Supporting information (SI)

One step fabrication of C-doped $BiVO_4$ with hierarchical structures for high-performance photocatalyst under visible light irradiation†

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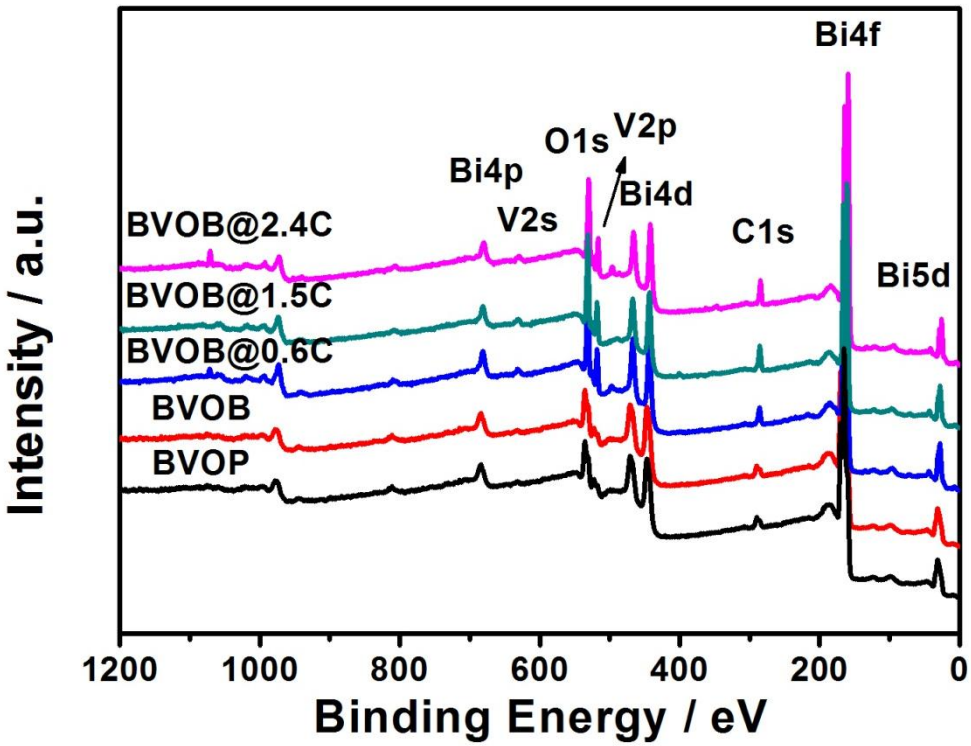

Figure S1 Full spectra of X-ray photoelectron spectra of the samples.

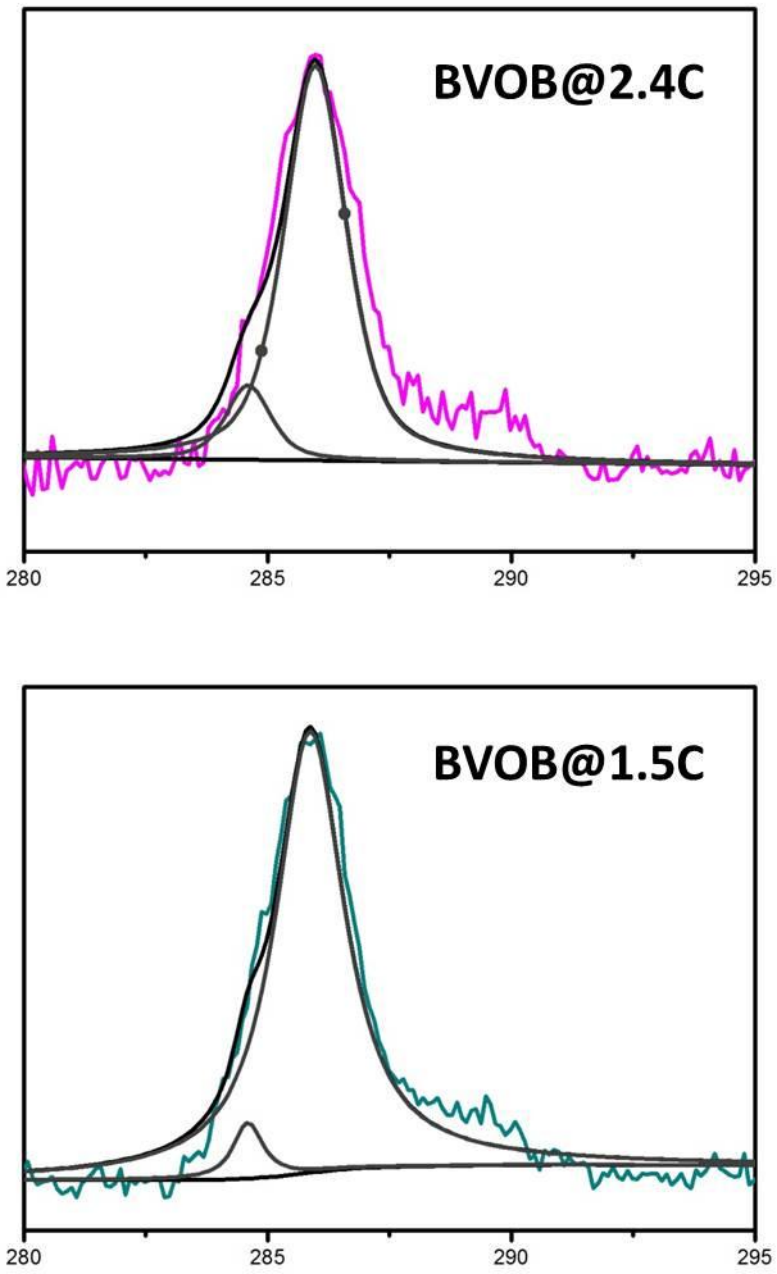

Figure S2 The C1s XPS spectra of BVO@1.5C and BVO@2.4C.

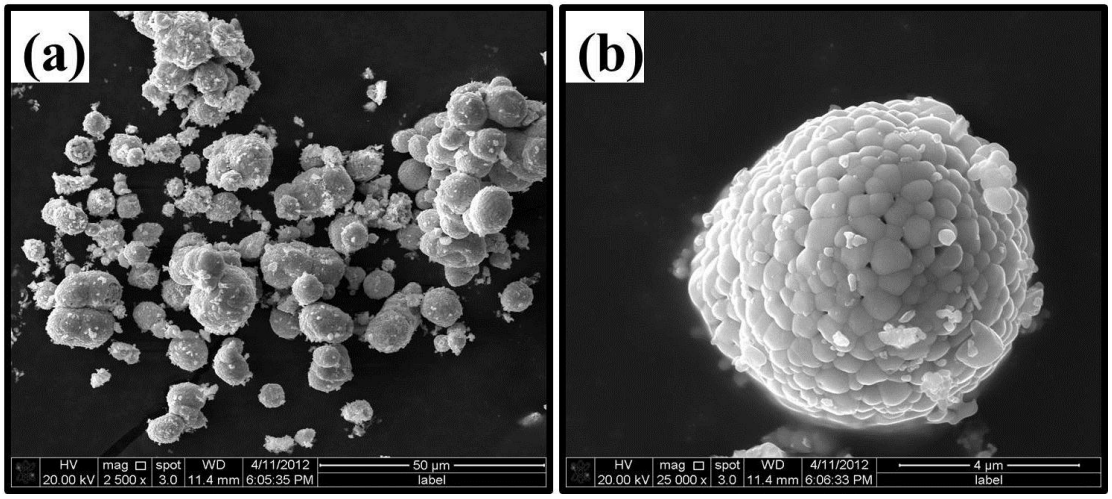

Figure S3 FE-SEM images of the $BiVO_4$ powders (BVOP).

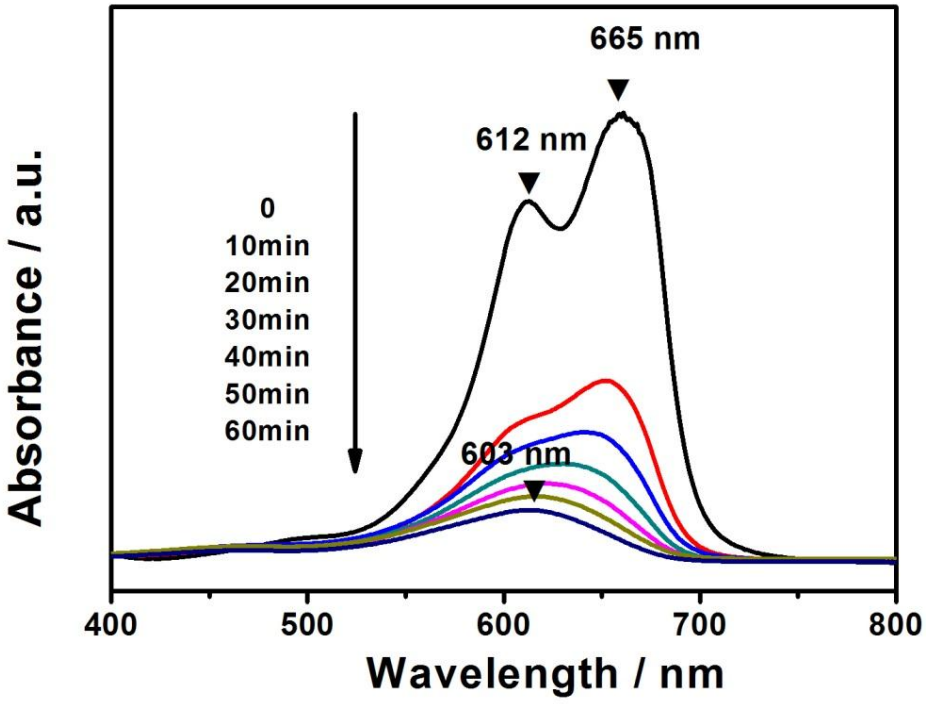

Figure S4. Time profile of MB absorbance spectrum observed during incubation with BVOB@1.5C under visible light irradiation ($\lambda > 420$ nm).

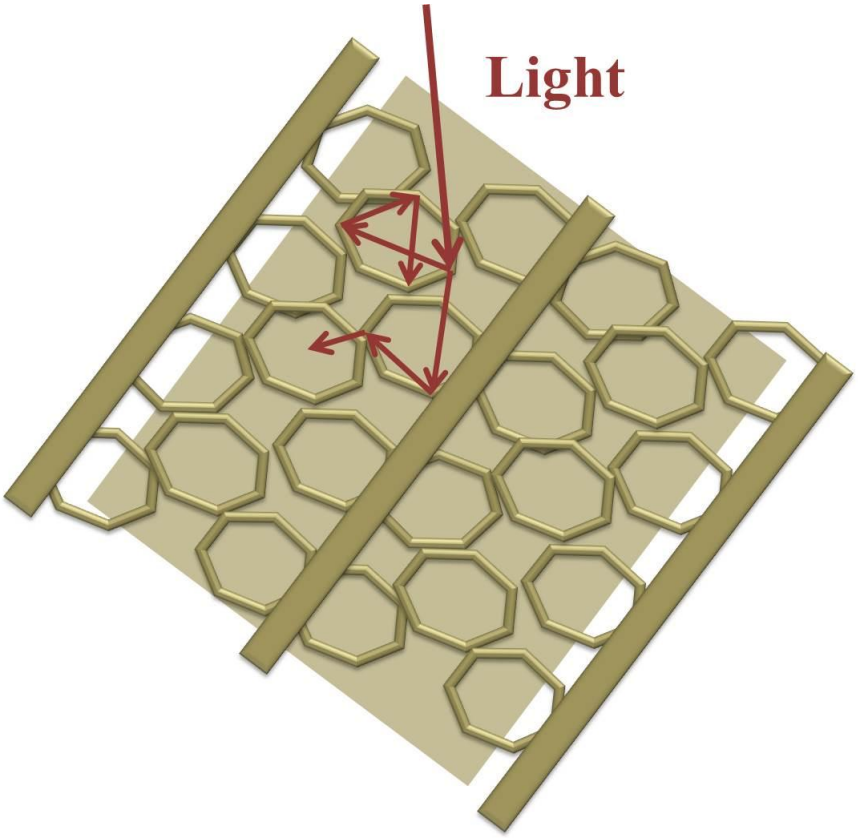

Figure S5. 2D model from the FESEM images，showing the ways to absorb solar by *Papilioparis* butterfly wing.