Electronic Supplementary Material (ESI) for Catalysis Science & Technology.

Effective elimination of As(III) via simultaneous photocatalytic oxidation and adsorption by a bifunctional cake-like TiO_2 derived from MIL-125(Ti)

Supporting Information

Table S1 BET special surface areas (S_{BET}), pore volumes (V_P) and average pore sizes of the samples.

Samples	S_{BET} (m^2 g^{-1})	V_P (cm^3 g^{-1})	Average pore size (nm)
MIL-125(Ti)-280°C	816.1	0.54	7.6
MIL-125(Ti)-380°C	114.9	0.27	9.5
MIL-125(Ti)-480°C	40.8	0.13	12.6
MIL-125(Ti)-580°C	32.5	0.12	16.2

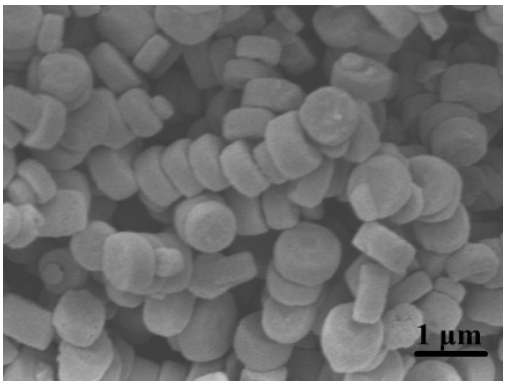

Fig. S1. SEM images of MIL-125(Ti).

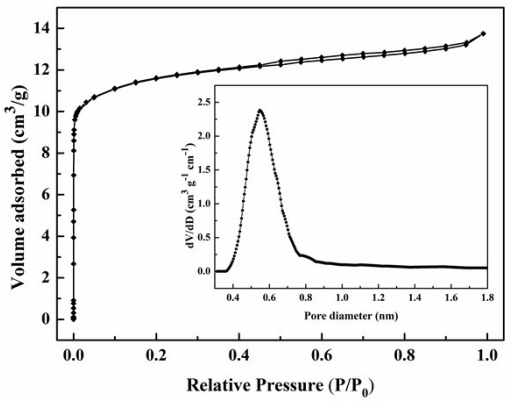

Fig. S2. N_2 adsorption-desorption isotherms and pore size distribution curves (insets) of MIL-125(Ti).

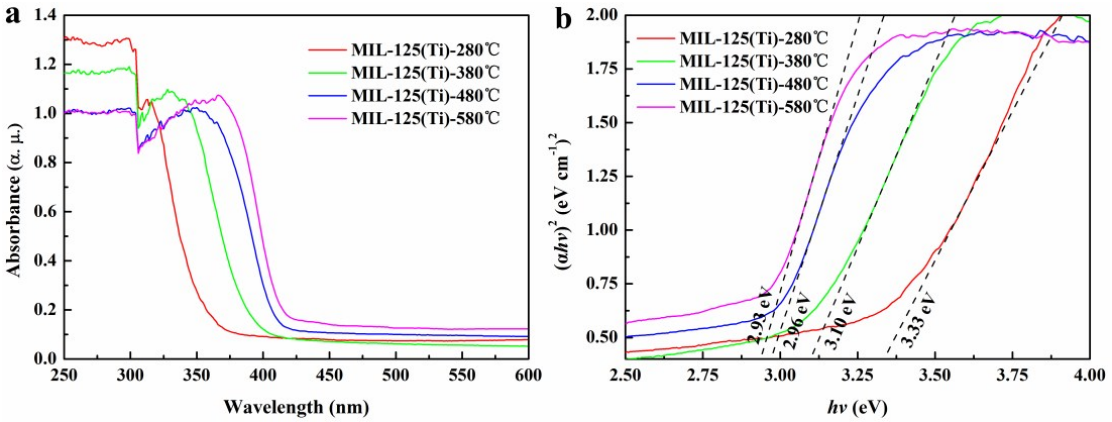

Fig. S3. UV-vis absorption spectra and (a) and plots of $(\alpha h\nu)^2$ versus hν of samples (b) of the MIL-125(Ti)-280°C, MIL-125(Ti)-380°C, MIL-125(Ti)-480°C and MIL-125(Ti)-580°C.

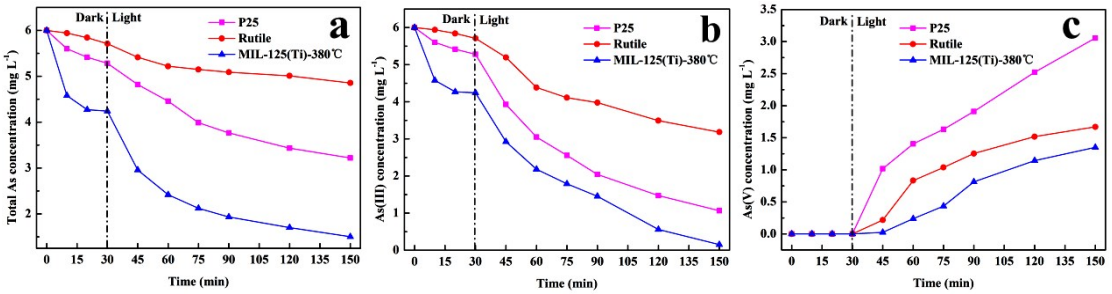

Fig. S4. Photocatalytic oxidation of As(III) by comparing P25, Rutile and MIL-125(Ti)-380°C under UV light irradiation. The concentration of total As (a), As(III) (b) and As(V) (c).

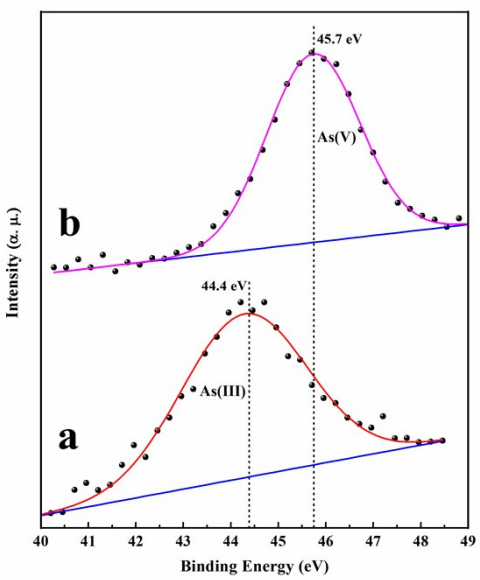

Fig. S5. XPS spectra of As 3d: (a) after adsorption of As(III) under dark and (b) after photocatalytic oxidation of As(III) under UV light.