

Fig.S1 TEM images and the corresponding SAED patterns of an as prepared BiOCl nanosheet on formvar support film before (a, b) and after e^- beam irradiation (dose rate: $7.8 \times 10^5 \text{ e}^-/\text{nm}^2 \cdot \text{s}$) for 30 mins (c, d).

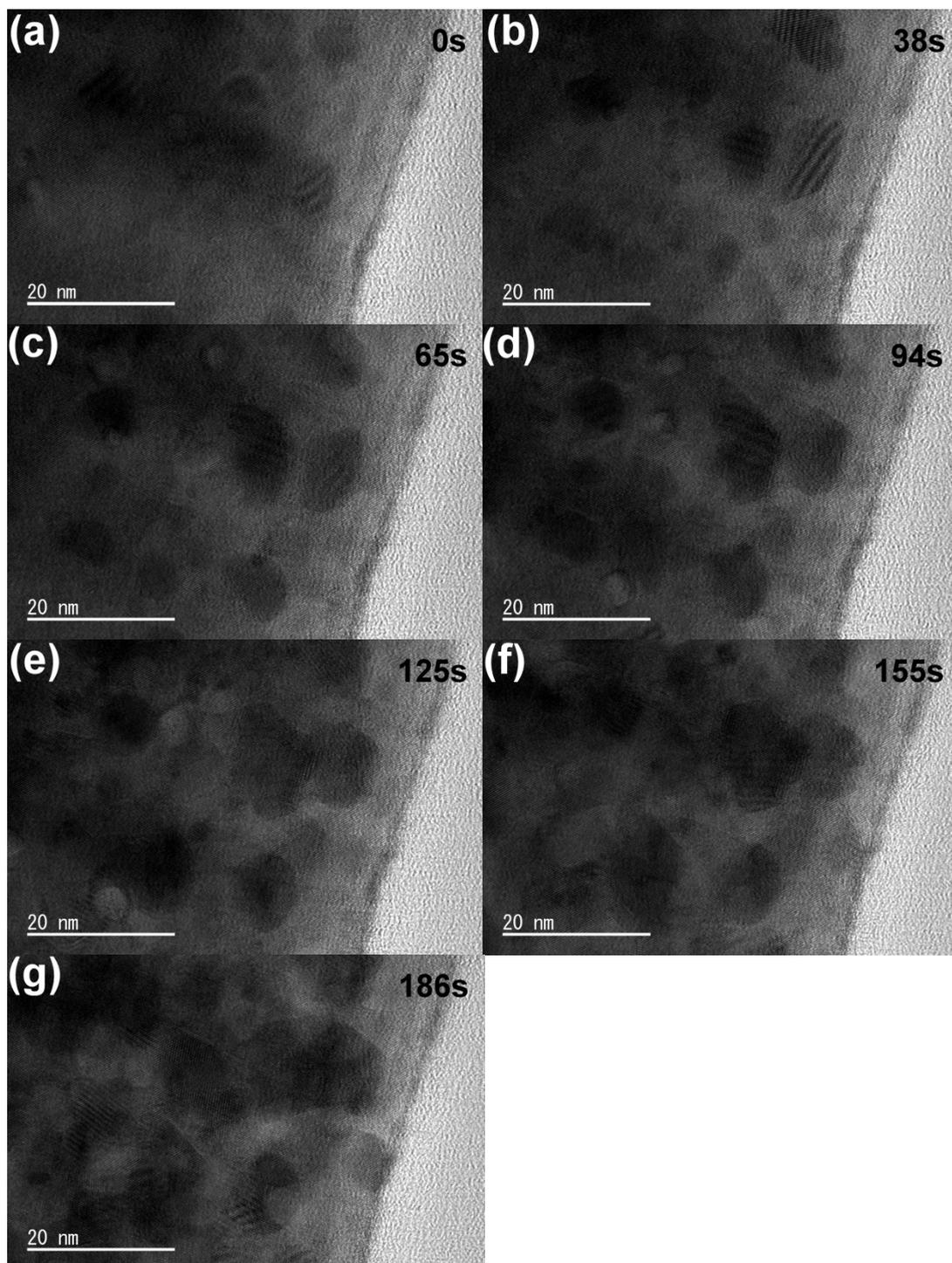


Fig. S2 A time series of low-mag TEM images showing the in situ growth of bismuth nanoparticles (dose rate: $2.6 \times 10^5 \text{ e/nm}^2 \cdot \text{s}$).

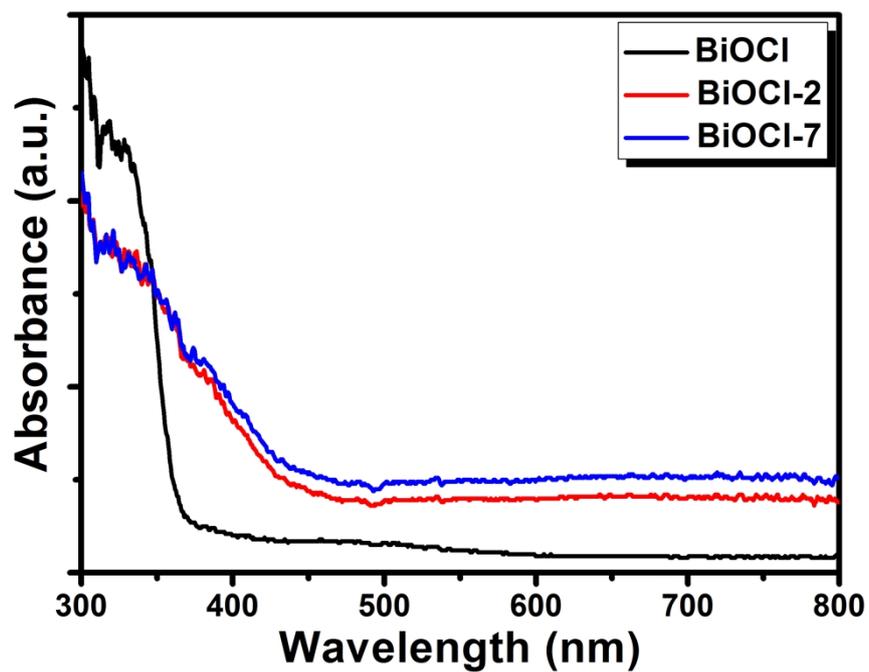


Fig. S3 UV-Vis absorption spectra of pure BiOCl and Bi/BiOCl composite photocatalysts prepared by UV-induced photoreduction method.