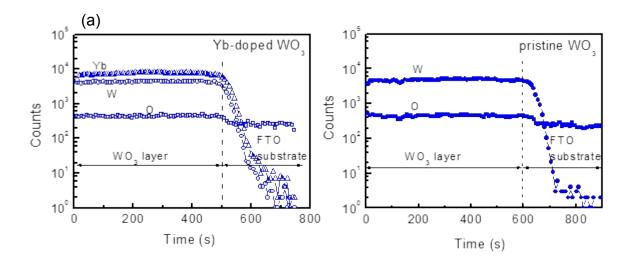
Electronic Supplementary Information



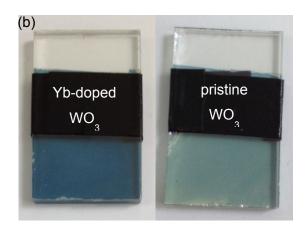


Fig. S1(a) SIMS elemental depth profiles of Yb-doped and pristine WO_3 sintered at 550 $^{\circ}$ C. (b) Colour change of photocatalysts from pale green in pristine WO_3 to deep blue in Yb-doped WO_3 sintered at 550 $^{\circ}$ C.

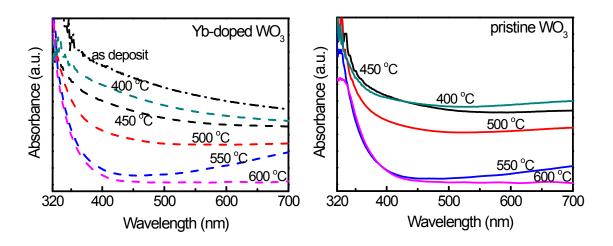


Fig. S2 Optical absorption spectra of Yb-doped and pristine WO_3 sintered from 400 to 600 $^{\circ}\mathrm{C}$.

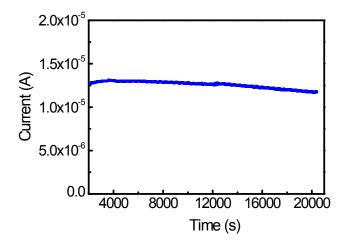


Fig. S3 Time stability of photocurrent of Yb-doped WO_3 .