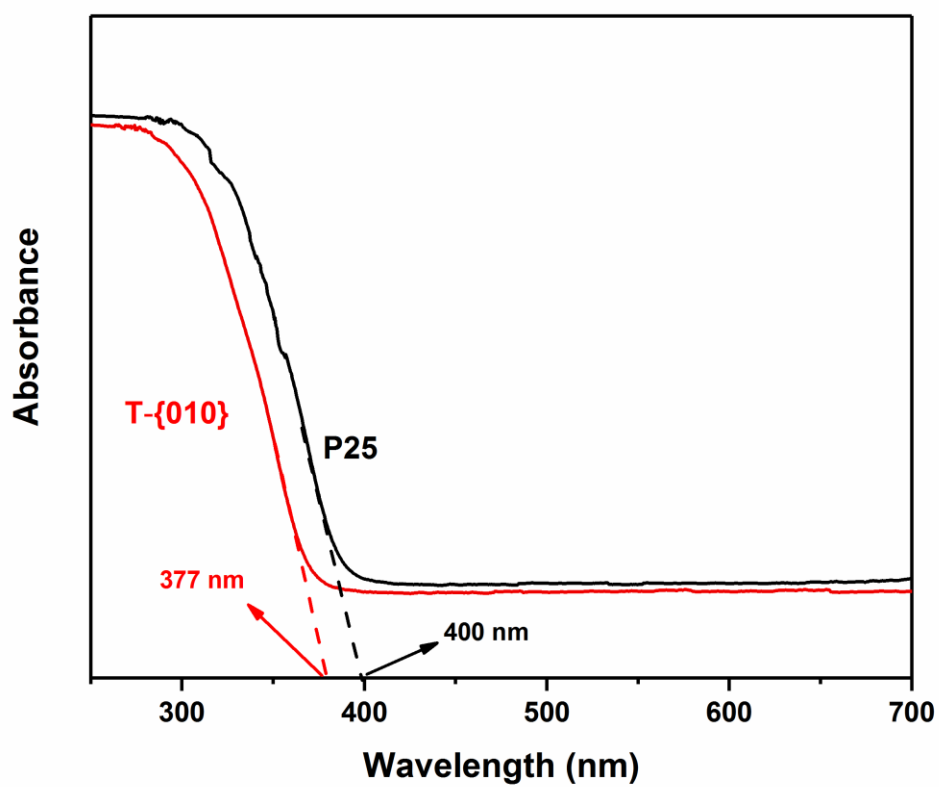


# Supplementary material

**Table S1.** Summary of  $k_{app}$  and normalized  $k_{app}$  results.

| Samples                | $k_{app}$ ( $\text{min}^{-1}$ ) | Normalized $k_{app}$ ( $\text{min}^{-1} \cdot \text{m}^{-2}$ ) |
|------------------------|---------------------------------|--|
| P25                    | $2.96 \times 10^{-2}$           | $6.29 \times 10^{-4}$  |
| {010}-TiO <sub>2</sub> | $2.33 \times 10^{-2}$           | $7.28 \times 10^{-4}$  |



**Figure S1.** UV-Vis absorption spectra of P25 and T-{010}.

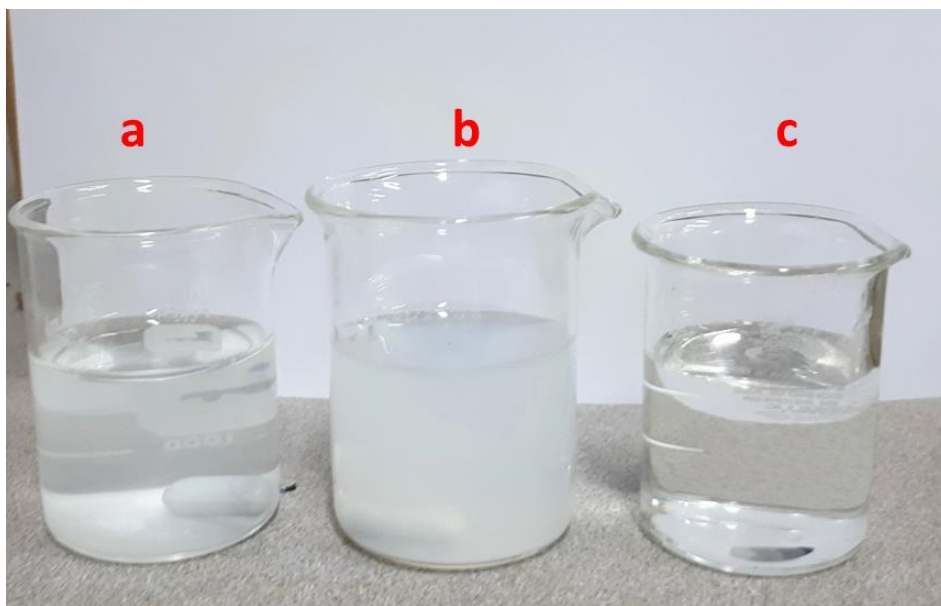


Figure S2. Images of suspension of (a) T-{010}, (b) P25 and (c) D. I. water.

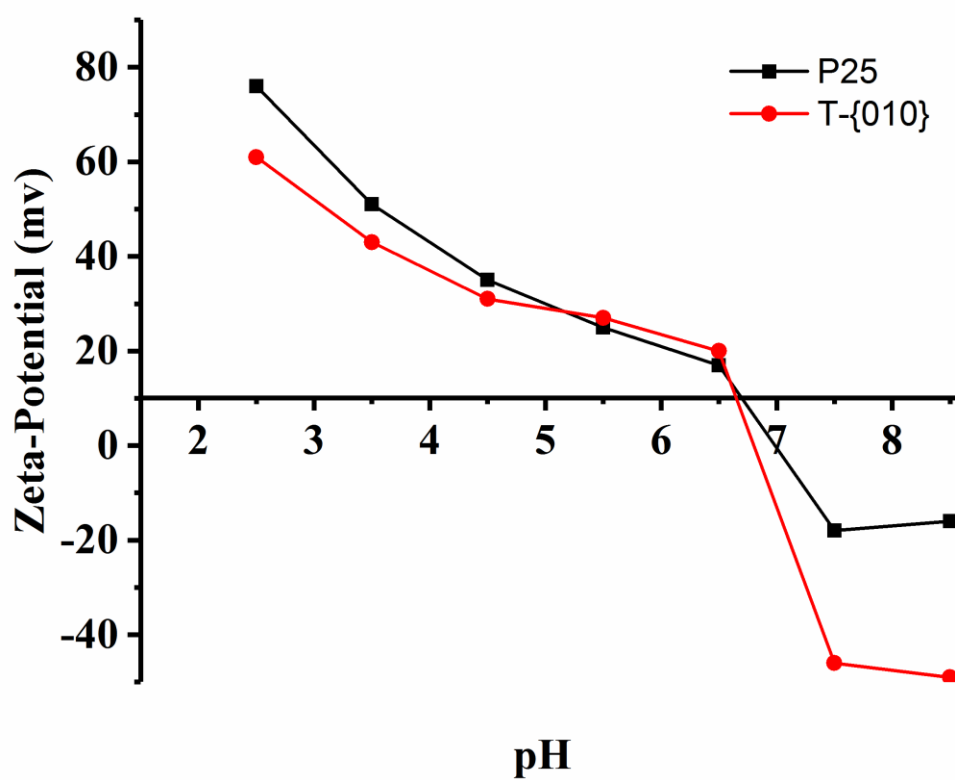
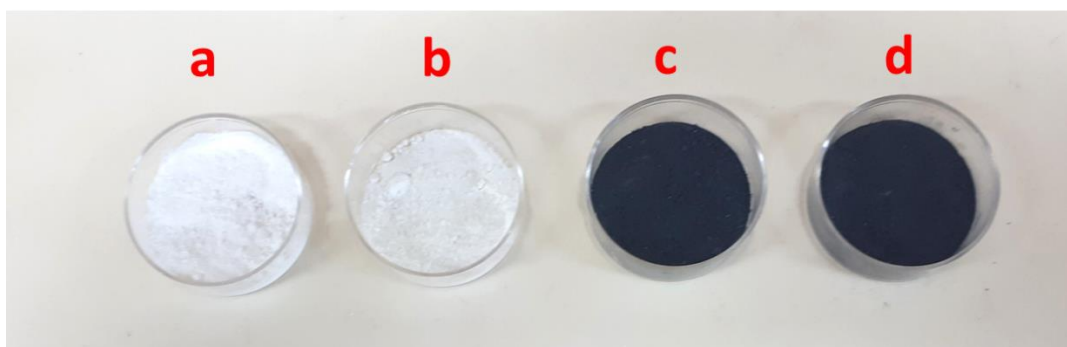
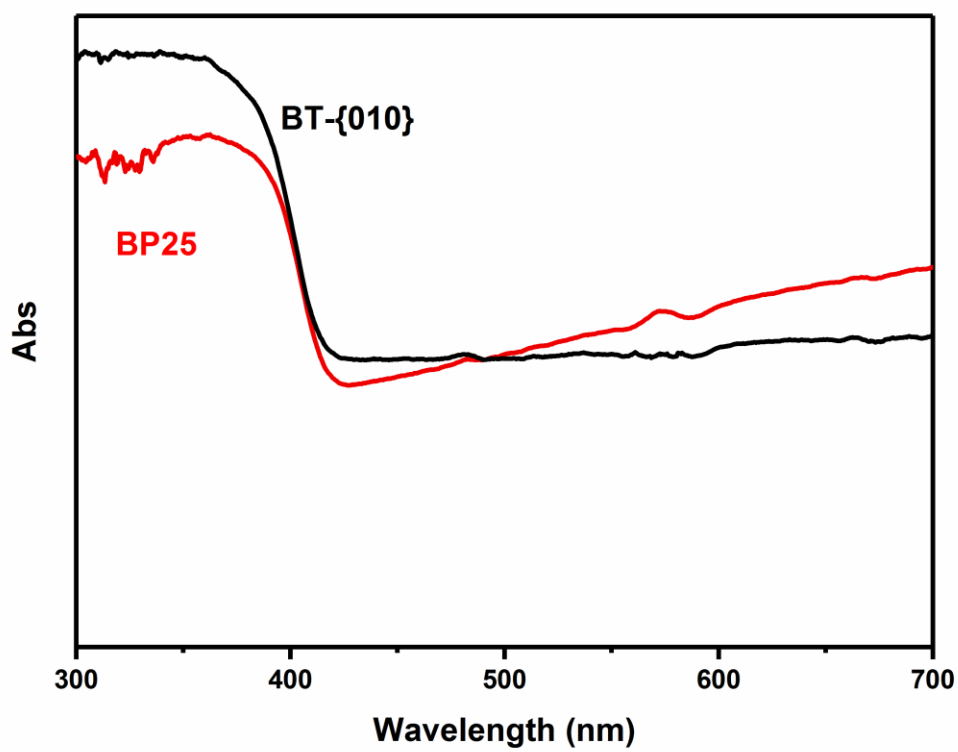


Figure S3. Zeta-potential of T-{010} and P25.



**Figure S4.** Images of (a) P25, (b) T-{010}, (c) BP25 and (d) BT-{010}.



**Figure S5.** The diffuse reflectance UV-Vis spectra of colored TiO<sub>2</sub>

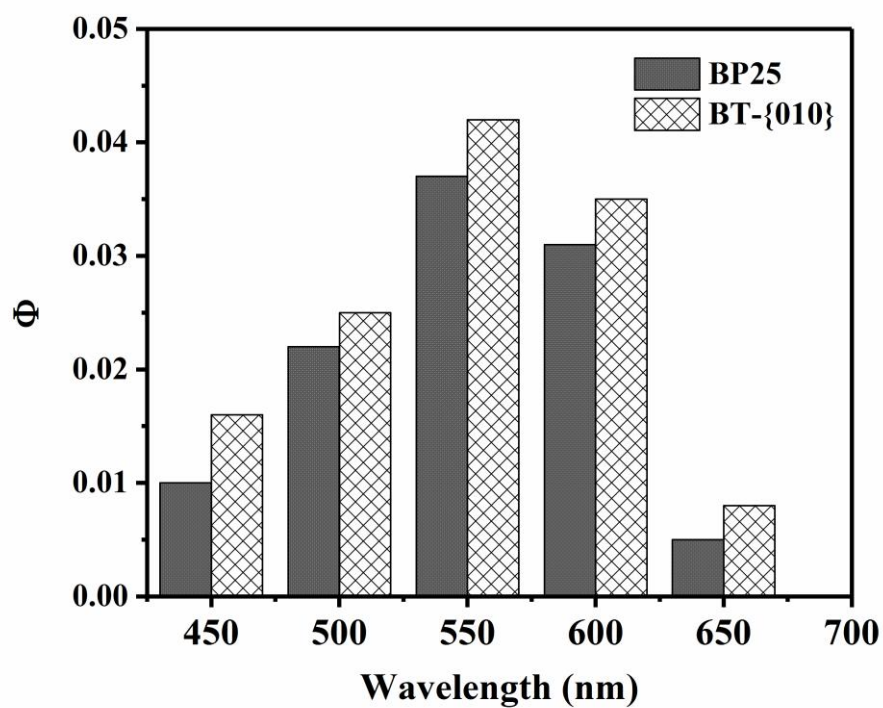


Figure S6. Wavelength-dependent apparent quantum yield for the photocatalytic degradation of ACE.

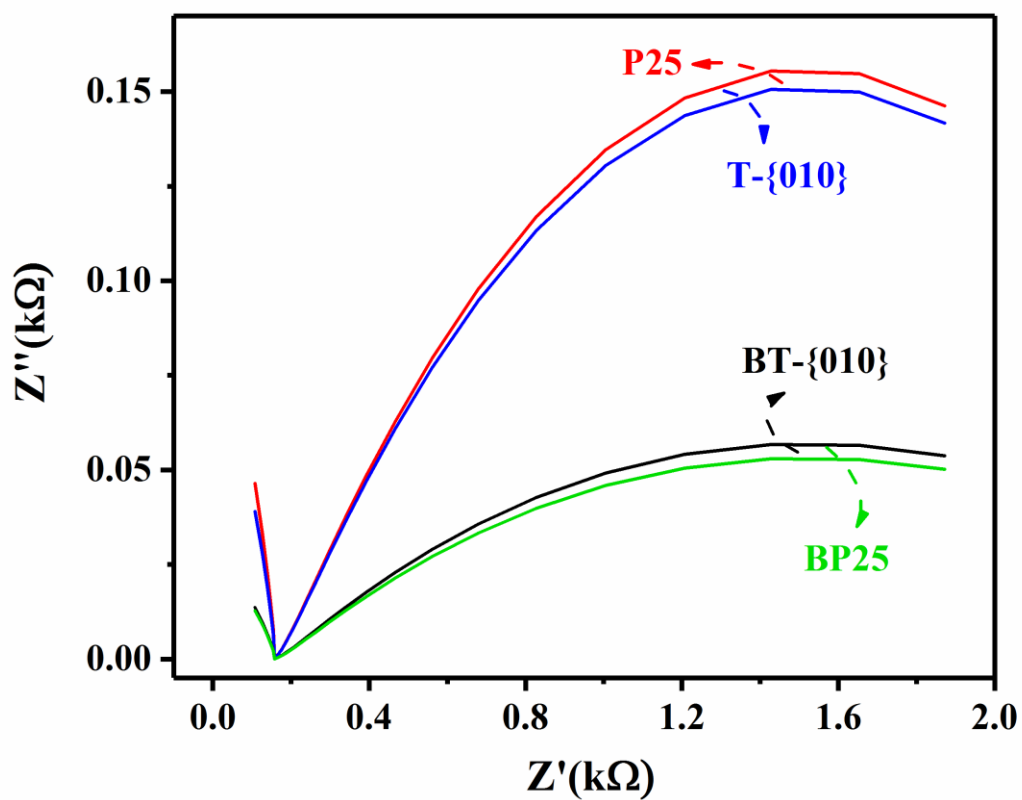


Figure S7 Nyquist characterization of the samples.