

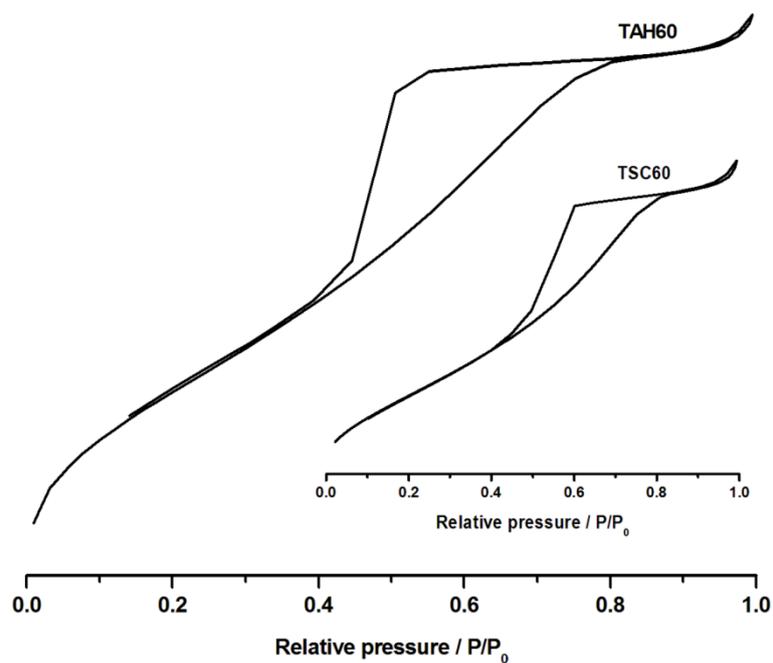
## Supplementary Information

# Selective adsorption and photocatalysis of low-temperature base-modified anatase nanocrystals

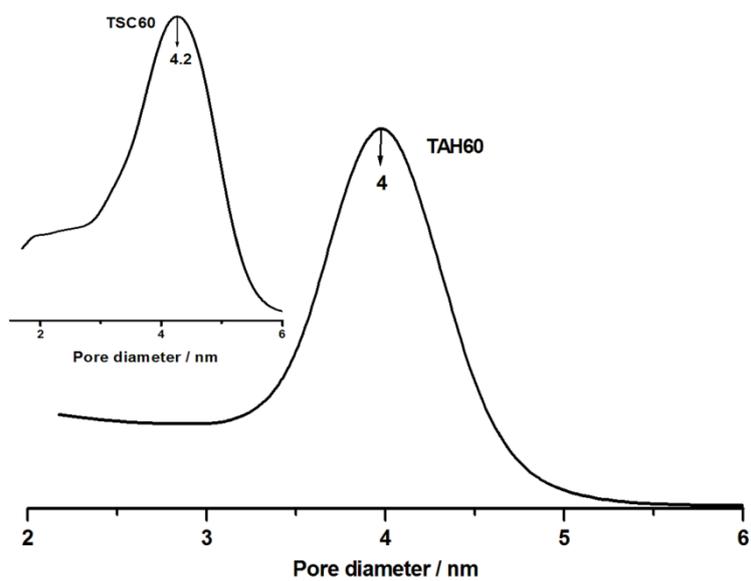
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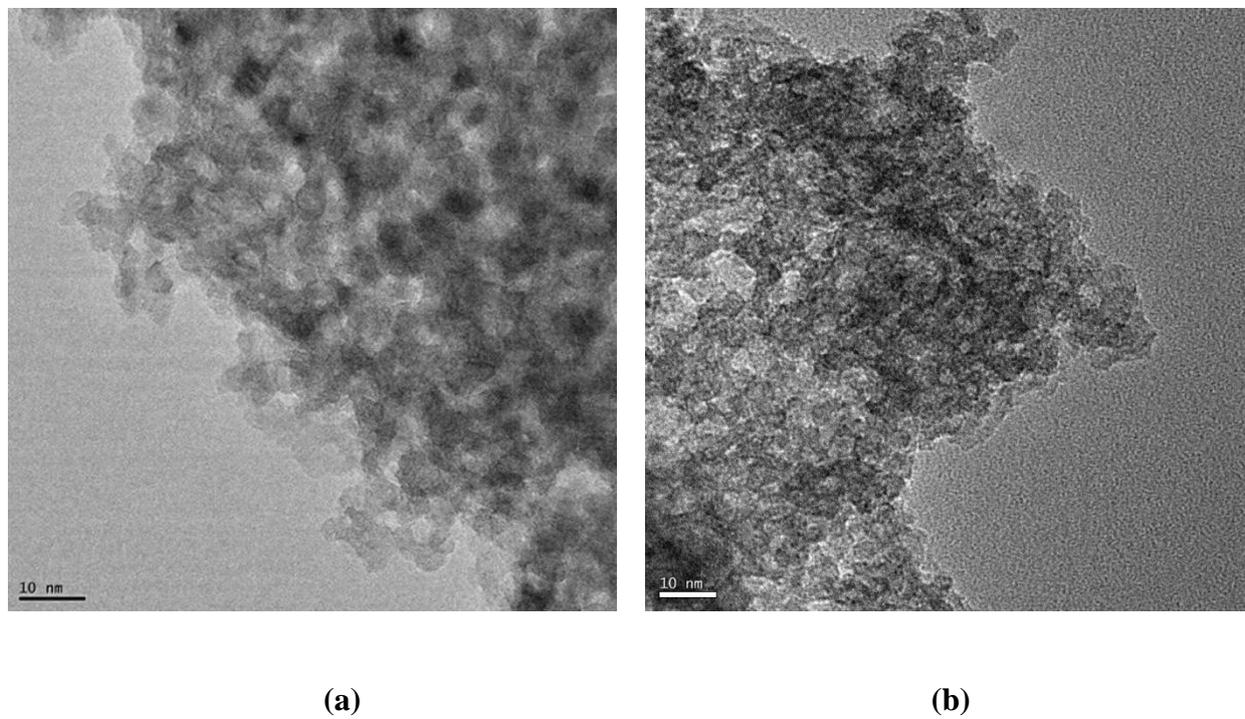
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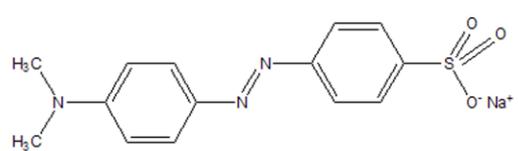
**Fig. S1** N<sub>2</sub> adsorption isotherms of TSC60 and TAH60.



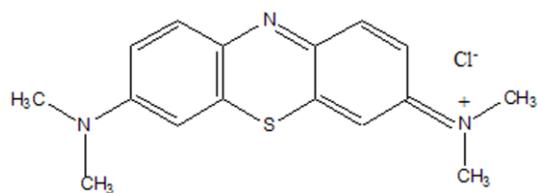
**Fig. S2** Pore size distribution of TSC60 and TAH60.



**Fig. S3** TEM images of (a) TSC60 and (b) TAH60.

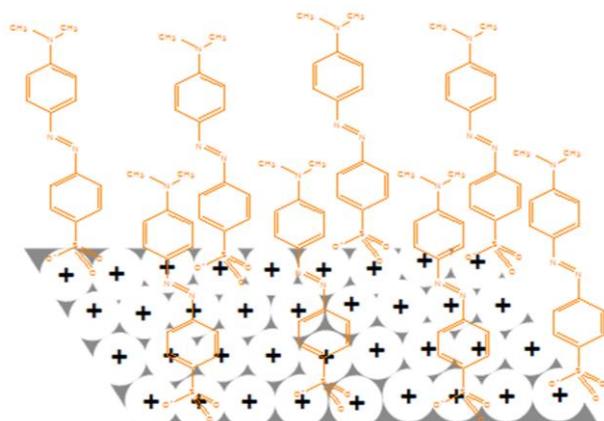


(a)

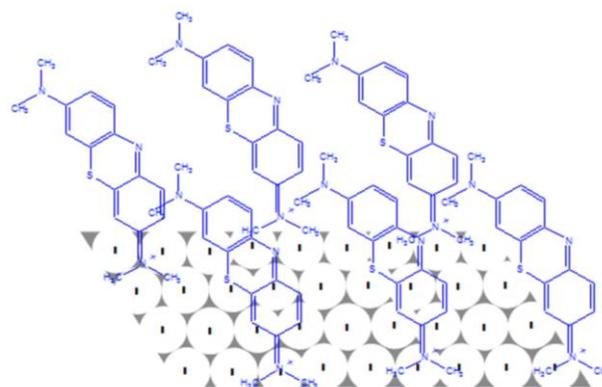


(b)

**Fig. S4** Structure of (a) Methyl orange (MO) and (b) Methylene blue (MB).

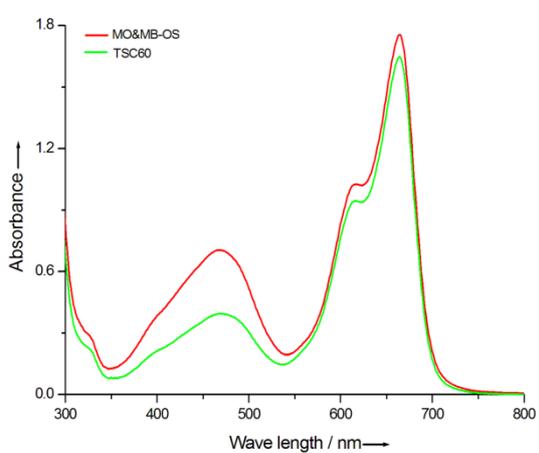


(a)

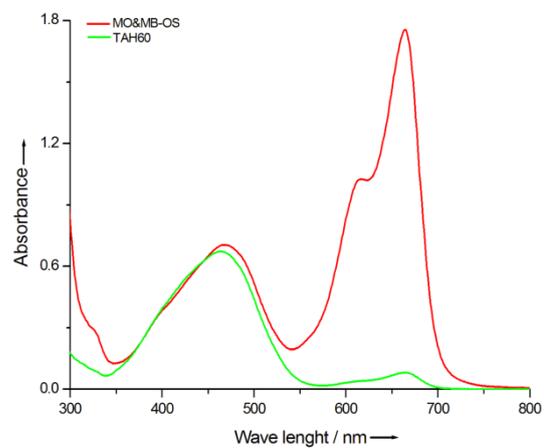


(b)

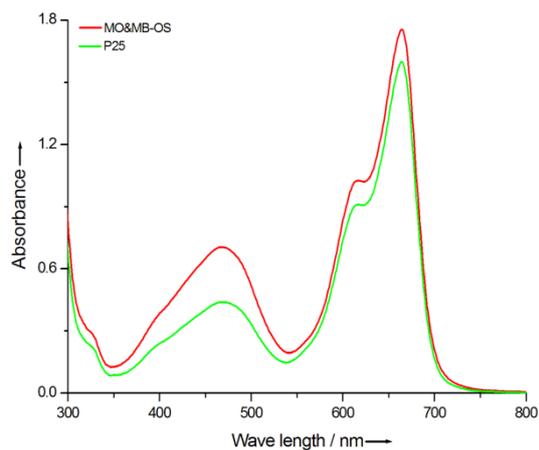
**Fig. S5** Schematic representation of adsorption of (a) MO on TSC60 and (b) MB on TAH60.



(a)

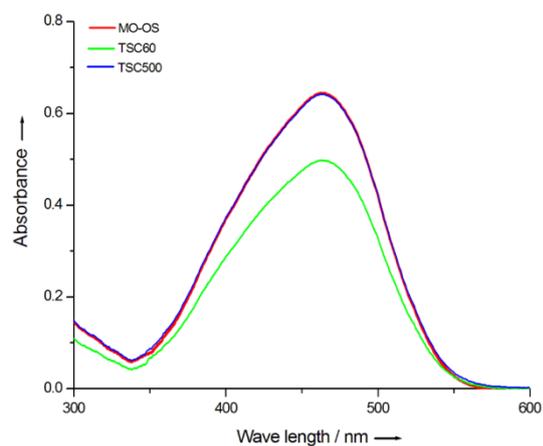


(b)

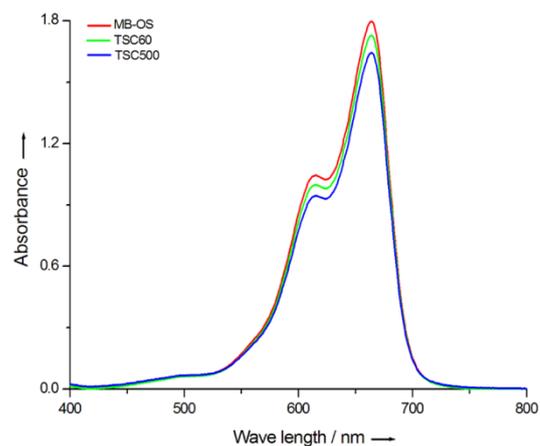


(c)

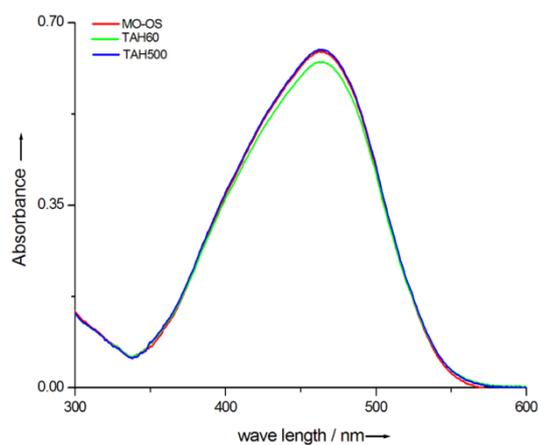
**Fig. S6** UV-Vis absorption spectra (left) of  $\approx 10 \text{ mgL}^{-1}$  aqueous mixture of MO & MB before (OS) and after contact with (a) TSC60, (b) TAH60 and (c) P25 for 30 minutes under dark.



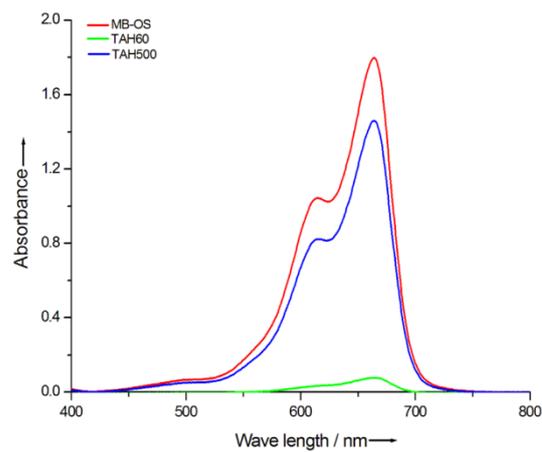
(a)



(b)



(c)



(d)

**Fig. S7** UV-Vis absorption results of adsorption studies of  $\approx 10 \text{ mgL}^{-1}$  aqueous solution of MO and MB separately (OS) with TSC60 & TSC500 (a & b) and with TAH60 & TAH500 (c & d) for 30 minutes under dark.