

Electronic Supporting Information

Design of solar-driven TiO₂ nanofilm on Ti foil by self-structure modifications

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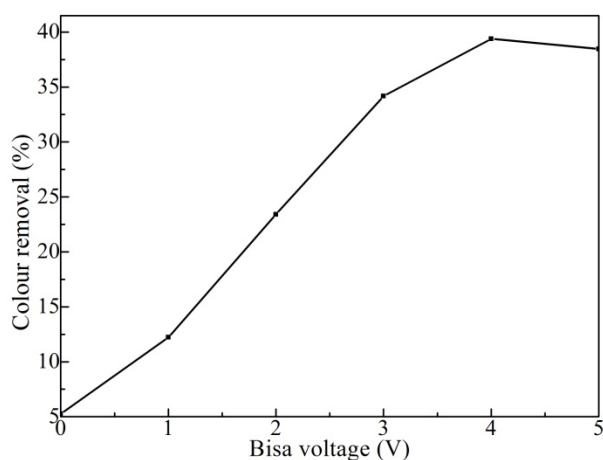


Fig.S1 The effect of different bias potential on the MO degradation ($C_{MO}=20$ mg/L, $V_{MO}=40$ mL, pH=6.8, degradation time=30 min).

The degradation rate increased with the increase of bias voltage in the range of 0 V to 4 V. Increasing the bias voltage to 5 V failed to improve the degradation rate. So, the bias voltage of 4 V was chosen to apply for the photoelectrocatalytic activity measurement.

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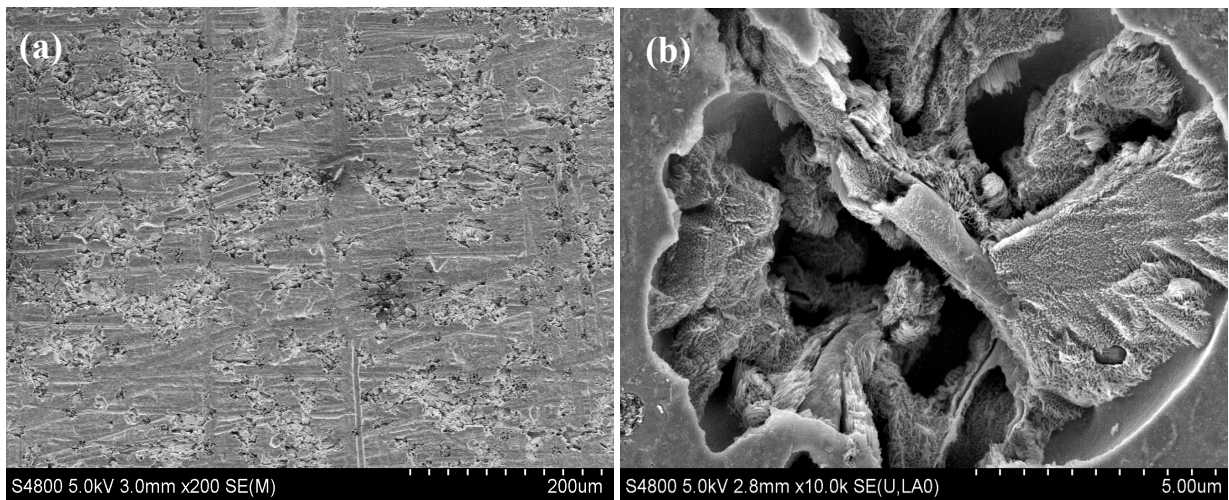


Fig.S2 (a) FE-SEM images of the the oxide layer after dielectric breakdown in HNO₃ electrolyte, (b) partial enlarged view of the inhomogeneous hole.

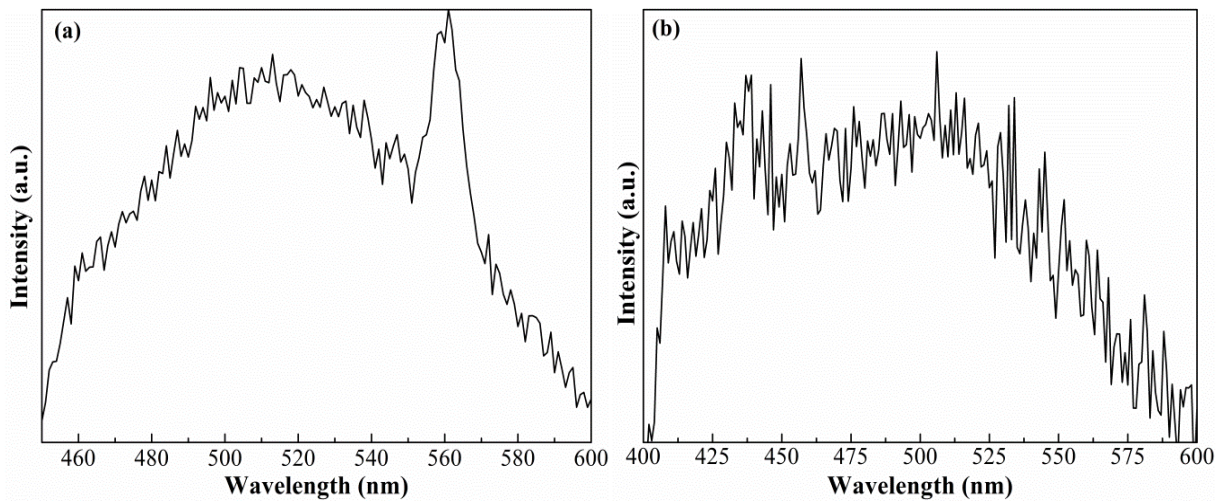


Fig.S3 PL spectra of the Vo-N-TiO₂ (A/R) film with different excitation wavelengths, (a) 280 nm, and (b) 354 nm.