

Supporting Materials

Fig.S1 Schematics of the experimental equipment for photocatalytic degradation of benzene

Fig.S2 Schematics of the experimental equipment for photocatalytic degradation of 4-chlorophenol

Fig. S3 XRD patterns of the products prepared from Sb_2O_5 and $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$, (●) $\text{Bi}_6\text{O}_6(\text{OH})_3(\text{NO}_3)_3 \cdot 1.5\text{H}_2\text{O}$ (00-053-1038); (◆) Sb_6O_{13} (01-071-1091)

Fig. S4 XRD patterns of the products prepared from Sb_2O_3 and BiCl_3 , (●) BiOCl (01-085-0861); (◆) Sb_2O_3 (01-071-0383); (♥) Sb_6O_{13} (00-033-0111); (↓) Bi (01-089-2387)

Fig. S5 XRD patterns of the products prepared from Sb_2O_5 and BiCl_3 , (●) BiOCl (01-073-2060); (◆) Bi_2O_3 (00-027-0053); (↓) Sb_6O_{13} (00-033-0111); (♥) $\text{Bi}_6\text{O}_4(\text{OH})_4(\text{Cl}_4)_6(\text{H}_2\text{O})_7$ (01-076-2291)

Fig. S6 XRD patterns of the products prepared from Sb_2O_3 and $\text{Bi}_5\text{O}(\text{OH})_9(\text{NO}_3)_4$, (◆) BiSbO_4 (01-048-0469); (●) $\text{Bi}_6\text{O}_6(\text{OH})_3(\text{NO}_3)_3 \cdot 1.5\text{H}_2\text{O}$ (00-053-1038); (♥) Sb_2O_3 (00-003-0530); (▽) $\text{Sb}_2\text{O}_5 \cdot \text{H}_2\text{O}$ (01-015-0021); (↑) Sb_2O_3 (00-011-0689); (↓) $\text{NaSb}(\text{OH})_6$ (00-038-0411); (□) Bi_2O_3 (00-027-0053)

Fig. S7 XRD patterns of the products prepared from Sb_2O_5 and $\text{Bi}_5\text{O}(\text{OH})_9(\text{NO}_3)_4$, (◆) Sb_6O_{13} (00-021-0051); (●) $\text{Bi}_6\text{O}_6(\text{OH})_3(\text{NO}_3)_3 \cdot 1.5\text{H}_2\text{O}$ (00-053-1038); (↓) Bi_2O_3 (00-027-0053)

Fig. S8 XRD patterns of the products prepared from Sb_2O_3 and ammonium bismuth citrate

Fig. S9 XRD patterns of the products prepared from Sb_2O_5 and ammonium bismuth citrate

Fig. S10 XRD patterns of the products prepared from $\text{Sb}(\text{Ac})_3$ and $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$

Fig. S11 IR spectra of the starting $\text{Bi}(\text{NO}_3)_3$ and the mixture of Sb_2O_3 and $\text{Bi}(\text{NO}_3)_3$

Fig. S12 Temporal evolution of HPLC graphs in the presence of $\text{BiSbO}_{4(\text{Hy})}$ under UV irradiations (initial concentration of 4-CP, $3.5 \cdot 10^{-4}$ M; catalyst loading: 1 g/L; pH = 5~6, $\lambda = 254$ nm)

Fig. S13 Temporal evolution of HPLC graphs in the presence of $\text{BiSbO}_{4(\text{SSR})}$ under UV irradiations (initial concentration of 4-CP, $3.5 \cdot 10^{-4}$ M; catalyst loading: 1 g/L; $\lambda = 254$ nm)

Fig. S14 Temporal evolution of HPLC graphs under UV irradiations only (initial concentration of 4-CP, $3.5 \cdot 10^{-4}$ M, $\lambda = 254$ nm)

Fig. S1

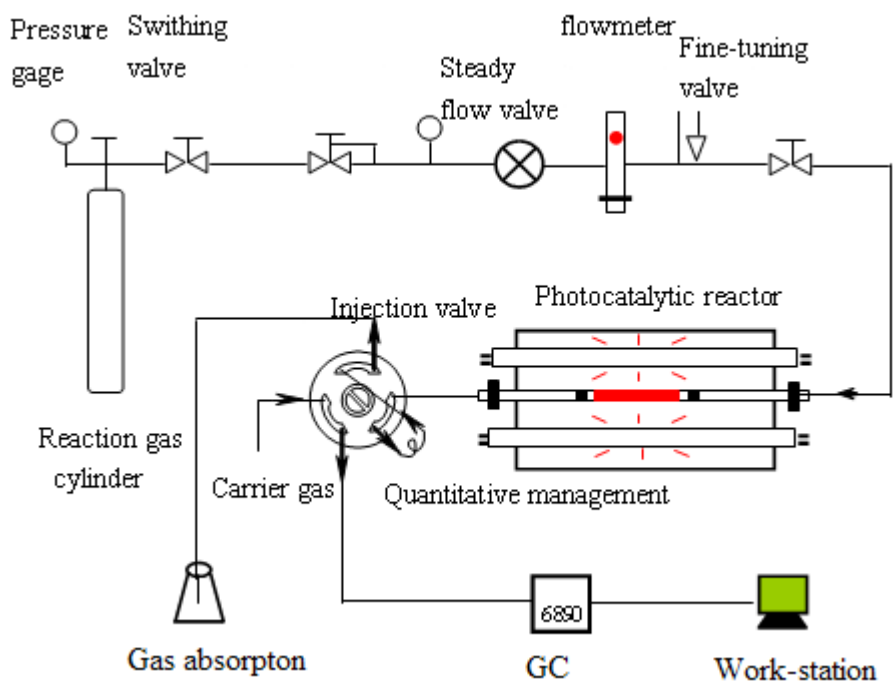


Fig. S2

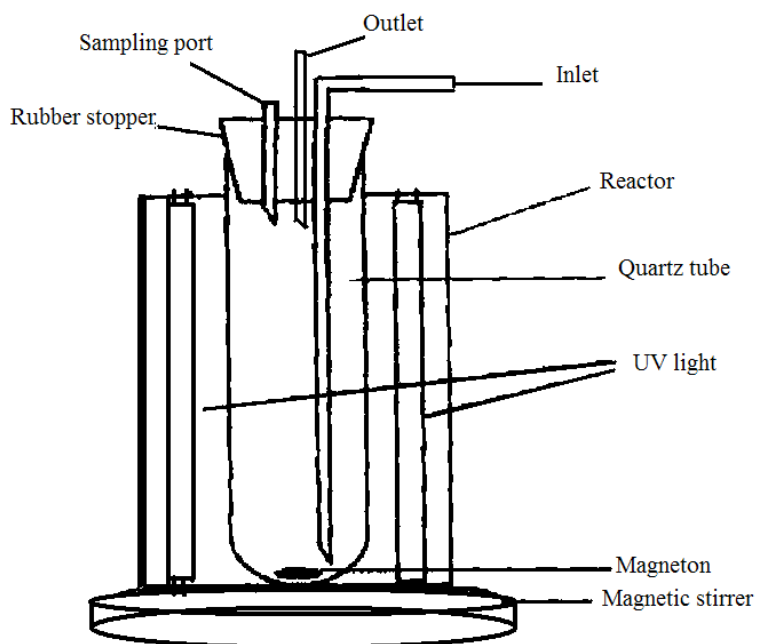


Fig. S3

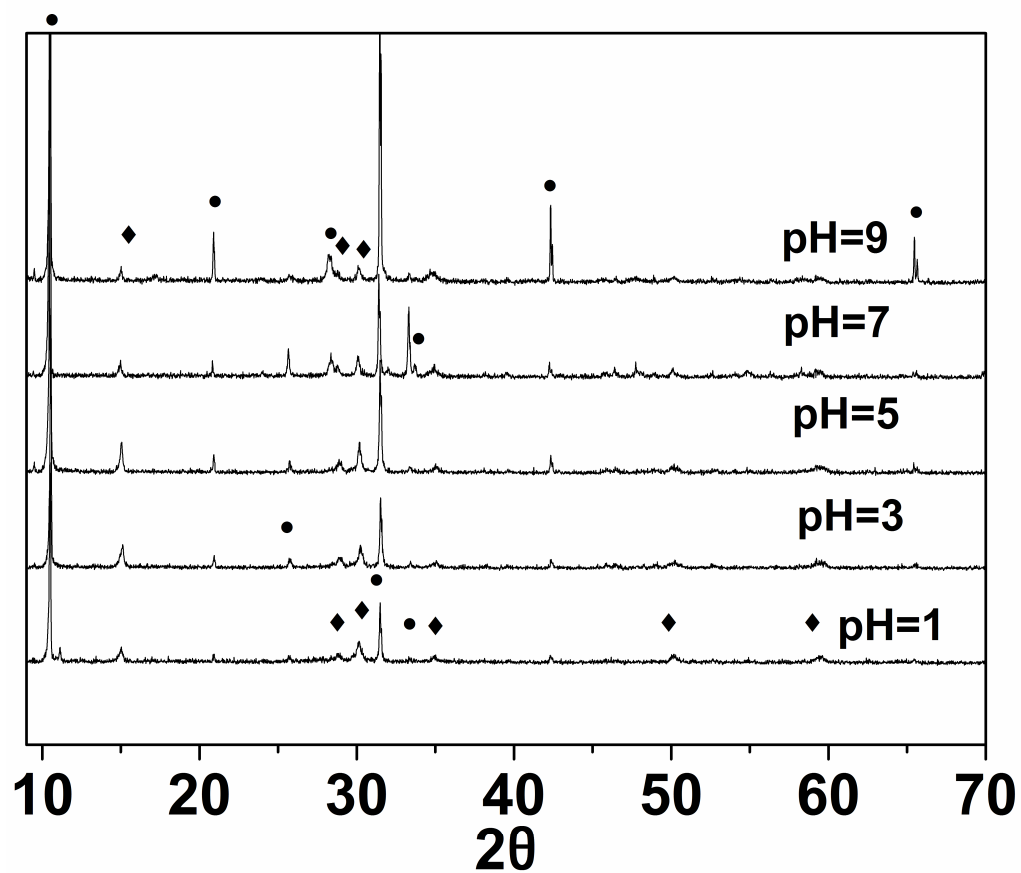


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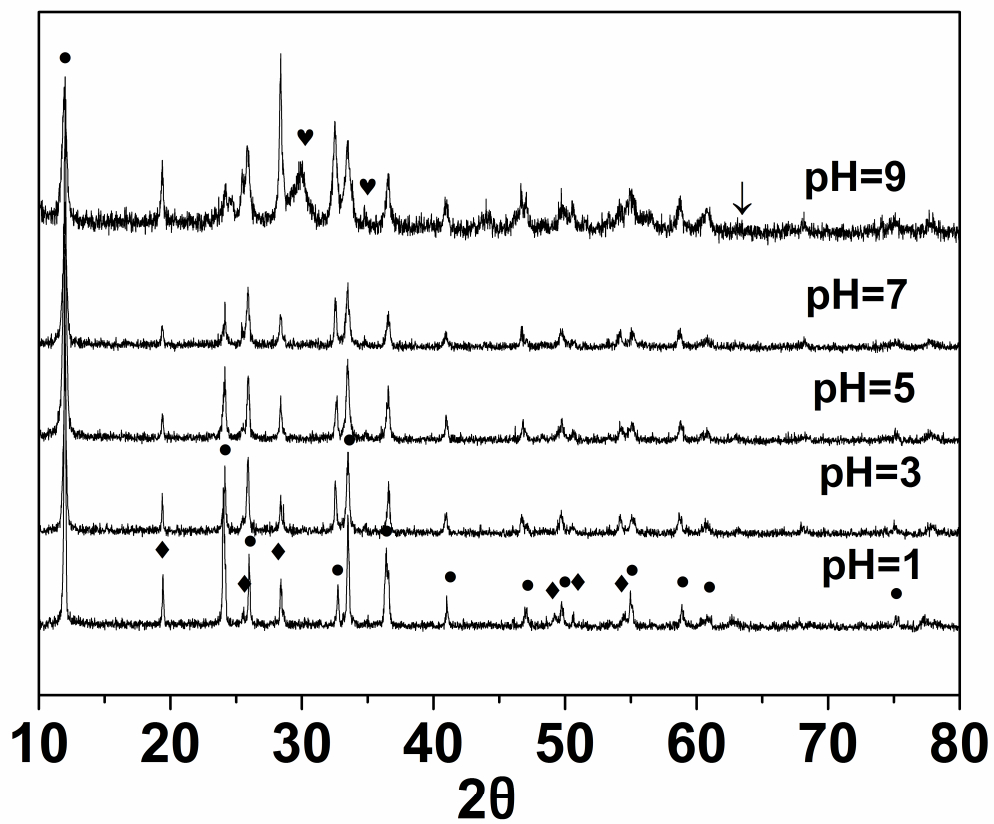


Fig. S5

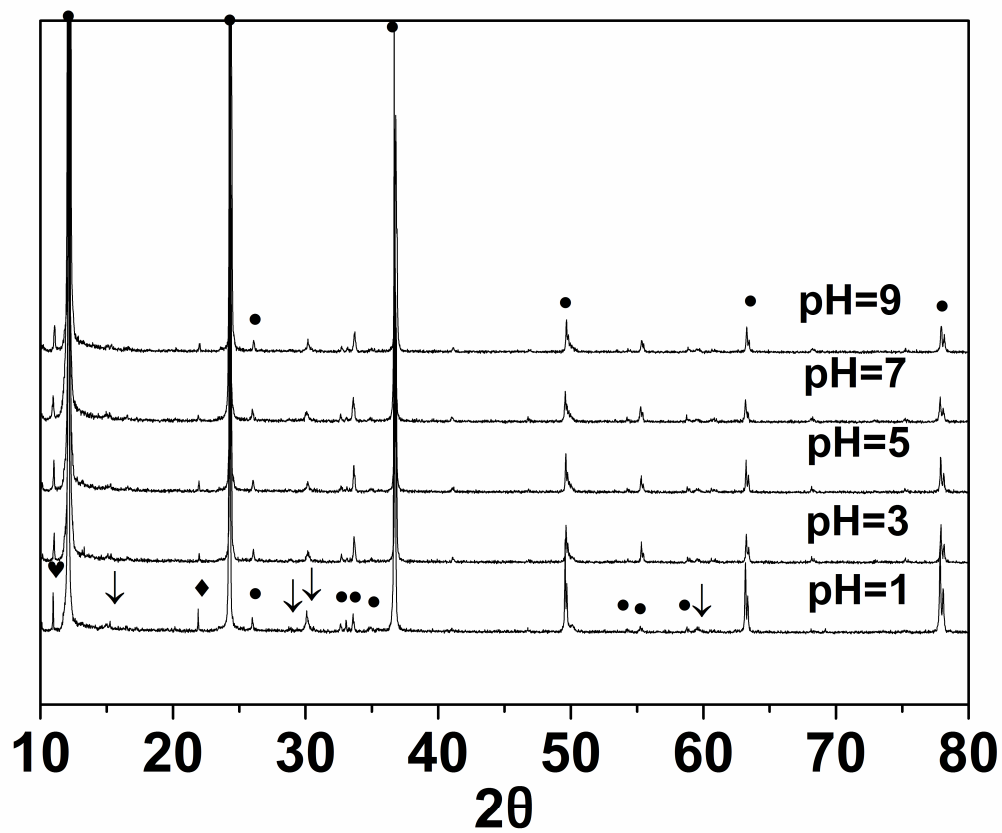


Fig. S6

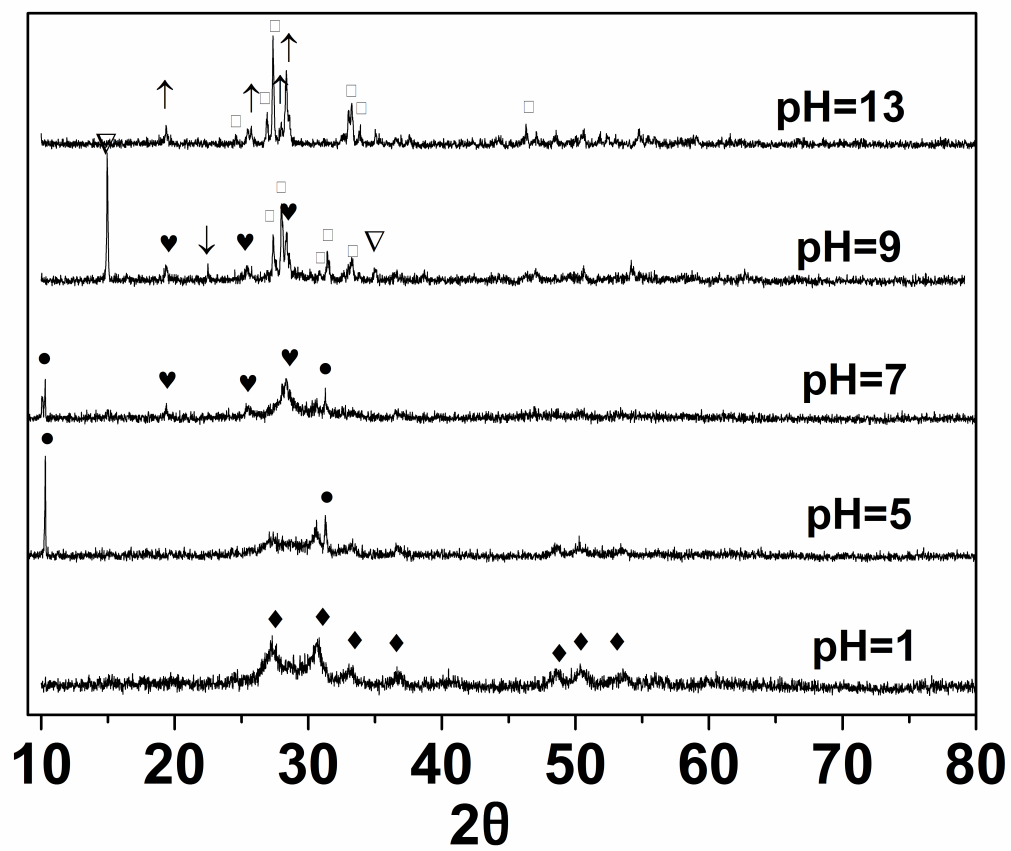


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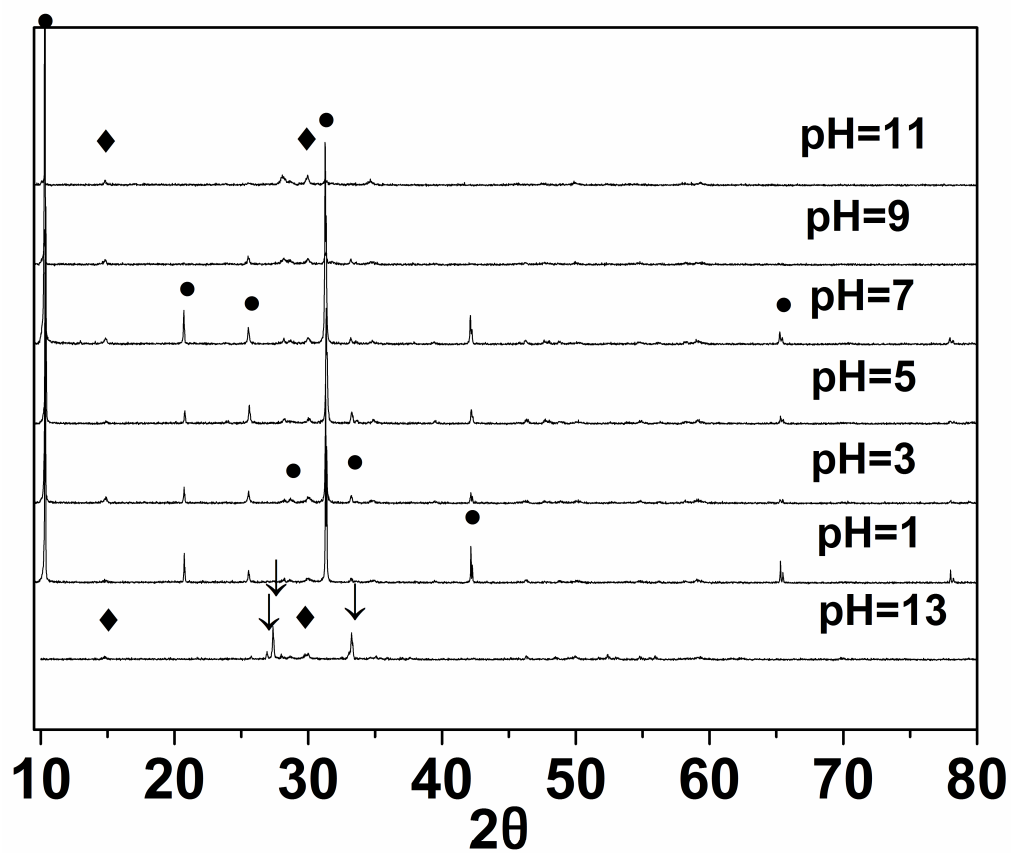


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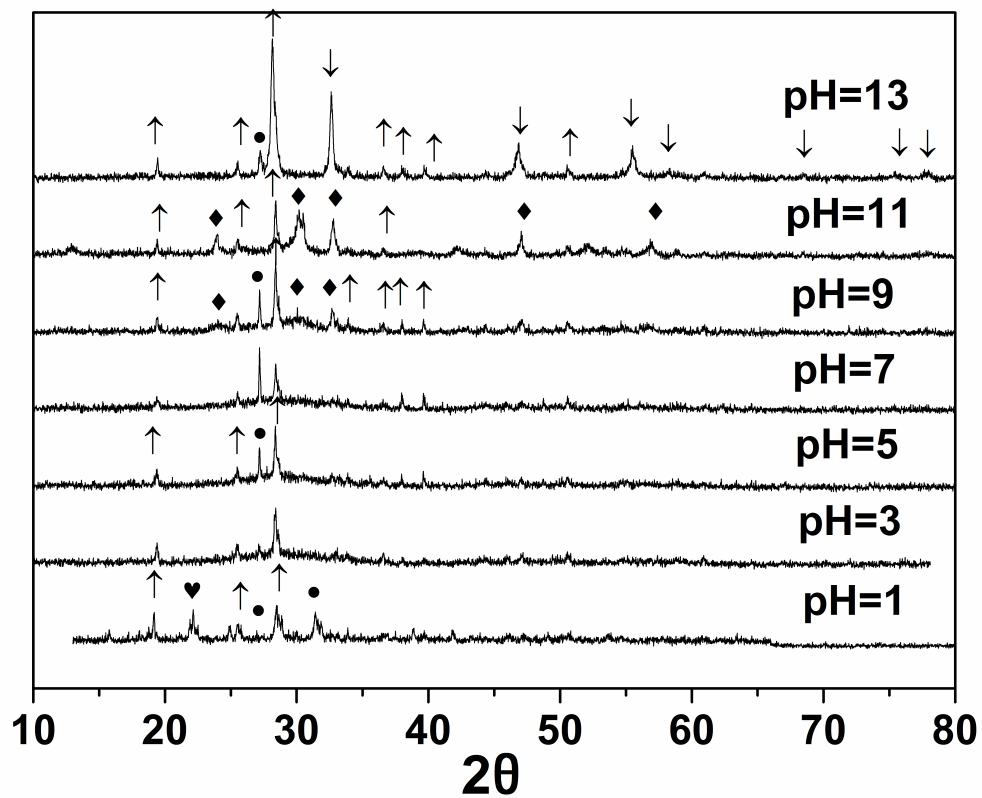


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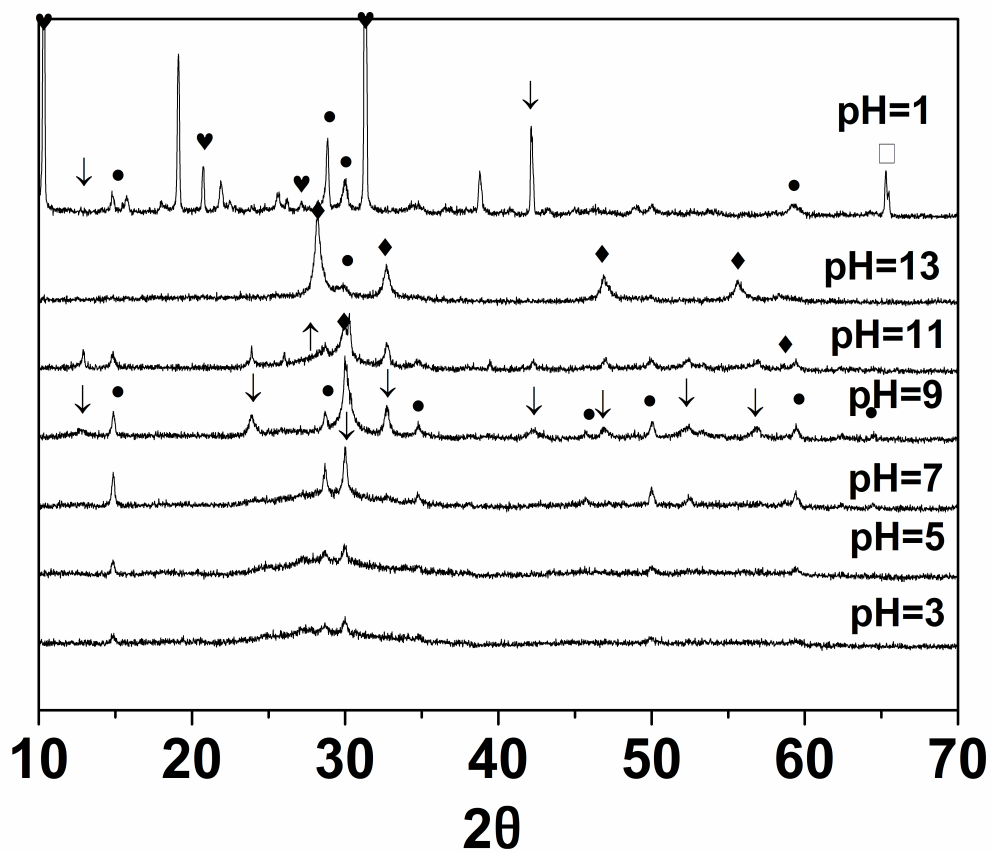


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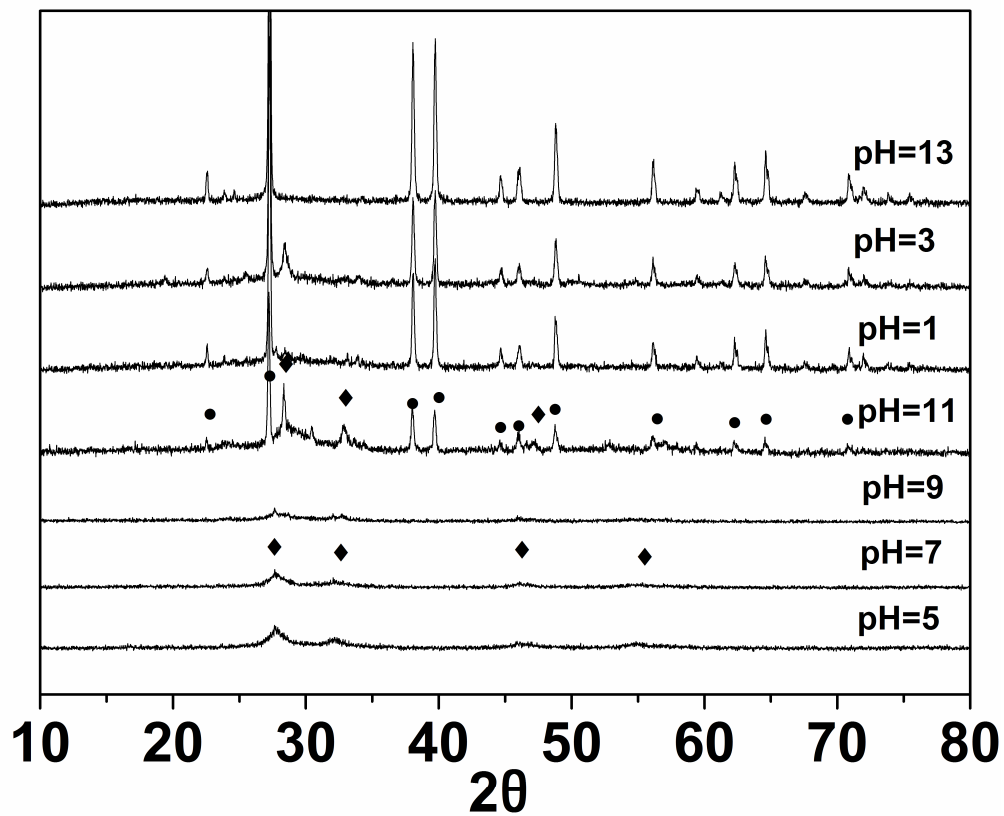


Fig. S11

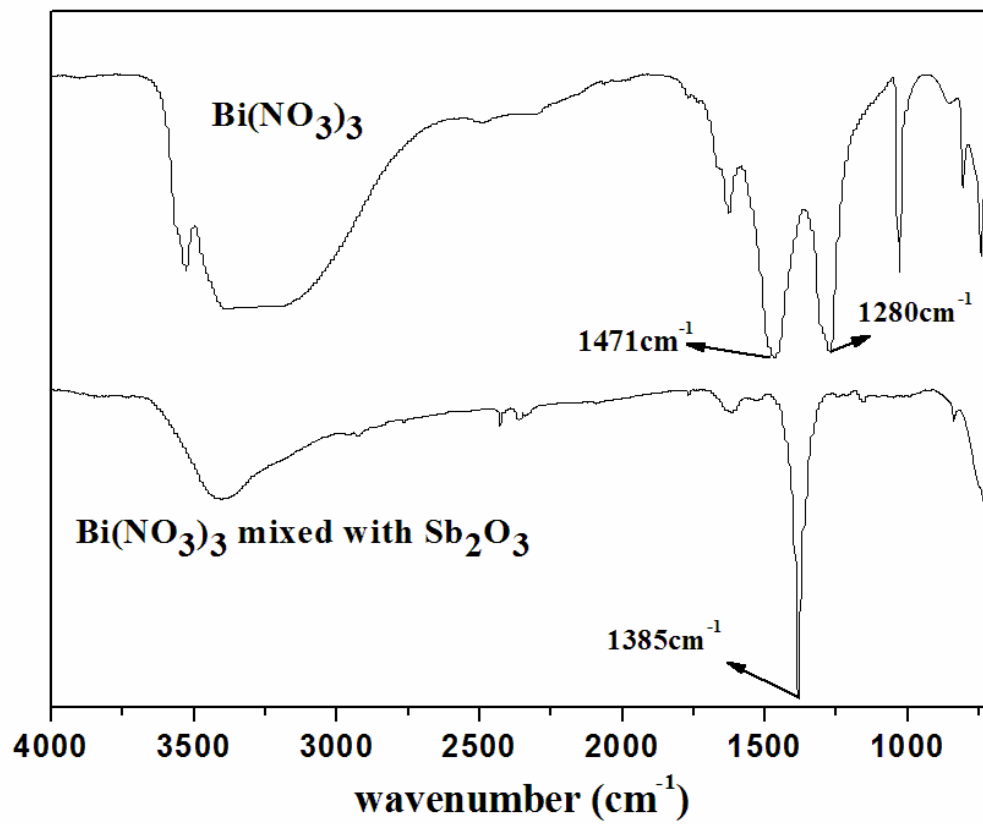


Fig. S12

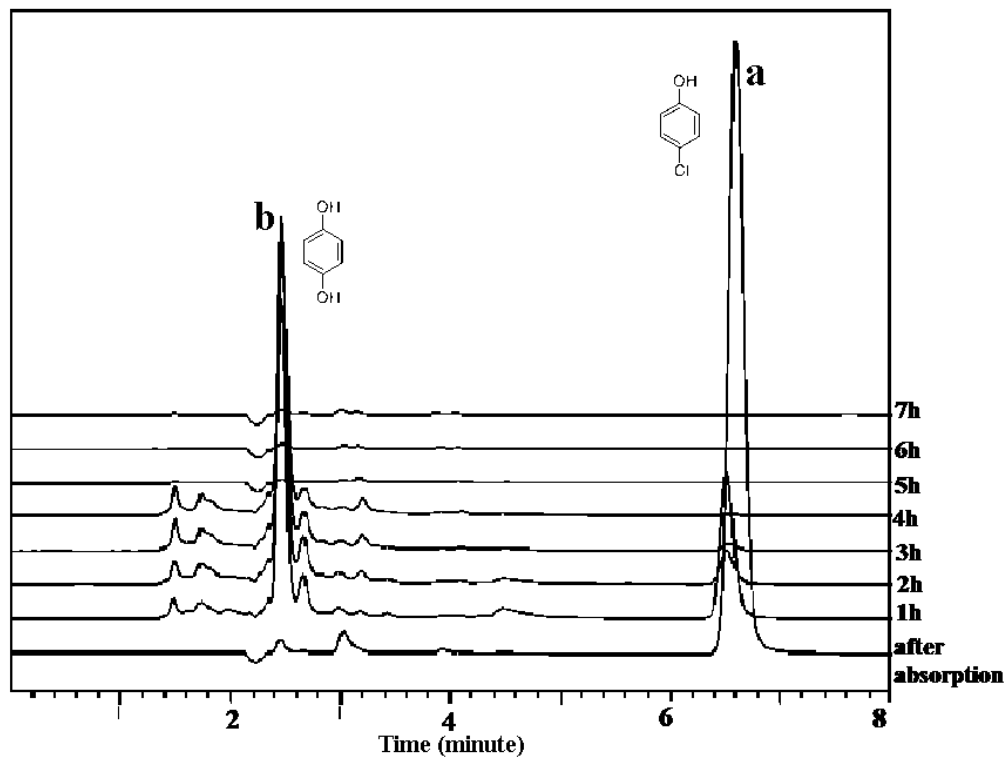


Fig. S13

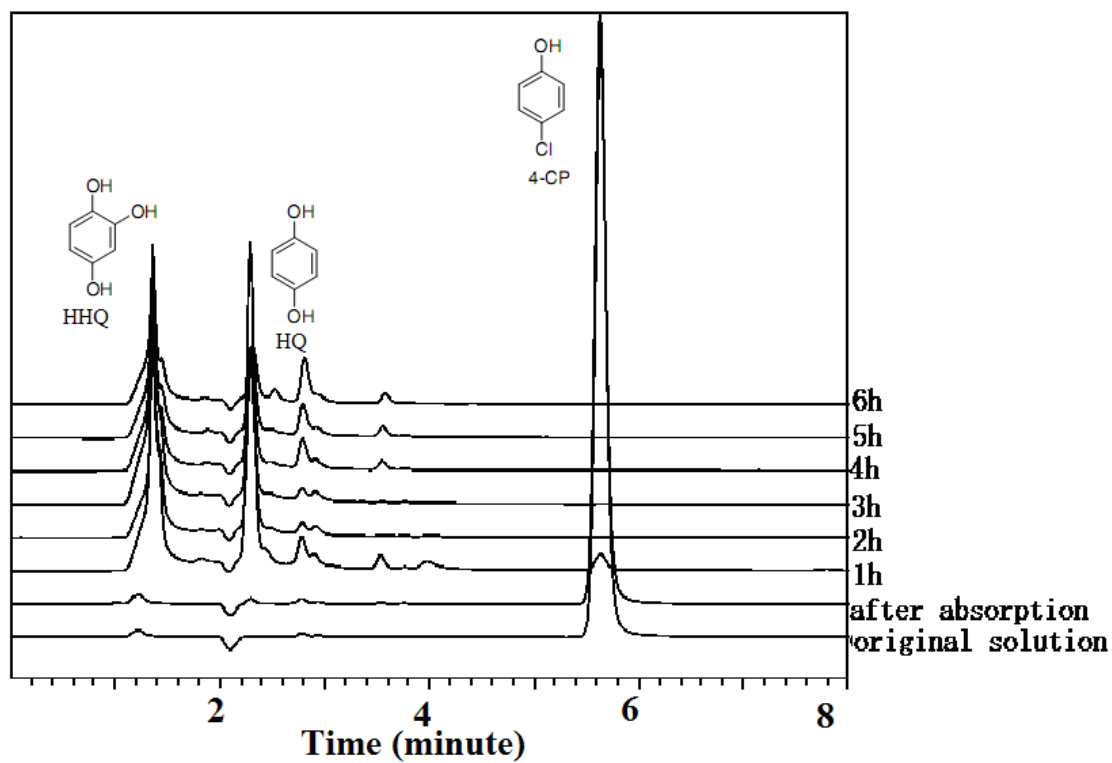


Fig. S14

