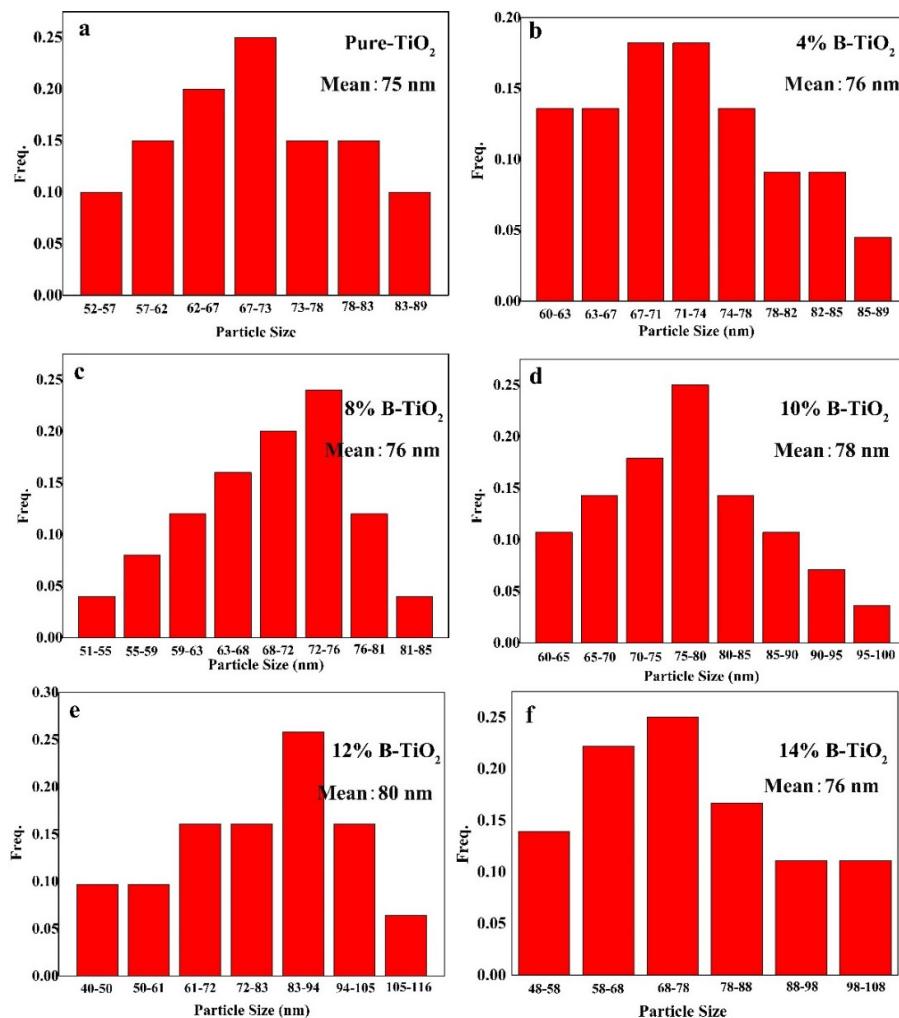


Supplementary

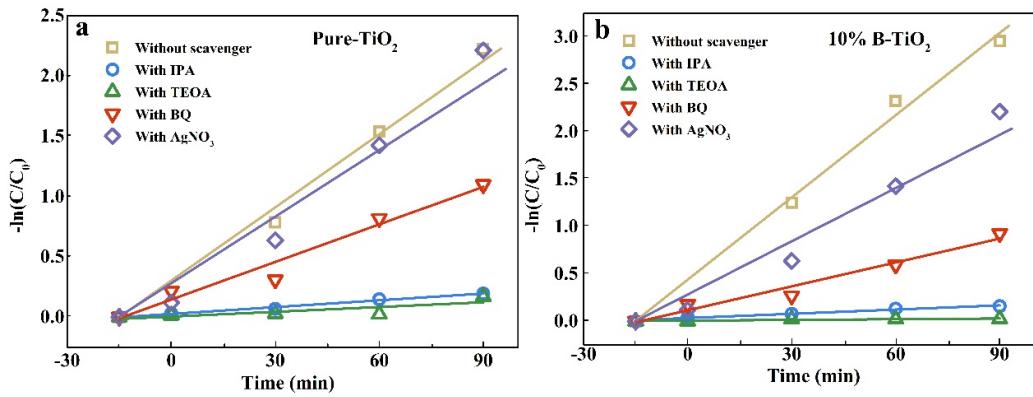
# Oxygen Vacancy Mediated Band-Gap Engineering via B-Doping for Enhancing Z-Scheme A-TiO<sub>2</sub>/R-TiO<sub>2</sub> Heterojunction Photocatalytic Performance

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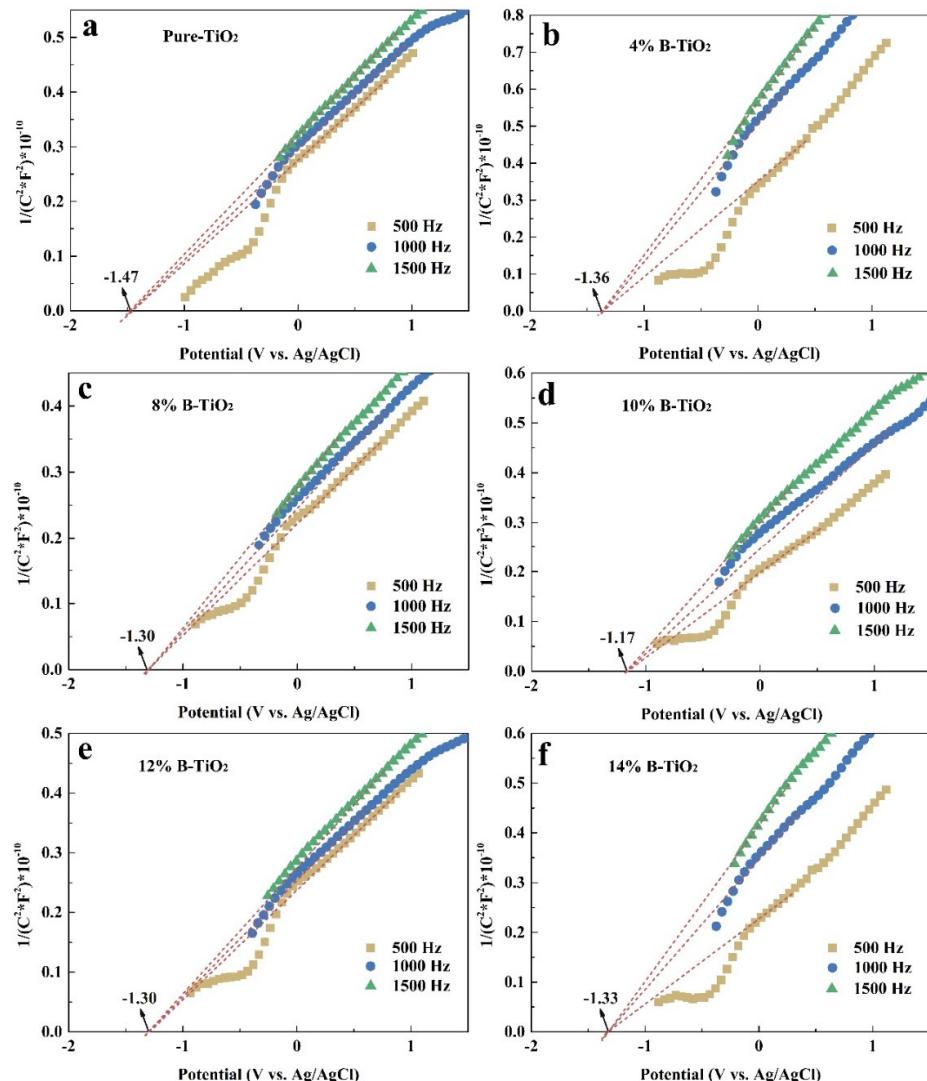
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**Figure S1.** Particle size distributions of all the prepared catalysts (a) pure TiO<sub>2</sub>, (b) 4% B-TiO<sub>2</sub>, (c) 8% B-TiO<sub>2</sub>, (d) 10% B-TiO<sub>2</sub>, (e) 12% B-TiO<sub>2</sub>, (f) 14% B-TiO<sub>2</sub>.



**Figure S2.** Degradation kinetics of pure  $\text{TiO}_2$  (a) and 10% B- $\text{TiO}_2$  (b) for active species trapping experiments.



**Figure S3.** Mott-Schottky curves of all the prepared catalysts (a) pure  $\text{TiO}_2$ , (b) 4% B- $\text{TiO}_2$ , (c) 8% B- $\text{TiO}_2$ , (d) 10% B- $\text{TiO}_2$ , (e) 12% B- $\text{TiO}_2$ , (f) 14% B- $\text{TiO}_2$ .