

Supporting Information

Building self-ordered tubular macro- and mesoporous nitridated titania from gas bubble towards high-performance lithium-ion batteries

*Hai Wang^{a,b}, Hongxing Yang^{*a}, Lin Lu,^a Yu Zhou,^b and Yuanhao Wang^{*a}*

*^aRenewable Energy Research Group (RERG); Department of Building Services
Engineering; The Hong Kong Polytechnic University; Room: FJ715, Kowloon, Hong
Kong.*

Fax: (+852)27746146; E-mail: hong-xing.yang@polyu.edu.hk.

*^bKey Laboratory of New Processing Technology for Nonferrous Metal and Materials,
Ministry of Education, Guilin University of Technology, Jiangan Road 12, Guilin,
Guangxi, PR China.*

Figure Captions:

Figure S1. FTIR spectra of TMM-TiO₂ and TMMN-TiO₂ samples.

Figure S2. XPS high-resolution spectra of the N1s regions of TMMN-TiO₂ sample.

Figure S3. TG-DTA curves of the as-prepared TMM-TiO₂ sample.

Figure S4. Representative FESEM images of as-prepared TMM-TiO₂. (a) low magnification, (b) high magnification.

Figure S5. Representative FESEM images of as-prepared TMM-TiO₂ obtained at different reaction time.(a)-(b) 3 h, (c)-(d) 6 h and (e)-(f) 9 h.

Figure S6. Representative FESEM images of as-prepared TMM-TiO₂ obtained under different ammonia/water volume ratios.(a) 10:50, (b) 20:40 and (c)40:20.

Figure S7. Cycling performance of the P25 electrode at various charge-discharge rates.

Figure S8. The Coulombic efficiency of the TMMN-TiO₂ as a function of cycle number at 30 C up to 1200 cycles.

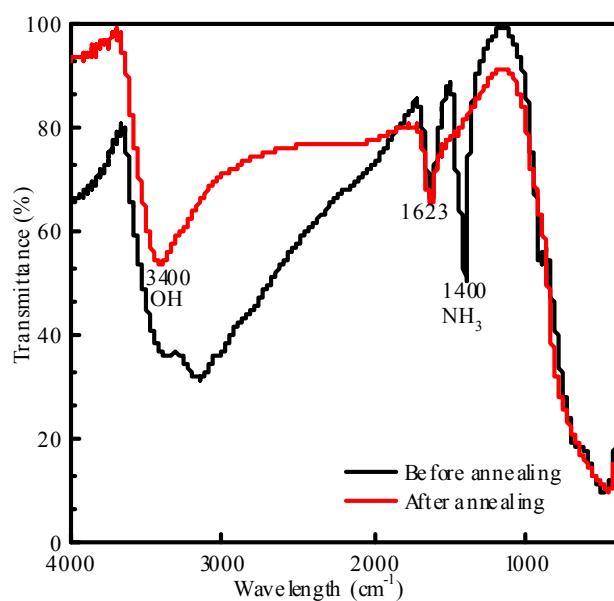


Figure S1. FTIR spectra of TMM-TiO₂ and TMMN-TiO₂ samples.

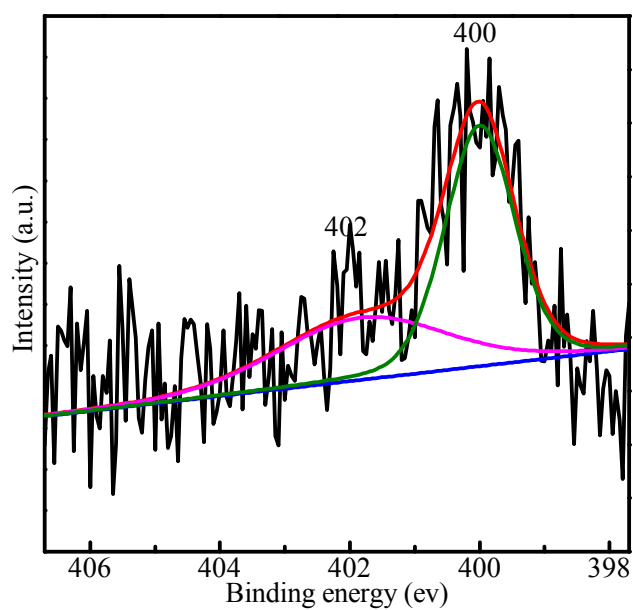


Figure S2. XPS high-resolution spectra of the N1s regions of TMMN-TiO₂ sample.

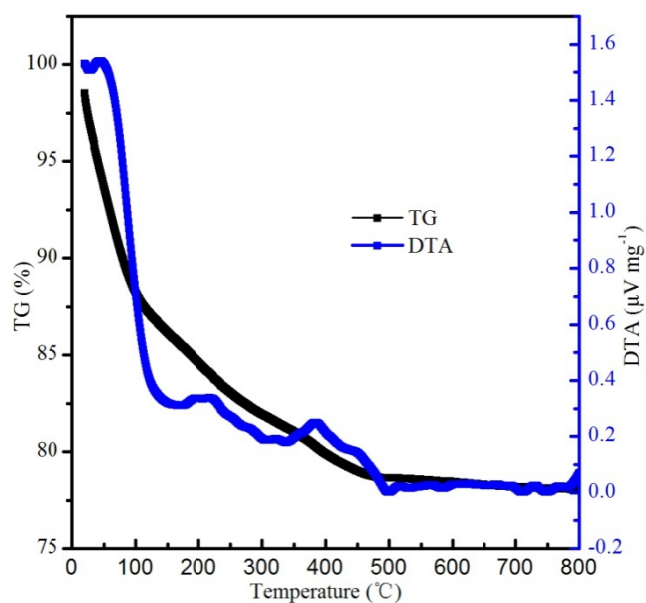


Figure S3. TG-DTA curves of the as-prepared TMM-TiO₂ sample.

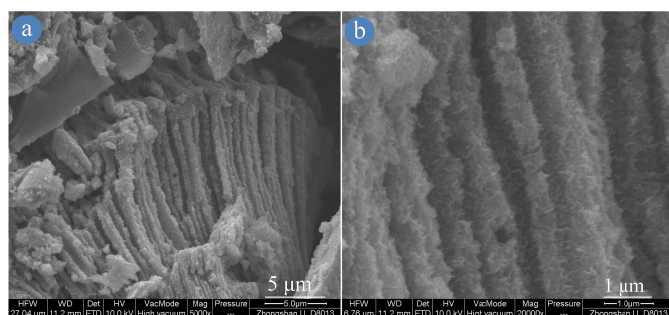


Figure S4. Representative FESEM images of as-prepared TMM-TiO₂. (a) low magnification, (b) high magnification.

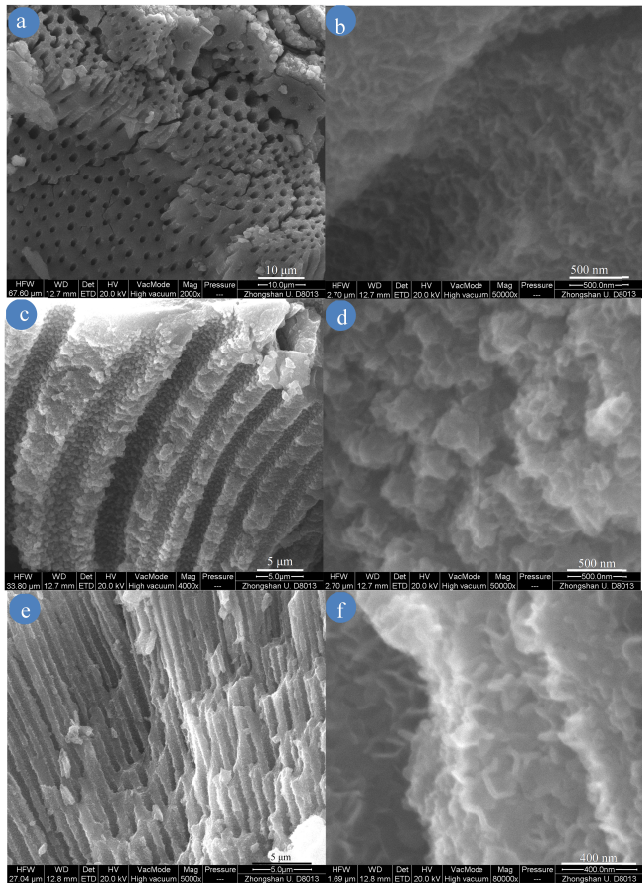


Figure S5. Representative FESEM images of as-prepared TMM-TiO₂ obtained at different reaction time.(a)-(b) 3 h, (c)-(d) 6 h and (e)-(f) 9 h.

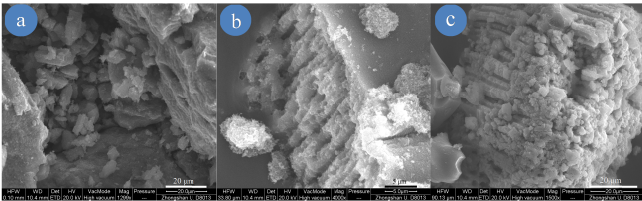


Figure S6. Representative FESEM images of as-prepared TMM-TiO₂ obtained under different ammonia/water volume ratios.(a) 10:50, (b) 20:40 and (c)40:20.

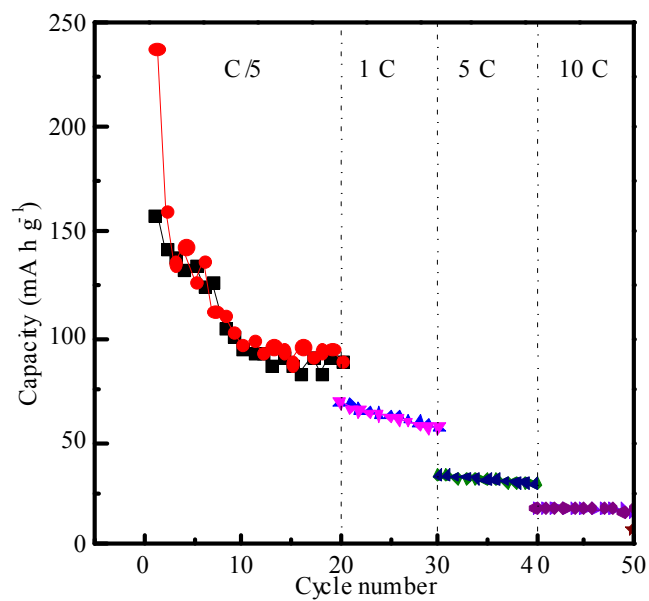


Figure S7. Cycling performance of the P25 electrode at various charge-discharge rates.

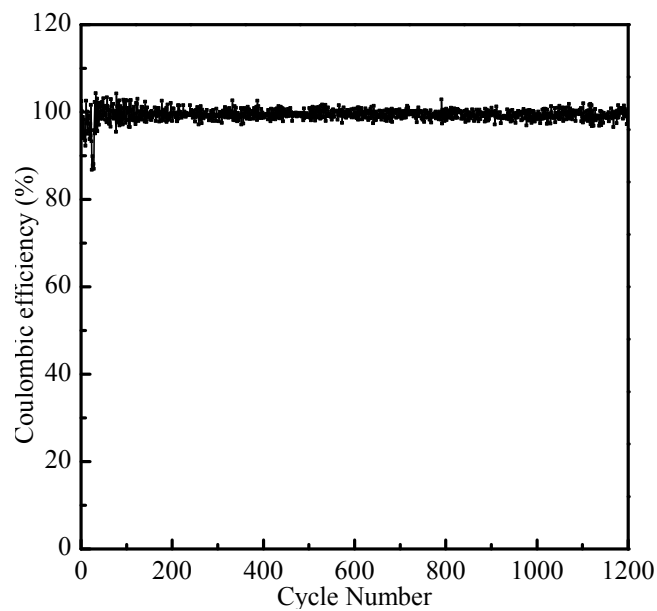


Figure S8. The Coulombic efficiency of the TMMN-TiO₂ as a function of cycle number at 30 C up to 1200 cycles.