

Supporting information

Spacing Prior to Decorating TiO₂ Nanowires by Dewetted Au Nanoparticles for Boosting Photoelectrochemical Water Oxidation

Yun Cai, Fengyu Yuan, Fan Li, Huihui Kang, Daxiang Xue, Siping Huo, Fengjiao Yu, Jun

*Fang and Yang Yang**

State Key Laboratory of Materials-Oriented Chemical Engineering, College of Chemical
Engineering, Nanjing Tech University, Nanjing 211816, China

*Corresponding Author; Email: yangy@njtech.edu.cn

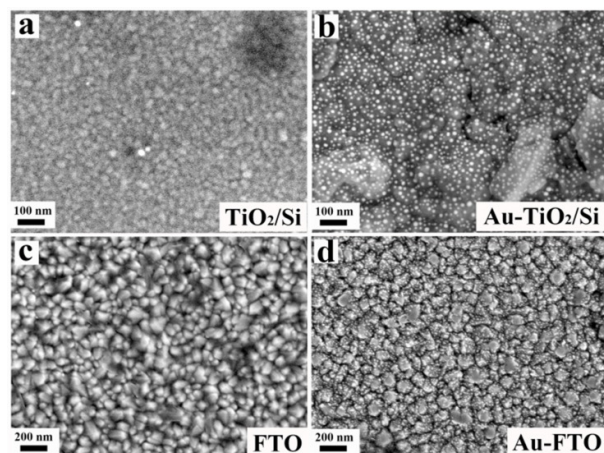


Fig. S1 SEM images showing surface morphology of (a) Si substrate coated with a TiO₂ seed layer (TiO₂/Si), (b) TiO₂/Si covered with dewetted Au nanoparticle masks (Au-TiO₂/Si), (c) FTO glass substrate, and (d) FTO covered with dewetted Au nanoparticle masks (Au-FTO).

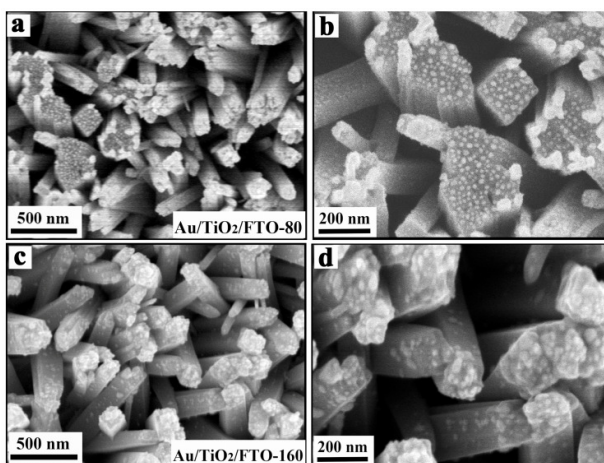


Fig. S2 SEM images of (a, b) Au/TiO₂/FTO-80 and (c, d) Au/TiO₂/FTO-160.

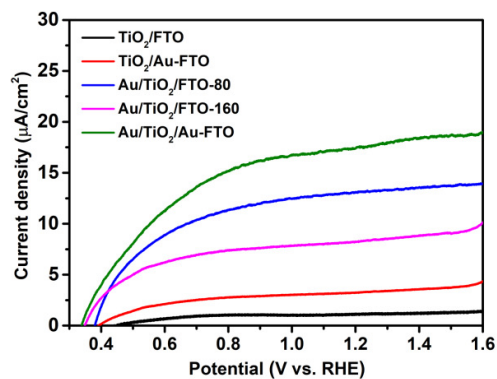


Fig. S3 Linear sweep voltammograms of electrodes under visible-light ($\lambda > 420$ nm) illumination.

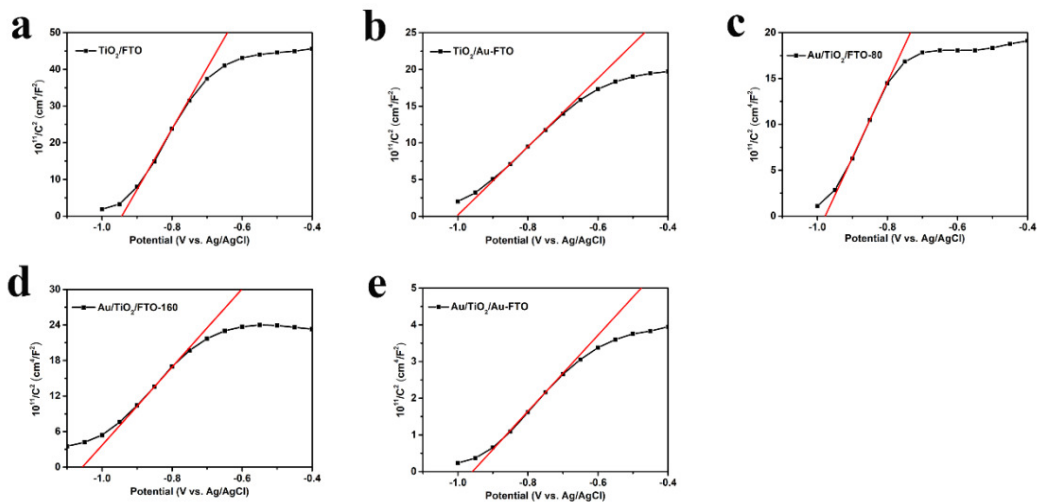


Fig. S4 Mott-Schottky plots of (a) TiO_2/FTO , (b) $\text{TiO}_2/\text{Au-FTO}$, (c) $\text{Au/TiO}_2/\text{FTO-80}$, (d) $\text{Au/TiO}_2/\text{FTO-160}$ and (e) $\text{Au/TiO}_2/\text{Au-FTO}$.