

Supplementary Information

Fig. S1 Low angle and wide angle XRD (inset) patterns of the as-washed and calcined HPT.

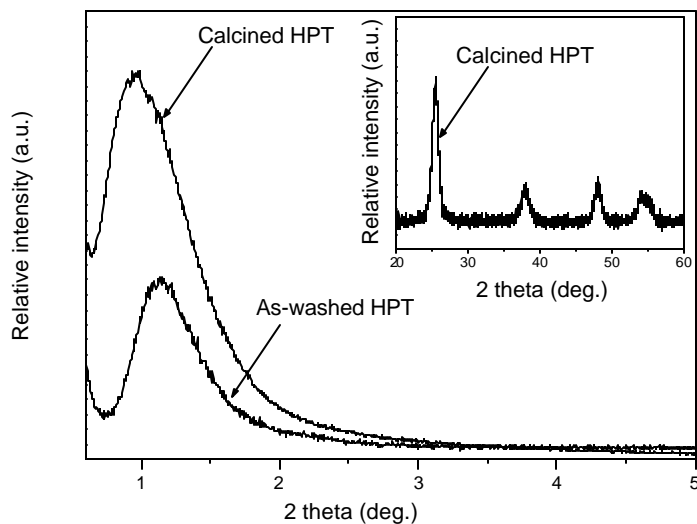


Fig. S2 Nitrogen adsorption-desorption isotherms and pore size distribution curves (inset) of the as-washed and calcined HPT

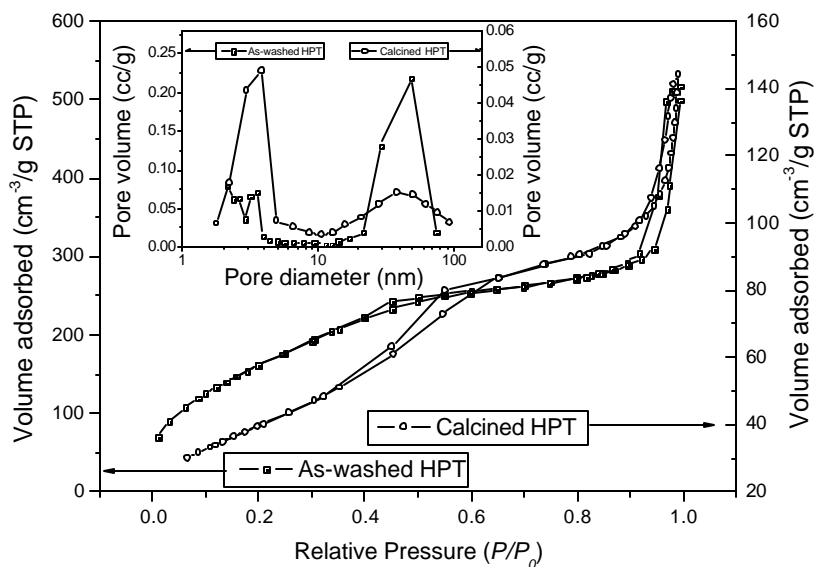


Fig. S3 Photocatalytic activities of the calcined HPT, SMT and P25.

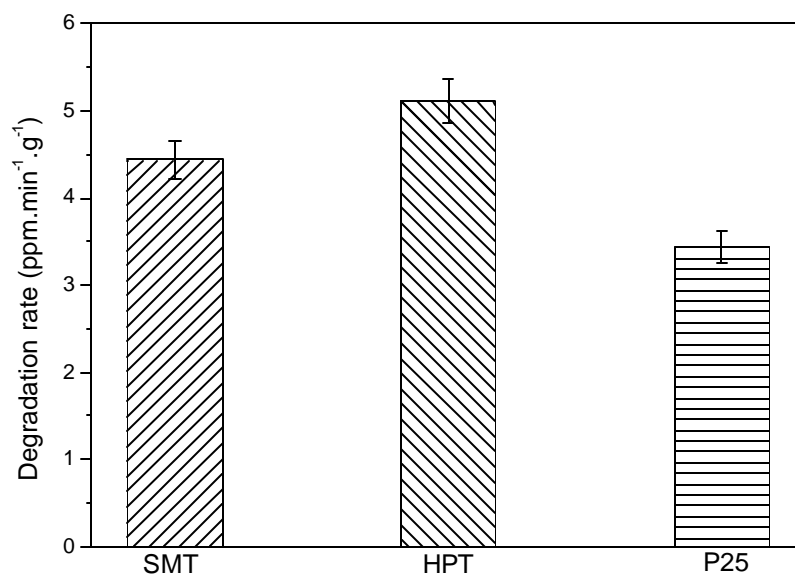


Table S1 Summary of the physicochemical properties of the as-washed and calcined HPT, SMT and P25.

Materials	D ^a (nm)	BET SA ^b (m ² /g)	V _t ^c (cm ³ /g)	V _f ^d (cm ³ /g)	V _{tx} ^e (cm ³ /g)	V _{tx} /V _t (%)
As-washed SMT	-	487	0.52	0.44(0.9P/P ₀)	0.08	15
Calcined SMT	8.6	144	0.26	0.20(0.9P/P ₀)	0.06	23
As-washed HPT	-	622	0.56	0.39(0.6P/P ₀)	0.17	30
Calcined HPT	8.8	145	0.20	0.13(0.65P/P ₀)	0.07	35
P25	37	50	0.12	-	-	-

^a D^a, Crystalline size of anatase calculated from (101) by the Scherrer equation.

^b BET SA, BET surface area calculated from the linear part of the BET plot.

^c V_t, total pore volume obtained from the volume of N₂ adsorbed at 0.99 P/P₀.

^d V_f, framework pore volume obtained from the volume of N₂ adsorbed at end point of the first hysteresis loop (relative pressure shown in the parentheses).

^e V_{tx}, textural pore volume obtained from the difference (V_t - V_f).