

Hierarchical TiO₂ Nanoflowers/Nanosheets Array Film: Synthesis, Growth Mechanism and Enhanced Photoelectrochemical Properties

Huizhen Yao,^a Jinwen Ma,^b Yannan Mu,^{a,c} Yanli Chen,^a Shi Su,^a Pin Lv,^a Xiaolin Zhang,^a Dong Ding,^a Wuyou Fu,^a Haibin Yang^{*a}

a State Key Laboratory of Superhard Materials Jilin University, Changchun 130012, PR China. Fax: +86-431-85168763; Tel: +86-431-85168763; E-mail: yanghb@jlu.edu.cn

b College of New Energy, Bohai University, Jinzhou, Liaoning, 121013, PR China. E-mail: mjw423@163.com

c Department of Physics and Chemistry, Heihe University, Heihe 164300, PR China. E-mail: myn17@yeah.net

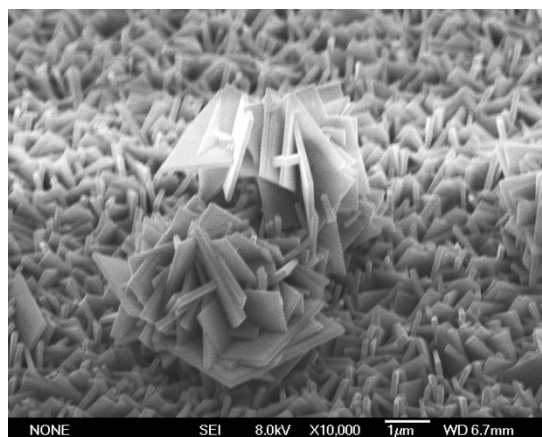


Figure.S1. FESEM images of TiO₂ nanostructures film as-prepared without the annealed treatment.

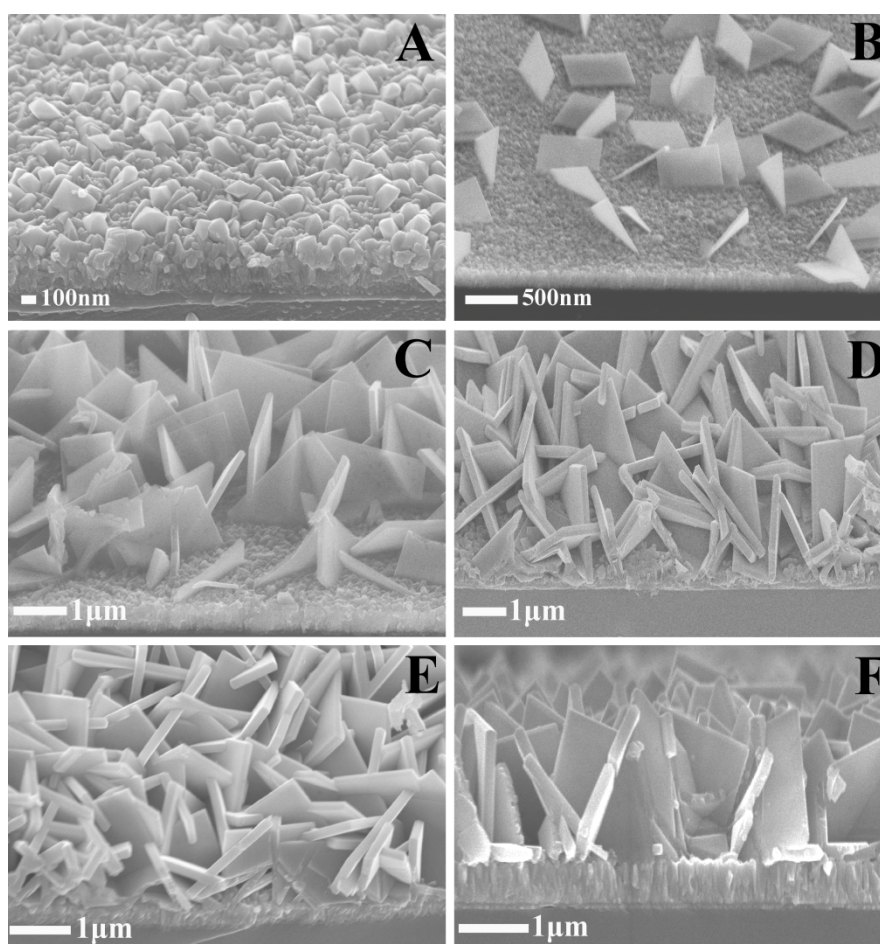


Figure.S2. Cross-sectional FESEM images of TiO₂ nanostructures film prepared at 170°C with 0.04M (NH₄)₂TiF₆ and 1 mL titanium butoxide for (A) 2 h; (B) 4 h; (C) 6 h; (D) 8 h; (E) 10 h; (F) 12 h.

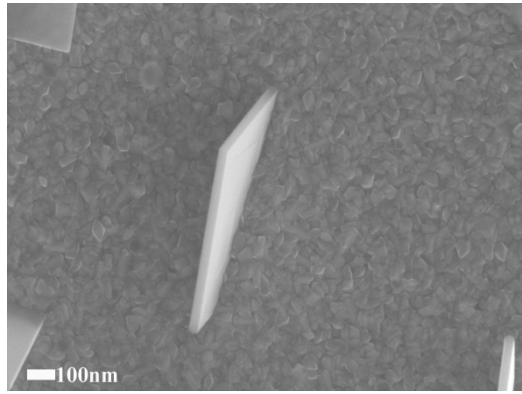


Figure.S3. High-magnification FESEM images of TiO₂ nanostructures film prepared at 170°C with 0.04M (NH₄)₂TiF₆ and 1 mL titanium butoxide for 4 h.

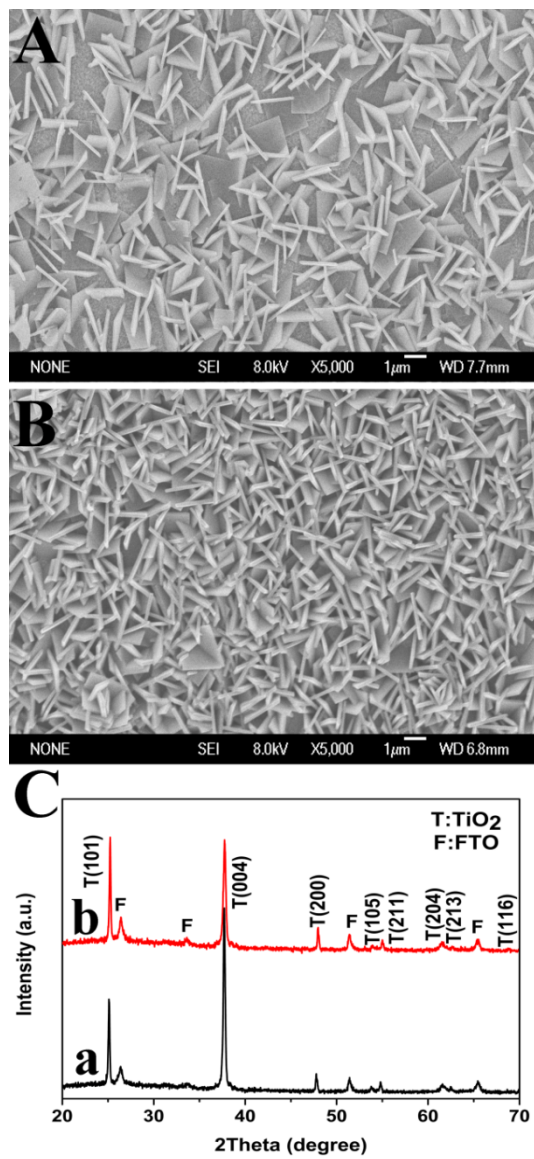


Figure.S4. FESEM images of TiO₂ nanostructures film prepared for 14 h with 0.04 M (NH₄)₂TiF₆ and 1 mL titanium butoxide at (A) 150°C, (B) 160°C; (C): the corresponding XRD patterns of TiO₂ nanostructures film prepared at (a) 150°C, (b) 160°C.