Electronic Supplementary Material (ESI) for CrystEngComm

Supporting Information

Adsorption and UV/Visible photocatalytic performance of BiOI for methyl orange, Rhodamine B and methylene blue: Ag and Ti-loading effects

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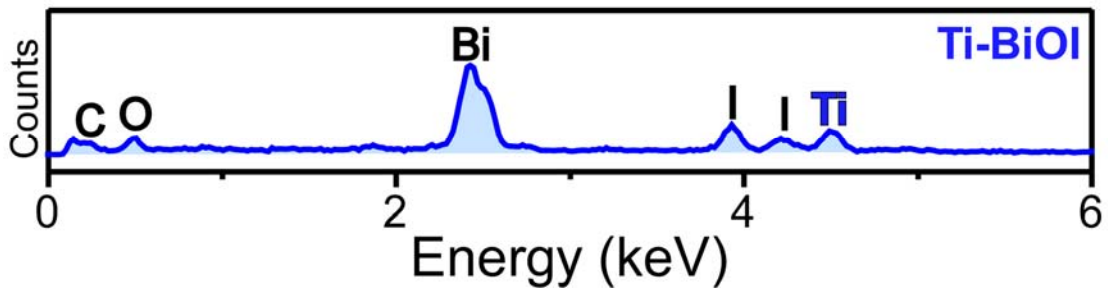

Figure S1: Energy-dispersive X-ray spectroscopy (EDX) of Ti-loaded (50 mol%) BiOI prepared in EG.

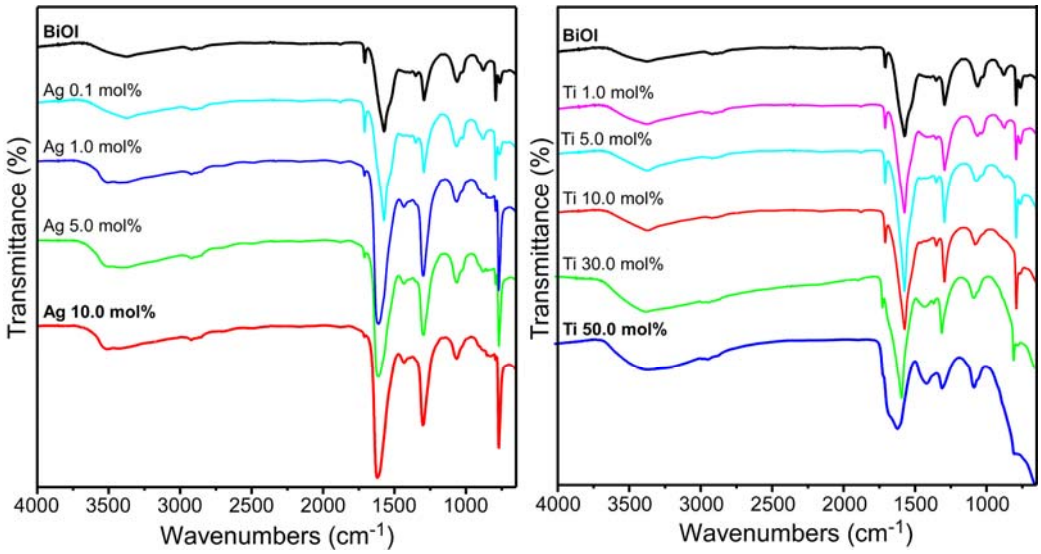

Figure S2: FT-IR spectra of undoped and Ag-(left) and Ti-loaded (right) BiOI prepared in water and EG.

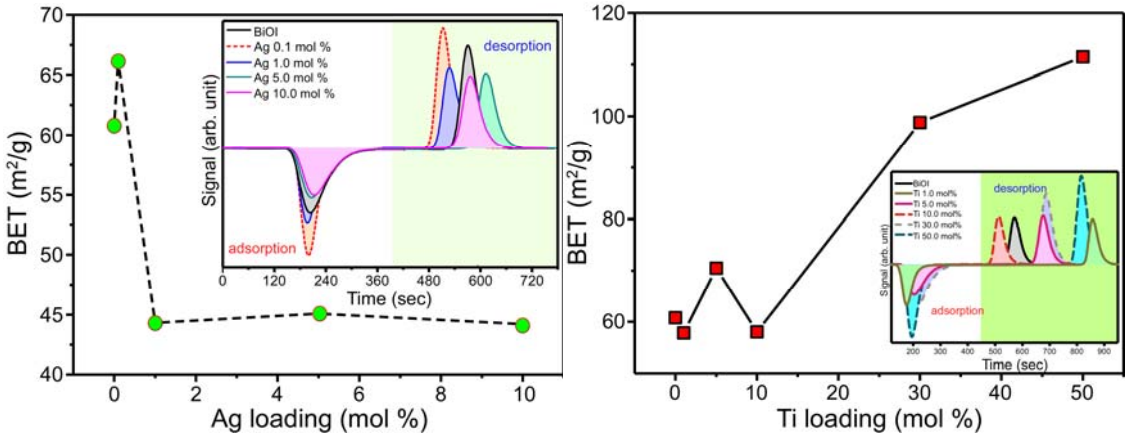

Figure S3. Nitrogen adsorption and desorption profiles of BiOI with increasing Ag (left) and Ti (right) loadings.

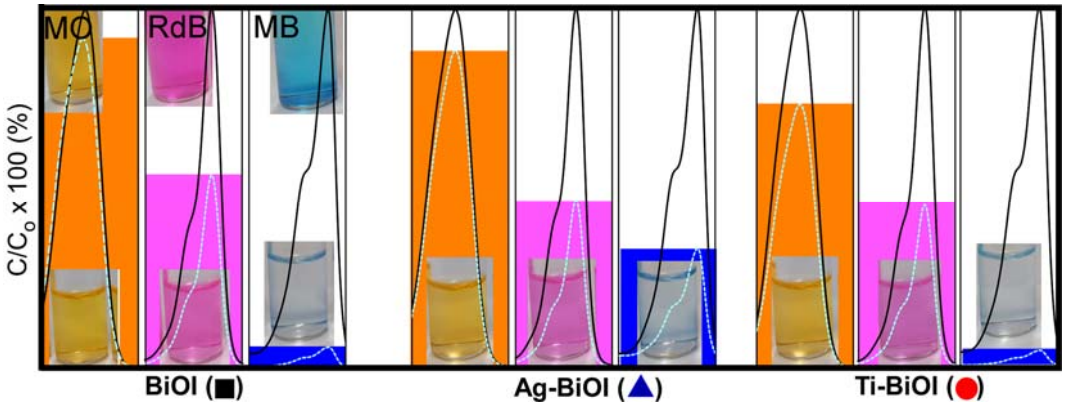

Figure S4. UV-visible absorption spectra and the corresponding intensities upon adsorption of MO, RhB and MB (10 mg/L, 50 mL) for 2 hour by 10 mg BiOI, Ag-doped BiOI and Ti-doped BiOI in dark condition. The absorption wavelengths (Fig. S5, Supporting Info.) of the dyes were omitted for clarity.

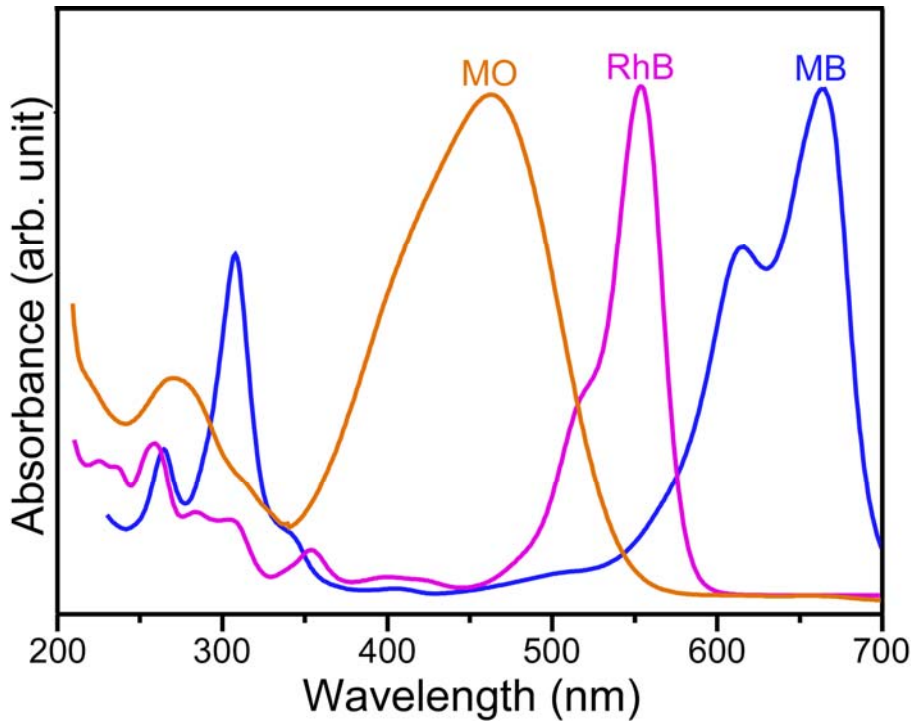

Figure S5. UV-visible absorption spectra of three different dye solutions.

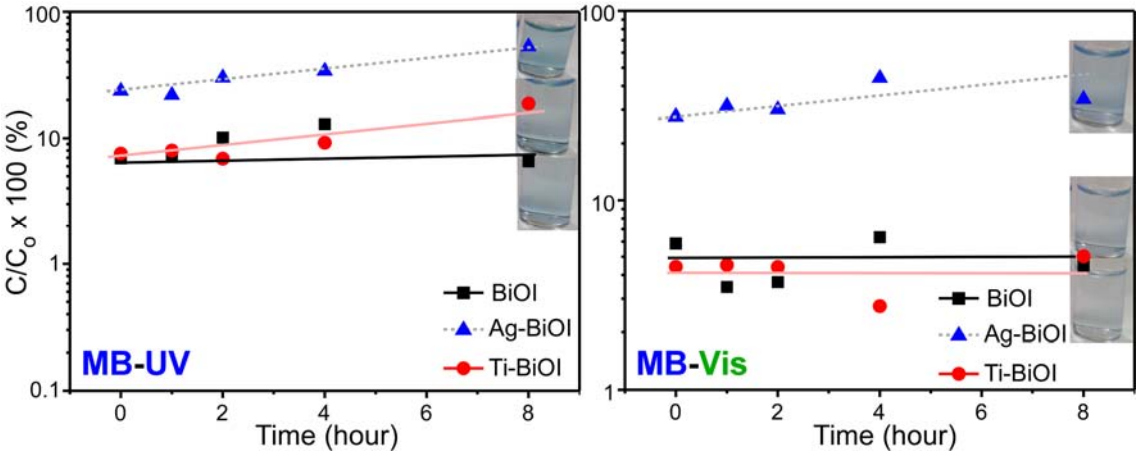

Figure S6. Photodegradation of MB solution (10 mg/L, 50 mL) upon adsorption under UV (left column) and visible (right column) light irradiation.

For MB, the fluctuation of the absorption intensity is likely due to adsorption/desorption during photoirradiation.

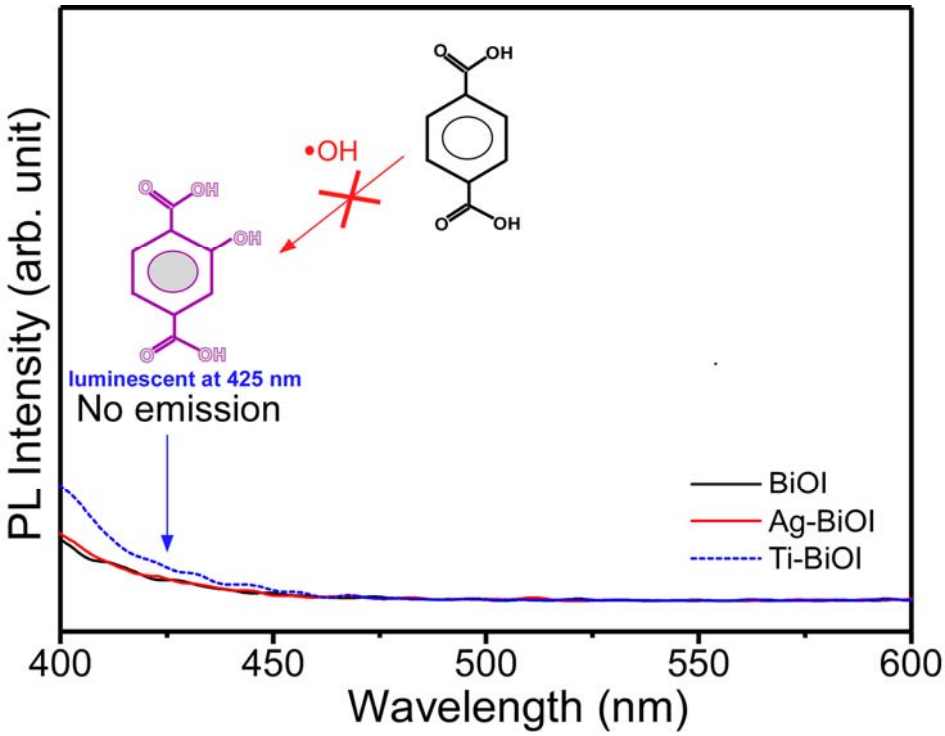

Figure S7. Photoluminescence spectra of terephthalic acid solutions with the three (BiOI, 5% Ag-BiOI and 10% Ti BiOI) selected catalysts after visible light irradiation for 6 hrs.