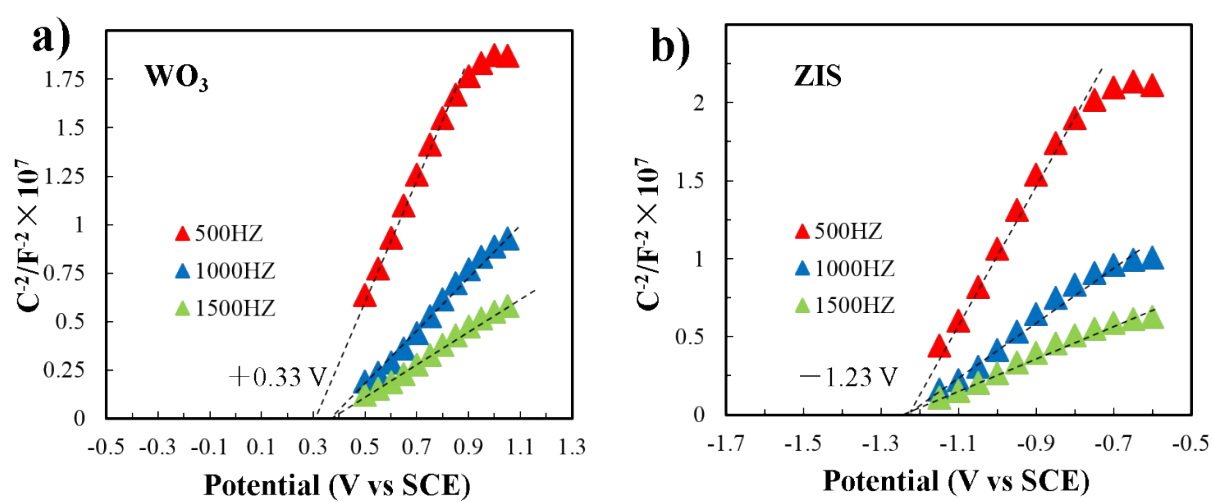
**Fig. S1.** SEM images, elemental mapping image and EDS results of (a) WO<sub>3</sub> NRs, (b) ZIS and (c) 8%ZIS-W nanocomposite



**Fig. S2.** (a) Survey and high-resolution XPS spectra of (b) W 4f, (c) Zn 2p, (d) In 3d, (e) O 1s, (f) S 2P and (g) C 1s for 8%ZIS-W nanocomposite before and after 5 cycles.



**Fig. S3.** (a) Survey and high-resolution XPS spectra of (b) Zn 2p, (c) In 3d, (d) C 1s, (e) O 1s and (f) S 2P for ZIS before and after 5 cycles.



**Fig. S4.** Mott-Schottky results of (a)  $\text{WO}_3$  NRs and (b) ZIS with different frequencies.