

Enhanced Photocatalytic Antibacterial Properties of TiO₂ Nanospheres with Rutile/Anatase Heterophase Junctions and the Archival Paper Protection Application

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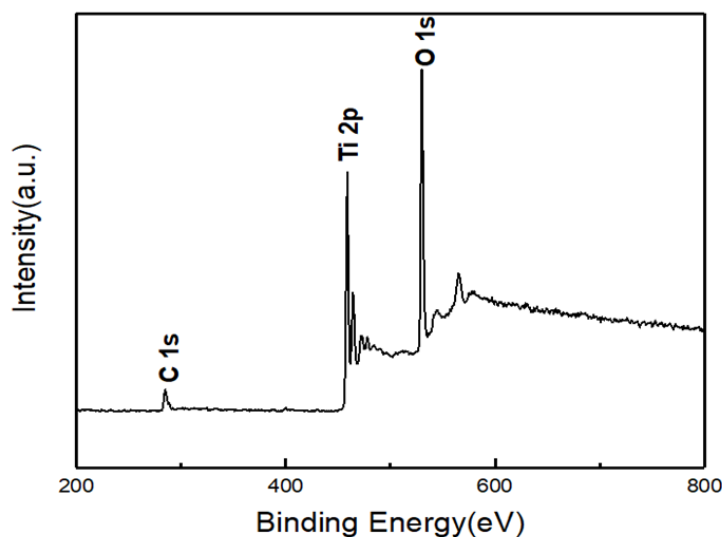


Figure S1. XPS survey spectrum of TiO₂-750.

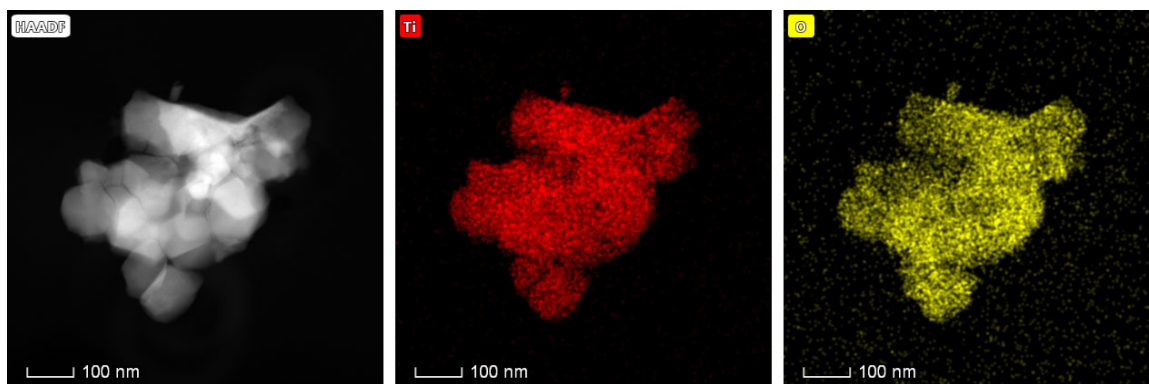


Figure S2. EDX mapping images of Ti and O in TiO₂-750.

Table S1. BET surface areas and pore sizes of TiO₂-A, TiO₂-250, TiO₂-350, TiO₂-550 and TiO₂-750.

Samples	BET Surface area (m ² g ⁻¹)	Pore size (nm)
TiO ₂ -A	16	3.6

TiO ₂ -250	306	3.8
TiO ₂ -350	302	3.8
TiO ₂ -550	298	4.0
TiO ₂ -750	297	4.2

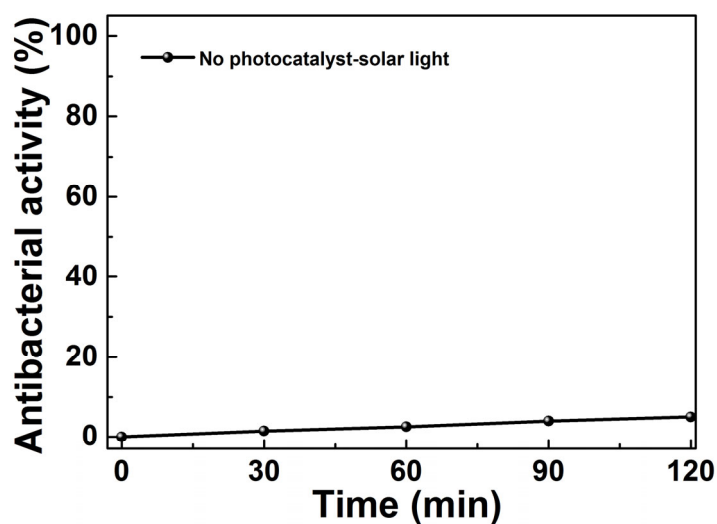


Figure S3. Photocatalytic disinfection efficiency against *E. coli* for no photocatalyst under simulated solar light irradiation.

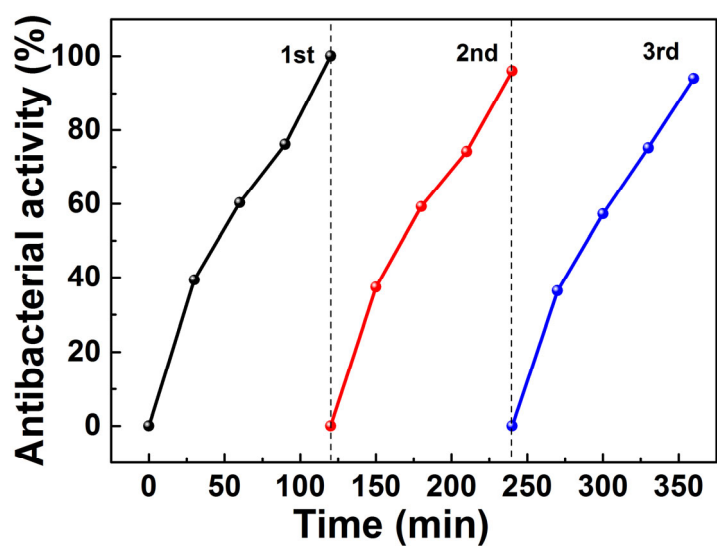


Figure S4. Photocatalytic disinfection efficiency against *E. coli* for TiO₂-750 under simulated solar light irradiation.