Supporting Information For

Biomolecule-assisted hydrothermal synthesis of In₂S₃ porous films and enhanced

photocatalytic properties

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Fig. S1 XRD pattern for the film obtained by hydrothermal treatment at 160 $^{\circ}$ C for 12 h without adding GSH, showing the diffraction peaks of In(OH)₃. The unlabeled peaks may be attributed to the ITO substrates and other compounds existing in the film.



Fig. S2 UV-Vis absorption spectra of the In_2S_3 porous films obtained at different reaction times.



Fig. S3 SEM images illustrating the morphology of the In_2S_3 dense film (~1 µm) synthesized by chemical bath deposition method using $In(NO_3)_3$ and thioacetamide as precursors: (a) Top view; (b) Cross-section view.



Fig. S4 SEM image of the In_2S_3 porous film after photocatalytic test (Under UV radiation for 2h).