Supplementary Information

Facile synthesis of highly efficient β-Bi_2O_3/$Bi_2O_2CO_3$ heterojunction with enhanced photocatalytic NO oxidation under visible light

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Experimental details

photocatalytic measurements:

All photocatalytic measurements of NO oxidation were performed in in a continuous flow reactor. 200 mg photocatalysts were used for each experiment. The initial concentration of NO was 600 ppb and the relatively humidity of the gas was 55%. The total flow rate was controlled at 1.0 L/min. For the photocatalytic activity test under visible light, a 500-W commercial Xenon arc lamp with two optical filters were used to obtain light in the 420–700 nm range, and the integrated light intensity was 30 mW/cm^2.

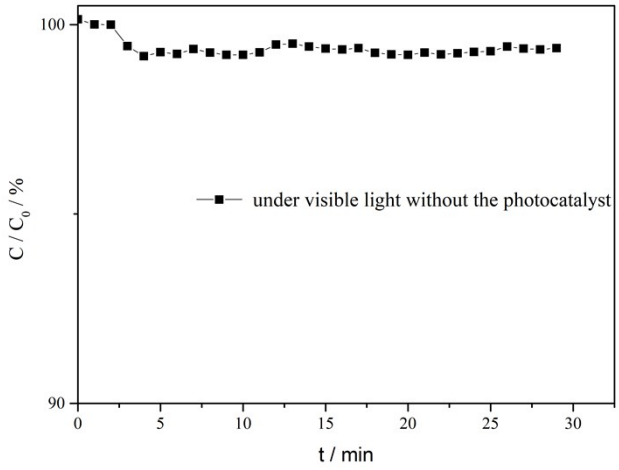

Fig. S1 Photocatalytic oxidation of NO without any photocatalyst under visible light.

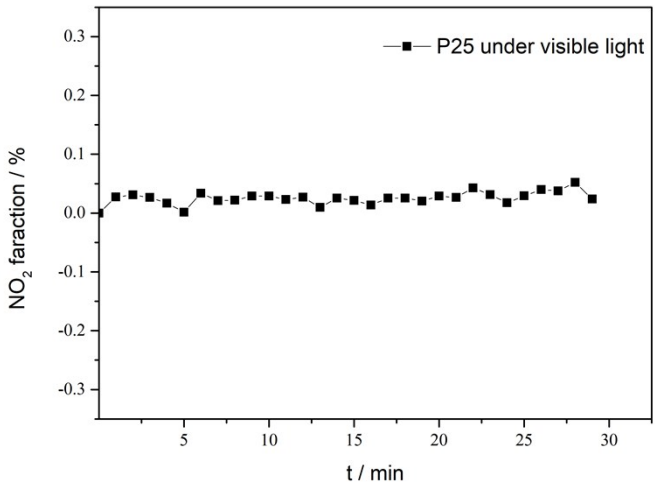

Fig. S2 Photocatalytic activity for NO_2 generation rate over P25 under visible light irradiation

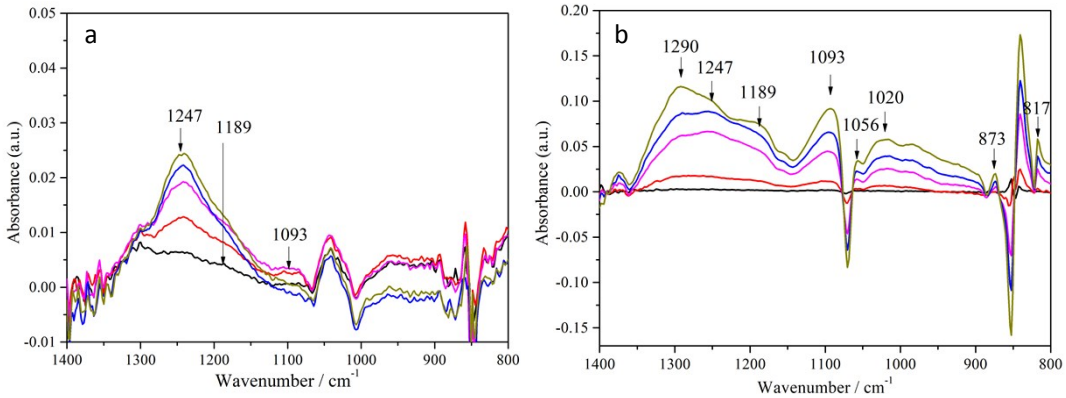

Fig. S3 In situ FTIR spectra of the adsorption process (a) and photocatalytic degradation (b) of NO + O_2 for β-Bi_2O_3/ $Bi_2O_2CO_3$