

Supporting Information

Mesoporous Yolk-Shell SnS₂/TiO₂ Visible Photocatalyst with Enhanced Activity and Durability in Cr(VI) Reduction

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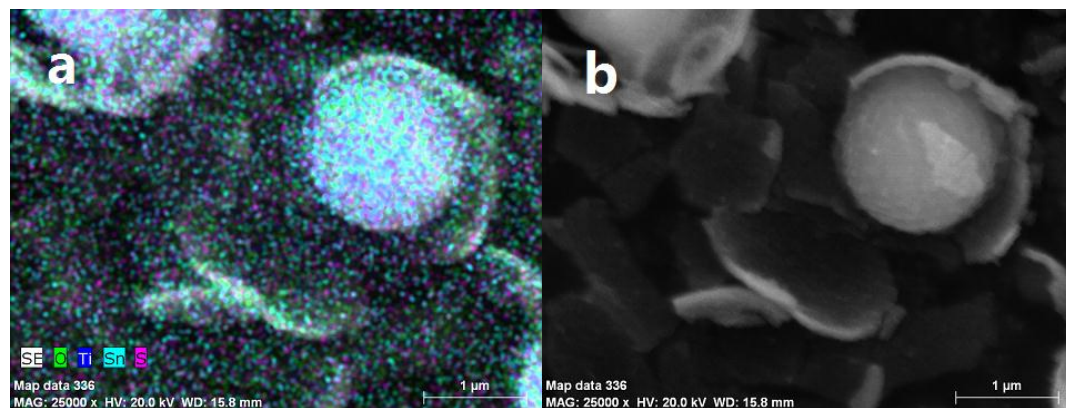


Figure S1 Chemical mapping image (a) and the corresponding FESEM image (b) of ST-is-4.

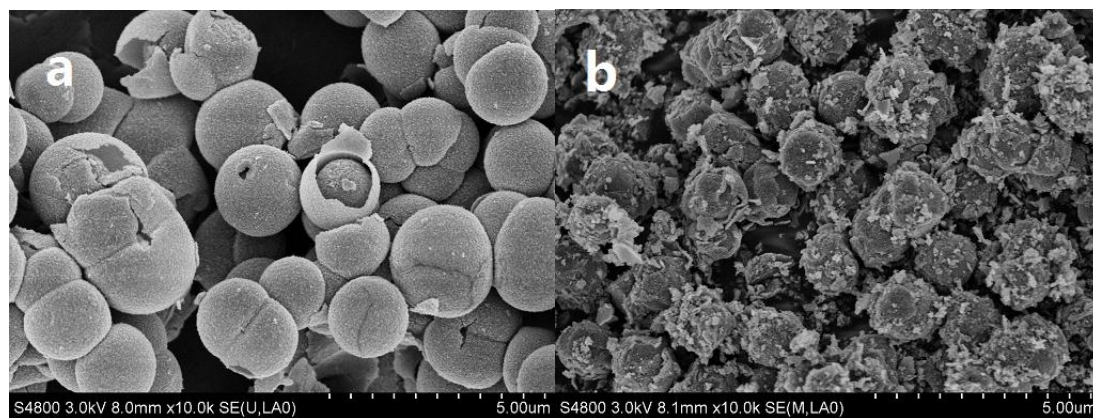


Figure S2 FESEM images of (a) pure TiO_2 and (b) ST-d.

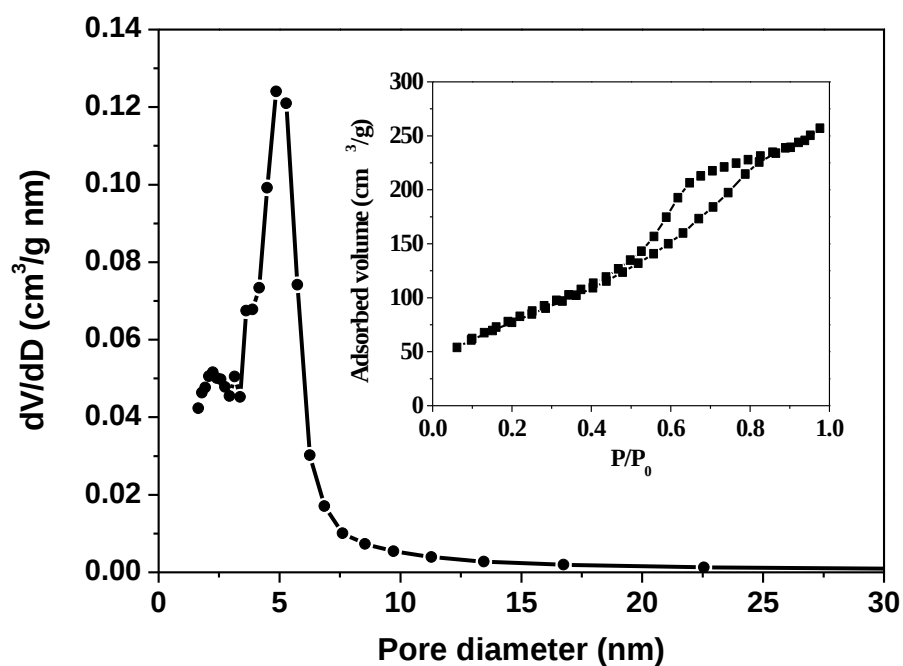


Figure S3 Pore size distribution curve and the attached N₂ adsorption-desorption isotherm of ST-is-4.

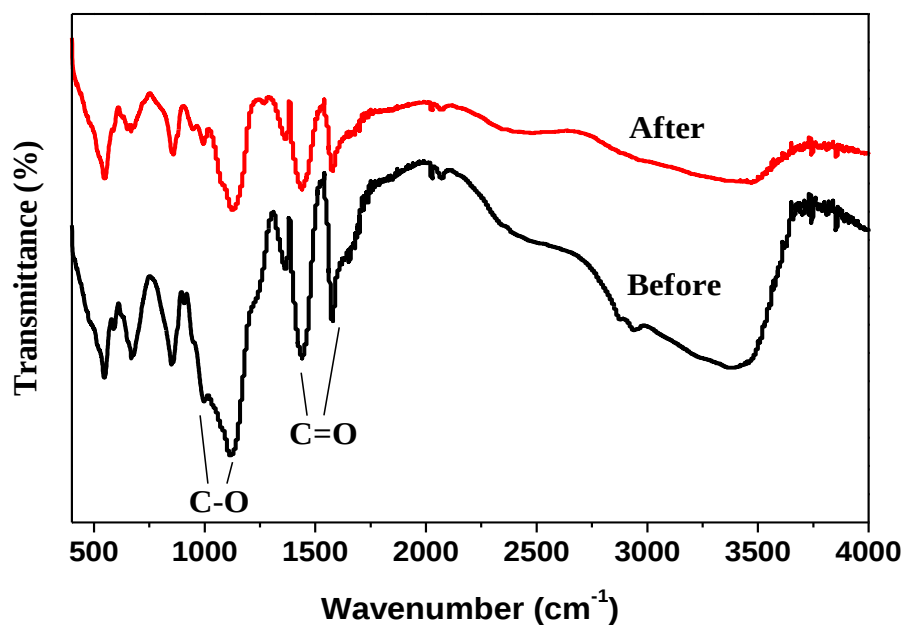


Figure S4 FTIR spectra of ST-is-4 before and after hydrothermal treatment.

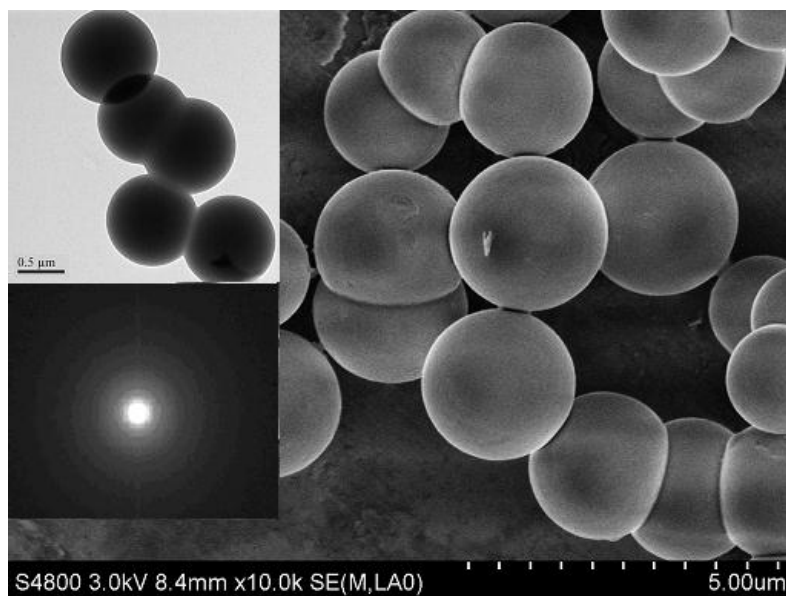


Figure S5 FESEM image of the ST-is-4 before hydrothermal treatment. The top and bottom insets are TEM and SAED images, respectively.

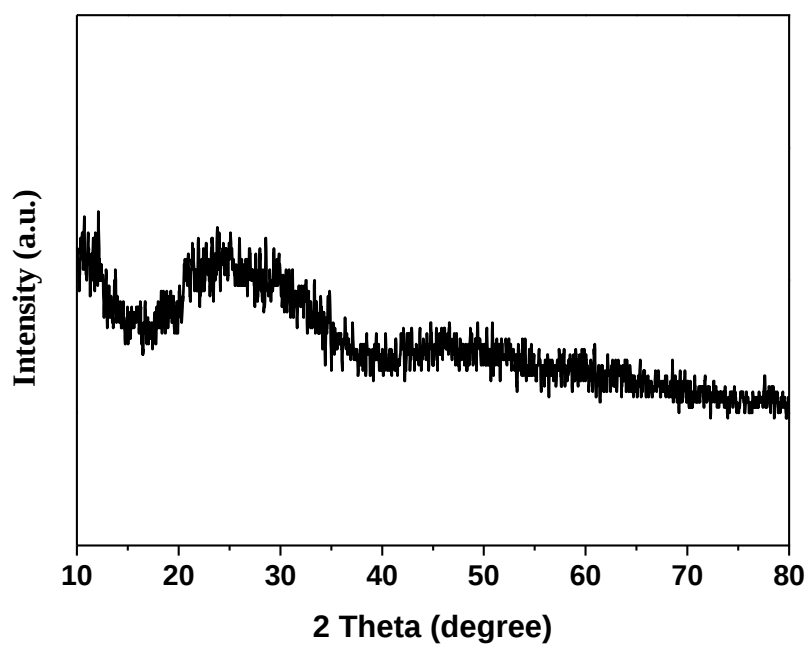


Figure S6 XRD patterns of ST-is-4 precursor before hydrothermal treatment.

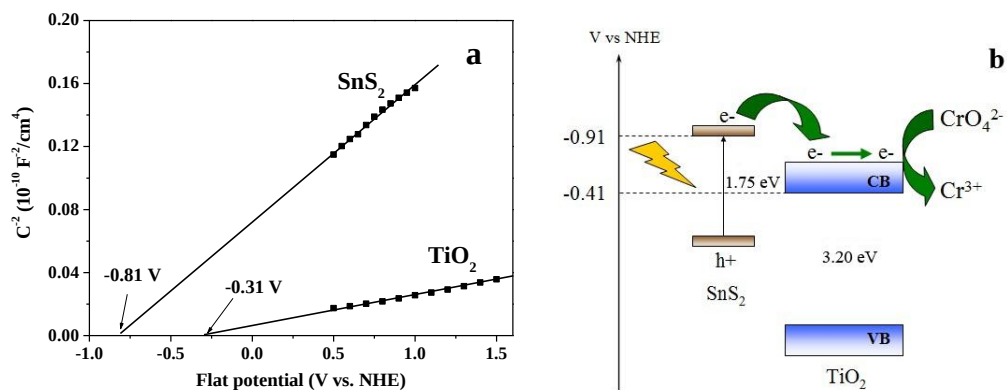


Figure S7 (a) Mott-Schottky plots of SnS_2 and TiO_2 and (b) a schematic illustration of the photocharge separation in $\text{SnS}_2/\text{TiO}_2$ photocatalyst under visible light irradiation.

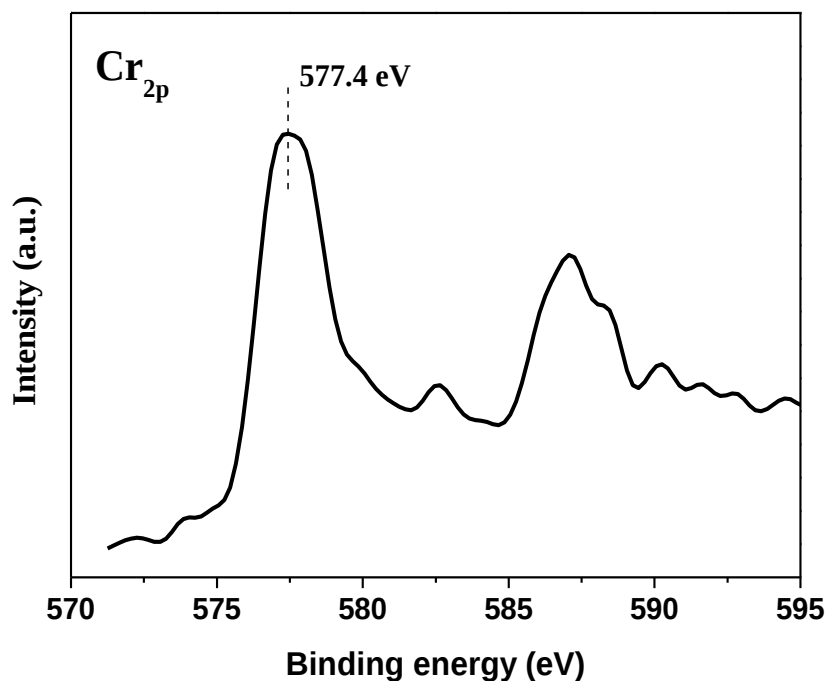


Figure S8 XPS spectrum of ST-is-4 after photocatalytic reaction.

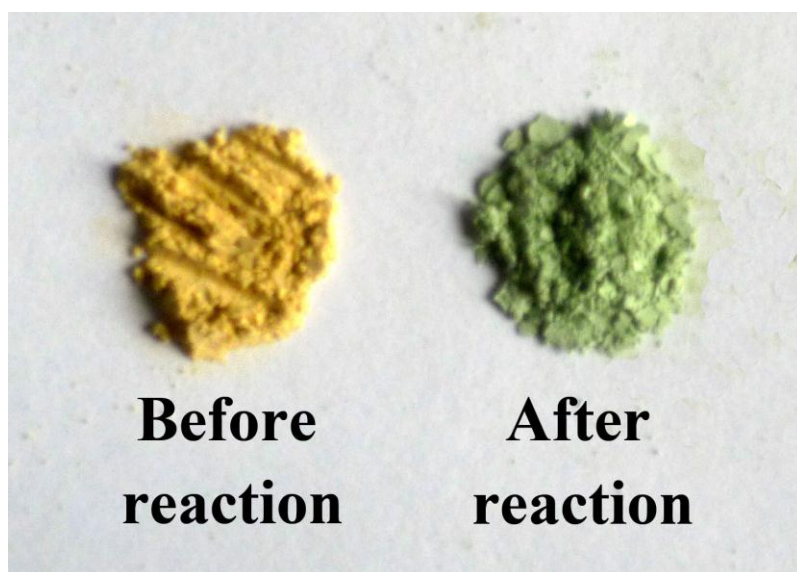


Figure S9 The picture of ST-is-4 before and after photocatalytic reduction of Cr(VI).

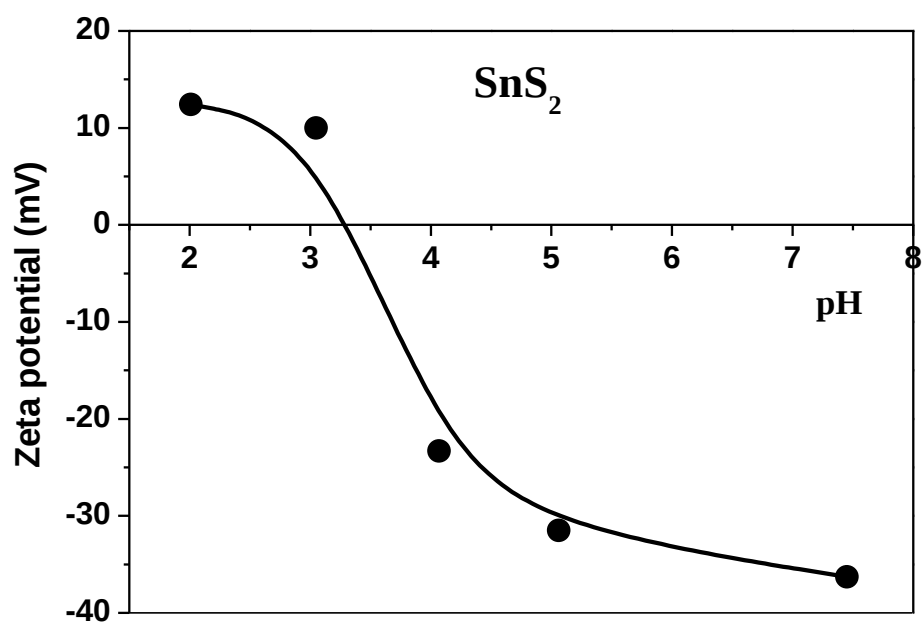


Figure S10 Zeta-potential of SnS₂ suspensions at different pH values.