

## Electronic Supplementary Information

### Synergistic effect of crystal and electronic structures on the visible-light-driven photocatalytic performances of $\text{Bi}_2\text{O}_3$ polymorphs

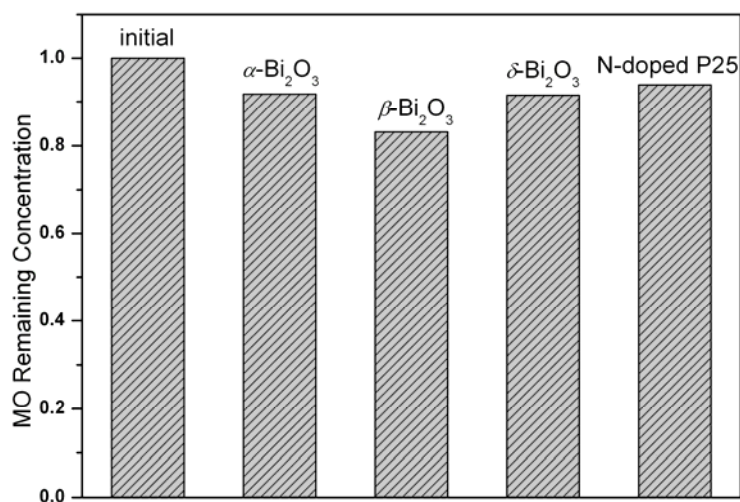
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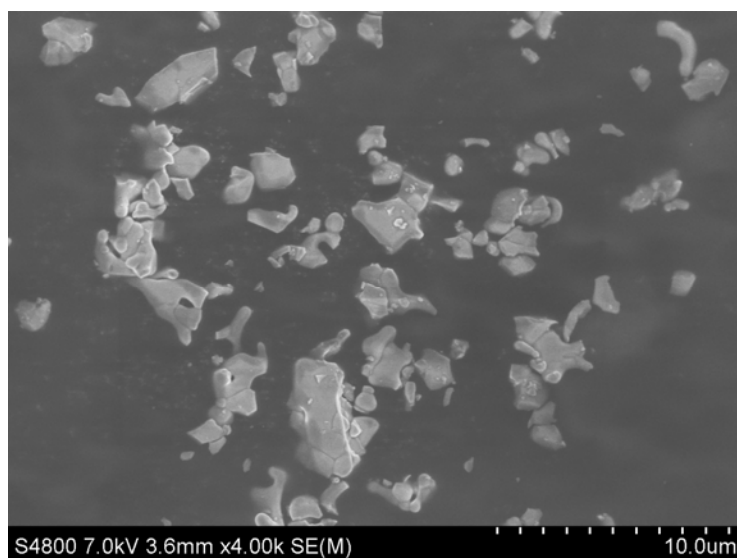
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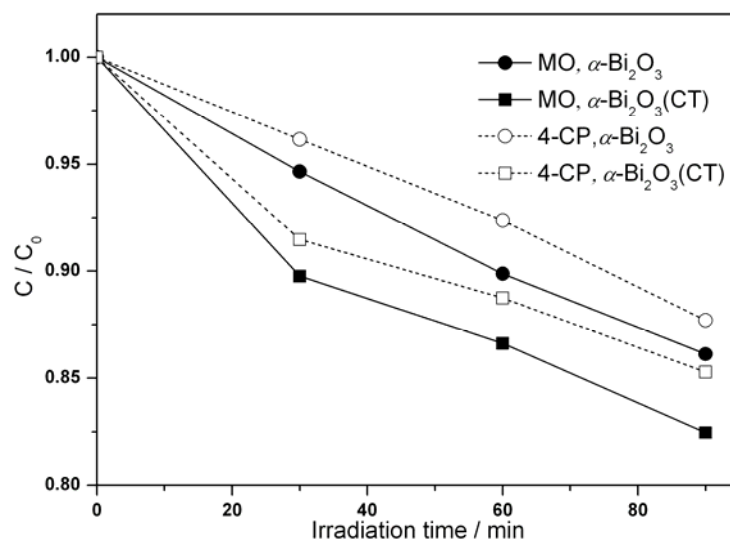
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**Figure S1.** The bar plot illustrating the remaining concentration of MO over different photocatalysts after adsorption/desorption equilibrium in the dark.



**Figure S2.** The typical SEM image of the as-prepared  $\alpha$ - $\text{Bi}_2\text{O}_3$  (CT) products.



**Figure S3.** Photocatalytic activity comparisons of  $\alpha\text{-Bi}_2\text{O}_3$  and  $\alpha\text{-Bi}_2\text{O}_3$  (CT) products.