

Synthesis of Hierarchical $\text{Bi}_2\text{O}_3/\text{Bi}_4\text{Ti}_3\text{O}_{12}$ p-n Junction Nanoribbons on Carbon Fibers from (001) Facets Dominated TiO_2 Nanosheets

Baicheng Weng^{*,1}, Fenghua Xu¹, Jianguang Xu

Materials Engineering Department, Yancheng Institute of Technology, 9 Xiwang Avenue, Yancheng, Jiangsu Province, 224051, China

*Corresponding Author: baichengweng@gmail.com

¹These authors contributed equally to this work.

Supporting information:

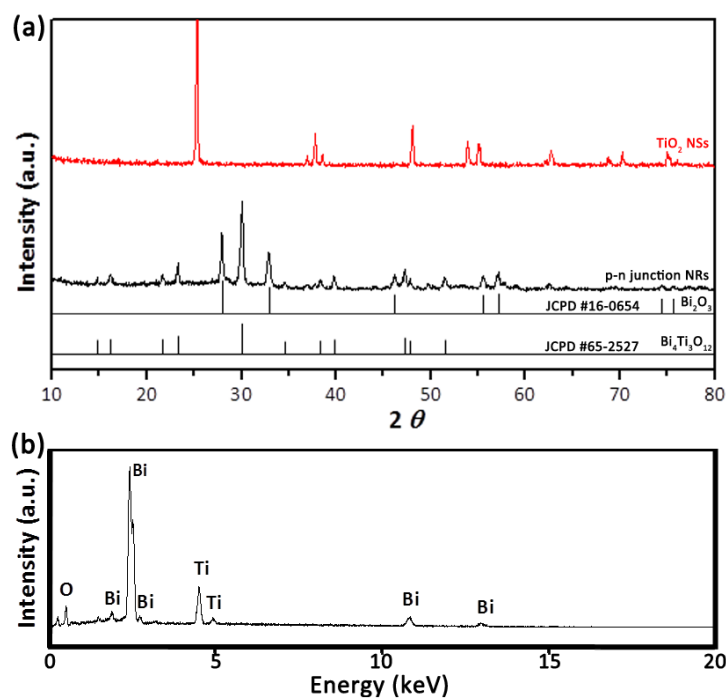


Figure S1. (a) XRD patterns of $\text{Bi}_2\text{O}_3/\text{Bi}_4\text{Ti}_3\text{O}_{12}$ p-n junction NRs on CFs and the precursor TiO_2 NSs. (b) EDS pattern of $\text{Bi}_2\text{O}_3/\text{Bi}_4\text{Ti}_3\text{O}_{12}$ p-n junction NRs on CFs. The standard XRD pattern of Bi_2O_3 (JCPDS No. 16-0654) and $\text{Bi}_4\text{Ti}_3\text{O}_{12}$ (JCPDS No. 65-2527) are also presented.

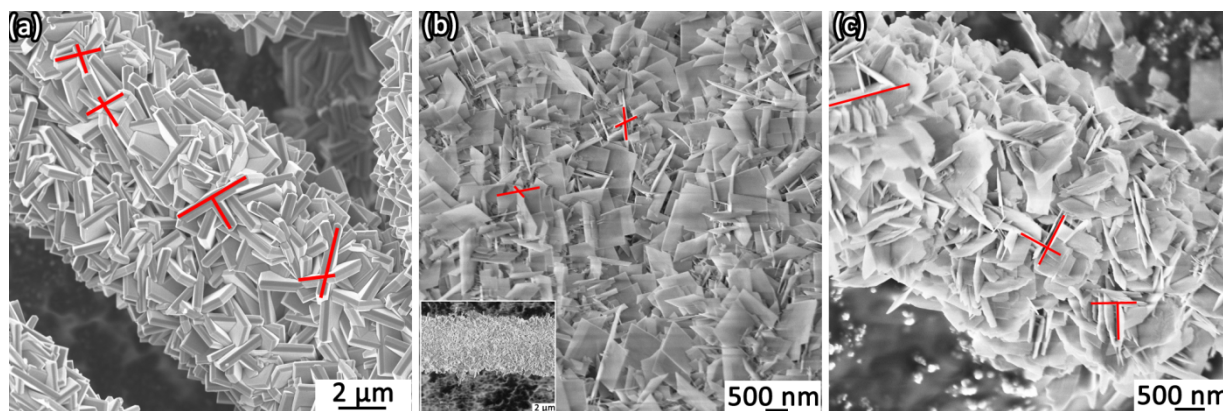


Figure S2. SEM images of CFs supported TiO₂ NSs precursor (a), the second step hydrothermal treatment of the precursor in the high pH bismuth aqueous solution for 3 h (b) and 10 h (c).

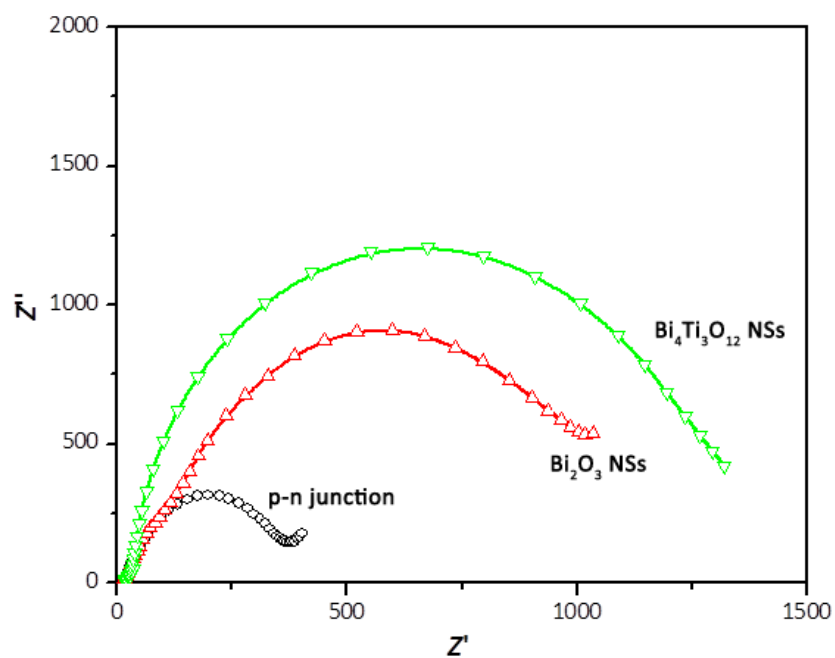


Figure S3. Nyquist plots of Bi_2O_3 NSs, $\text{Bi}_4\text{Ti}_3\text{O}_{12}$ NSs, $\text{Bi}_2\text{O}_3/\text{Bi}_4\text{Ti}_3\text{O}_{12}$ p-n junction NRs.

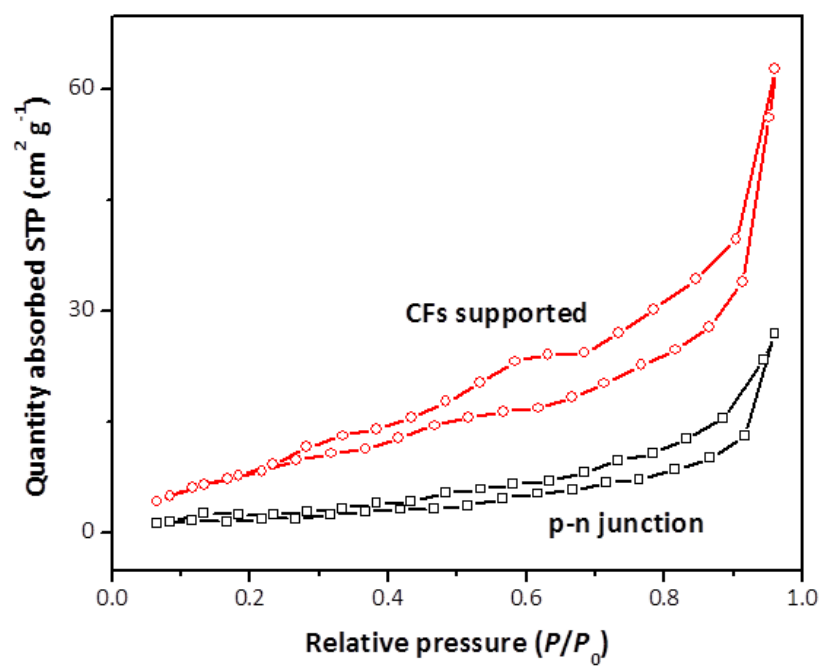


Figure S4. Isotherm curves of Bi₂O₃/Bi₄Ti₃O₁₂ p-n junction NRs and the hierarchical CFs supported Bi₂O₃/Bi₄Ti₃O₁₂ p-n junction NRs, respectively.