

Supporting Information

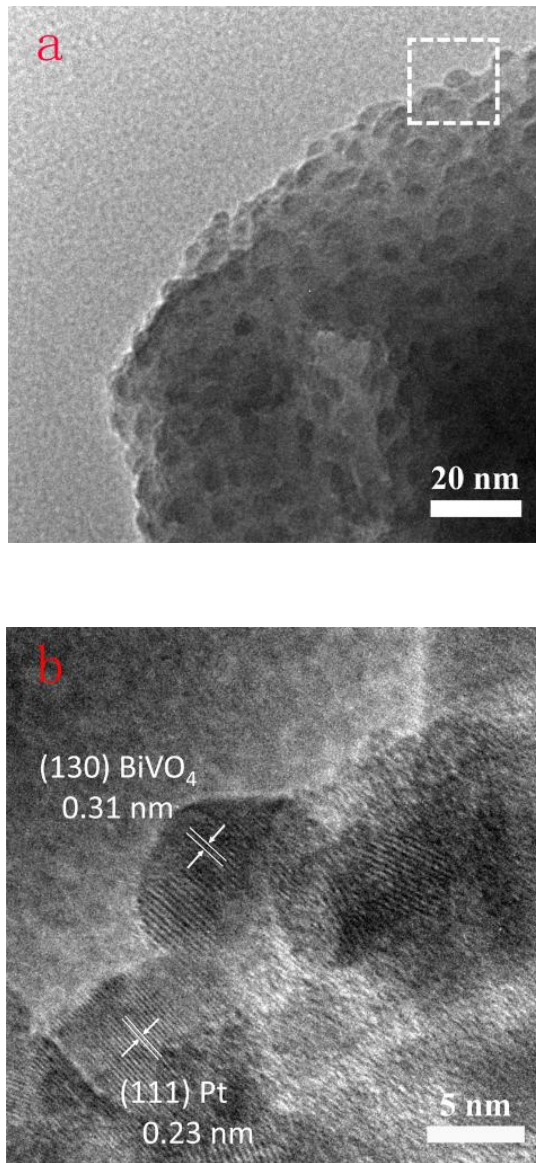
**Efficient hydrogen evolution under visible light irradiation over BiVO<sub>4</sub> quantum dots decorated screw-like SnO<sub>2</sub> nanostructures**

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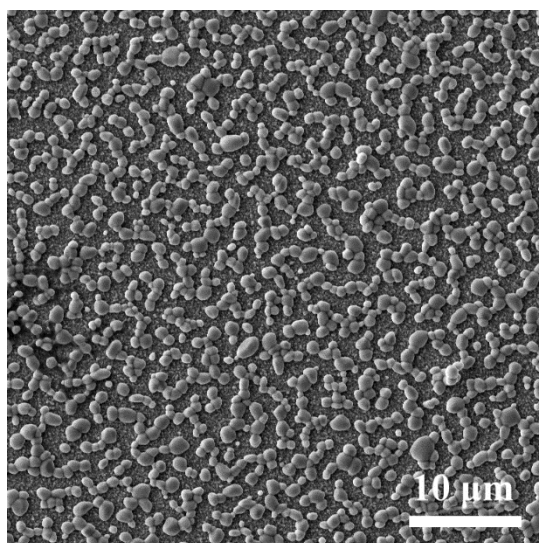
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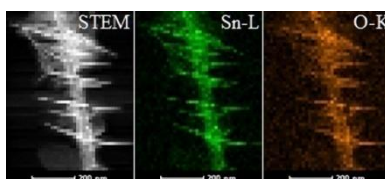
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**Fig. S1** TEM and HRTEM images of Pt loaded BVO-SLS 15. (b) is the magnification of the rectangular area marked in (a).



**Fig. S2** SEM image of  $\text{BiVO}_4$  film sample (BVO-B) prepared by an electrodeposition method.



**Fig. S3** EDS elemental maps of  $\text{BiVO}_4$  quantum dot decorated screw-like  $\text{SnO}_2$  (BVO-SLS 15).

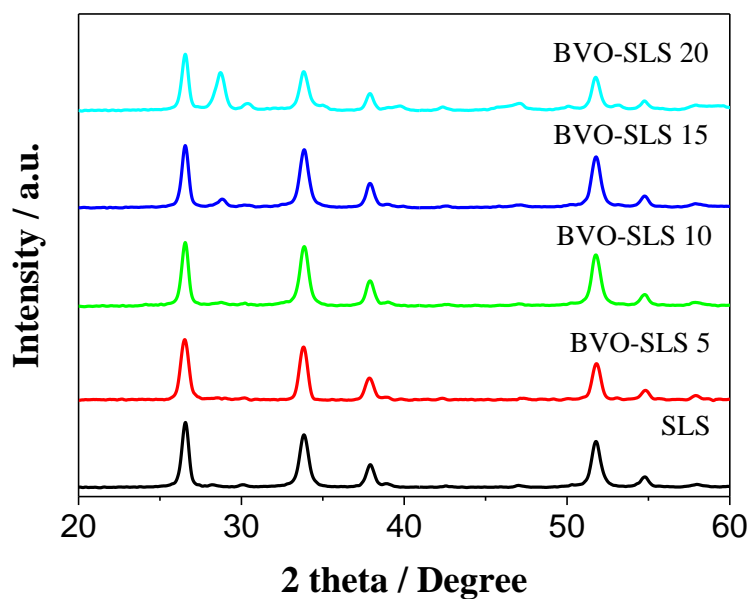


Fig. S4 XRD patterns of BiVO<sub>4</sub> quantum dot decorated screw-like SnO<sub>2</sub> samples.

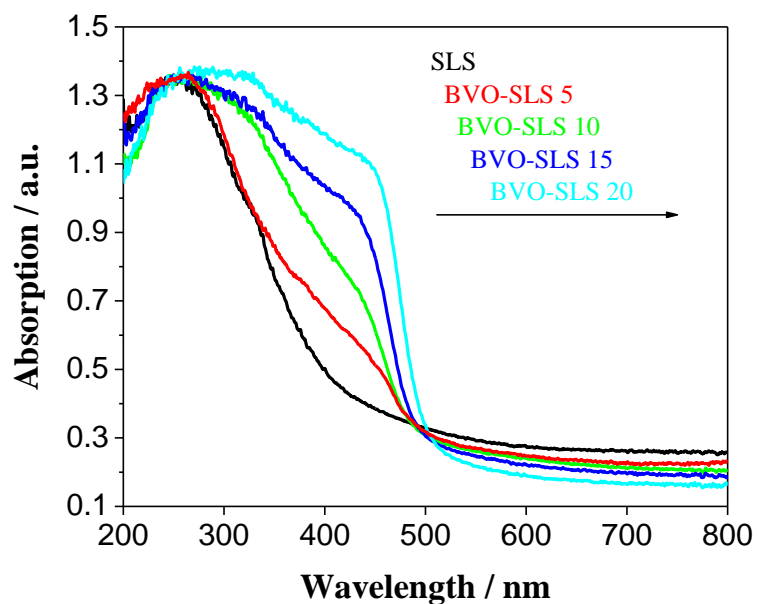
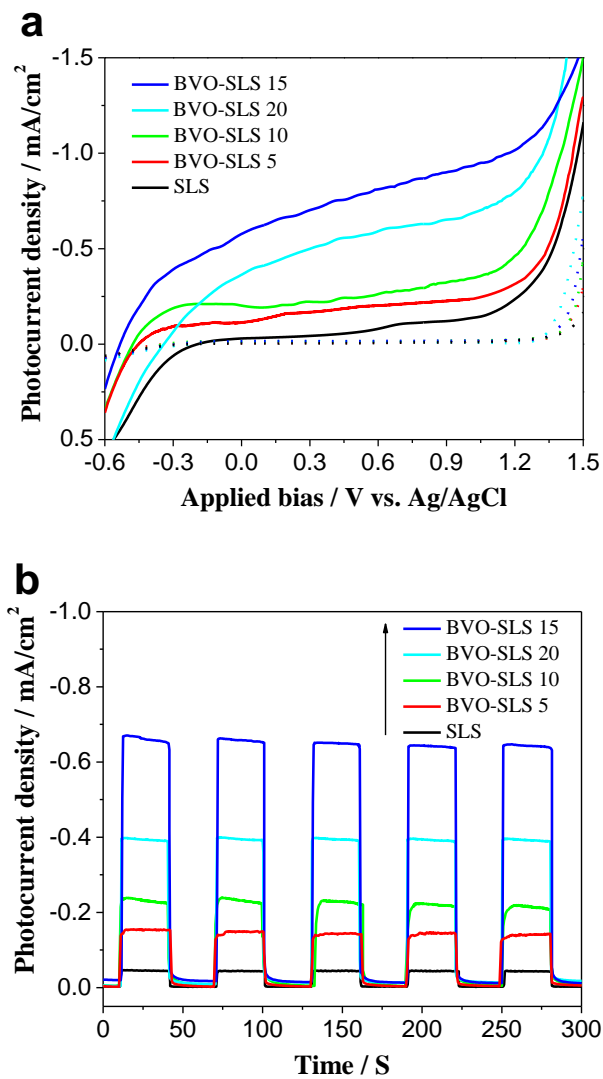
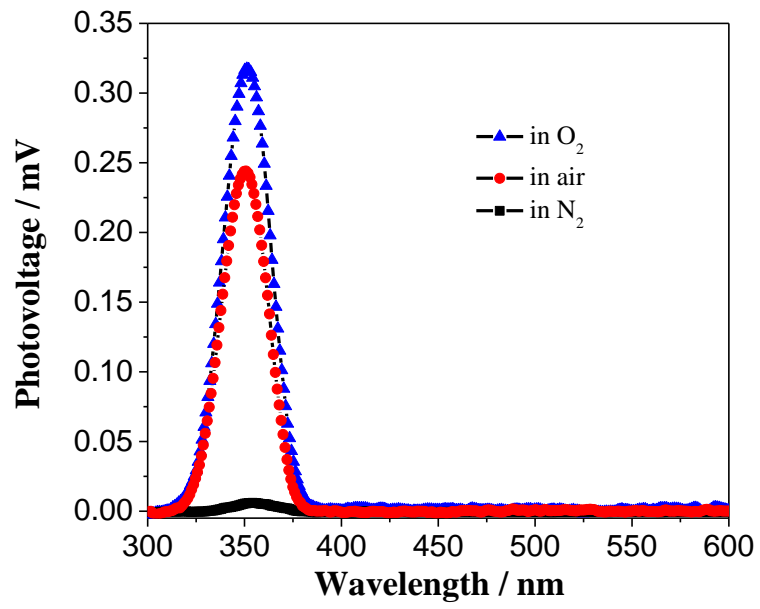


Fig. S5 UV-Vis absorption spectra of BiVO<sub>4</sub> quantum dot decorated screw-like SnO<sub>2</sub> samples.



**Fig S6** I-V curves under the visible light irradiation (a) and I-t curves (b) of BiVO<sub>4</sub> quantum dot decorated screw-like SnO<sub>2</sub> samples. The dotted lines in (a) represent the dark curves.



**Fig. S7** Surface photovoltage spectra of screw-like SnO<sub>2</sub> sample (SLS) in different atmospheres.