Supporting Information

Facile solvothermal synthesis of 3D flowerlike β -In₂S₃ microspheres and their photocatalytic activity performance

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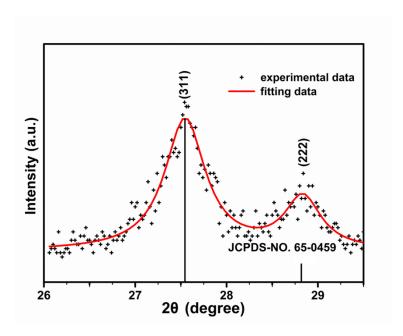


Figure S1 Fitting curve (26° to 29.5° in 20) of as-prepared 3D flowerlike In_2S_3 microspheres obtained in ethanol-water system with the volume ratio of 1:1 for 24 h.

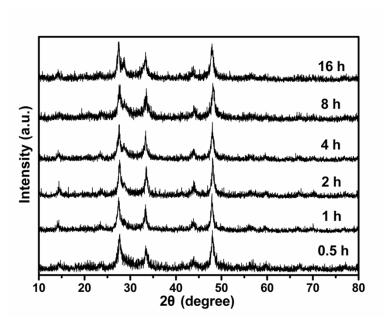


Figure S2 XRD patterns of In_2S_3 nanocrystals synthesized at different reaction durations in ethanol-water system with the volume ratio of 1:1.

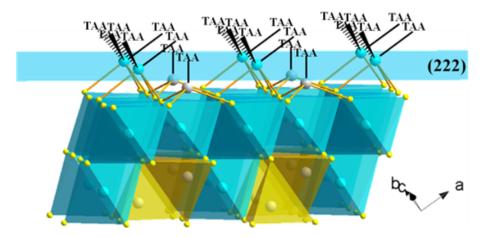


Figure S3 Schematic diagram of a projected view as TAA absorbed on the (222) surface of In_2S_3 to form a layer ($\bigcirc S$, \bigcirc four-coordinated In and \bigcirc six-coordinated In).

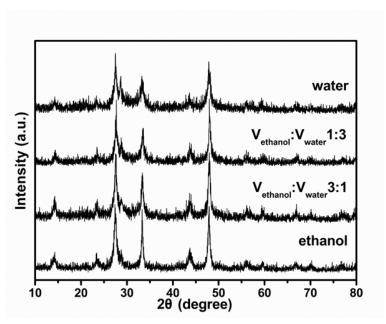
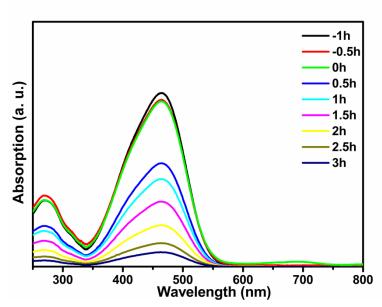


Figure S4 XRD patterns of products obtained in ethanol-water system with the volume ratio of 1:0, 3:1, 1:3 and 0:1, respectively.



 $\label{eq:Figure S5} \textbf{Figure S5} \ \ \text{Time-dependent UV-vis absorption spectra using as-prepared 3D} \\ \ \ \text{flowerlike In}_2S_3 \ \text{microspheres as photocatalyst.}$