Supporting Information

Fabrication of Hierarchically Structured Novel Redox-Mediator-free ZnIn$_2$S$_4$ Marigold Flower/Bi$_2$WO$_6$ Flower-like Direct Z-Scheme Nanocomposite Photocatalyst with Superior Visible Light Photocatalytic Efficiency

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1. Chemicals and Materials

Zinc nitrate hexahydrate (98 %), bismuth nitrate pentahydrate (≥ 98.0 %), indium (III) nitrate hydrate (99.99%), sodium tungstate dihydrate (99%), thiourea (≥ 99.0%), anhydrous isopropanol (99.5%), 1, 4-benzoquinone (≥98%), ammonium oxalate (≥99%), terephthalic acid (98%), and metronidazole (MTZ, ≥ 98%) were purchased from Sigma Aldrich. Glacial acetic acid (99%) was purchased from Duksan Pure Chemicals Co. Ltd, South Korea. Sodium hydroxide (NaOH, 99%), ethanol and methanol were purchased from Merck Millipore, Germany. The tungsten halogen lamp (500 W) was used for visible light irradiation and its spectral distribution is given in Fig.S1. Ultrapure water was used for the preparation of experimental solutions.
Figure S1. Spectral distribution of the light source.
Figure S2. Field emission-scanning electron microscopy images of (a and b) 50%-ZIS/BW and (c and d) 70%-ZIS/BW nanocomposites.
Figure S3. N$_2$ adsorption and desorption isotherm plots of hierarchical (a) BW, (b) ZIS and (c) x%-ZIS/BW nanocomposites at 77 K. (solid circle-adsorption branch; open circle-desorption branch).