

Electronic Supplementary Information for

TiO₂/graphene sandwich paper as an anisotropic electrode for high rate lithium ion batteries

Na Li,^{ab} Guangmin Zhou,^a Ruopian Fang,^a Feng Li^{a*} and Hui-Ming Cheng^a

^aShenyang National Laboratory for Materials Science, Institute of Metal Research, Chinese Academy of Sciences, Shenyang 110016, China; E-mail: fli@imr.ac.cn; Fax: +86 24 23903126; Tel: +86 24 83971472

^bDepartment of Materials Science & Engineering, School of Chemistry and Materials Science, University of Science and Technology of China, Hefei 230026, China

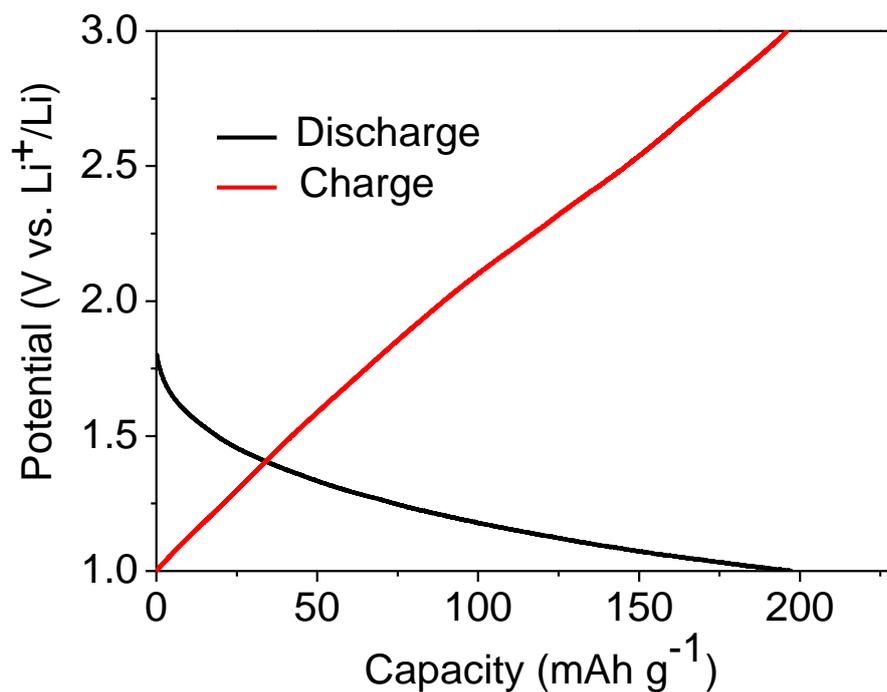


Figure S1 Galvanostatic charge–discharge profile of a pure graphene paper electrode at a current rate of 168 mA g⁻¹ between 3.0 and 1 V *versus* Li⁺/Li.

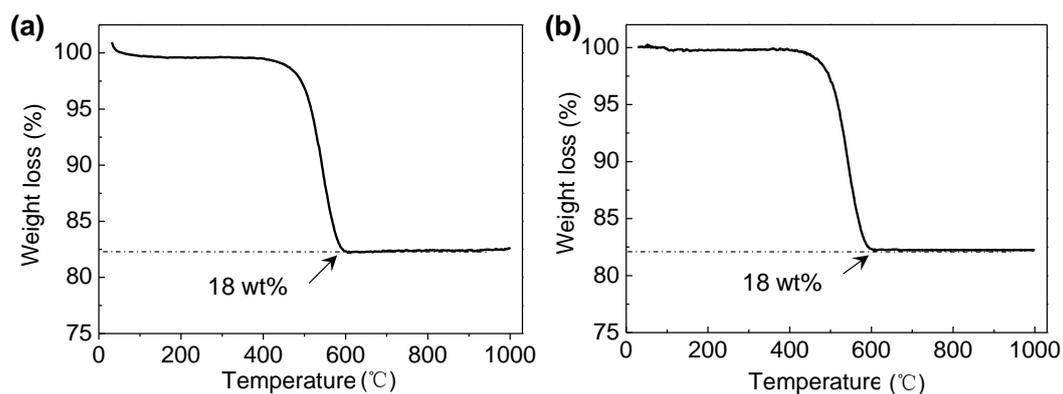


Figure S2 Thermo-gravimetric analysis curves of (a) A-TO/GSP and (b) I-TO/GSP.

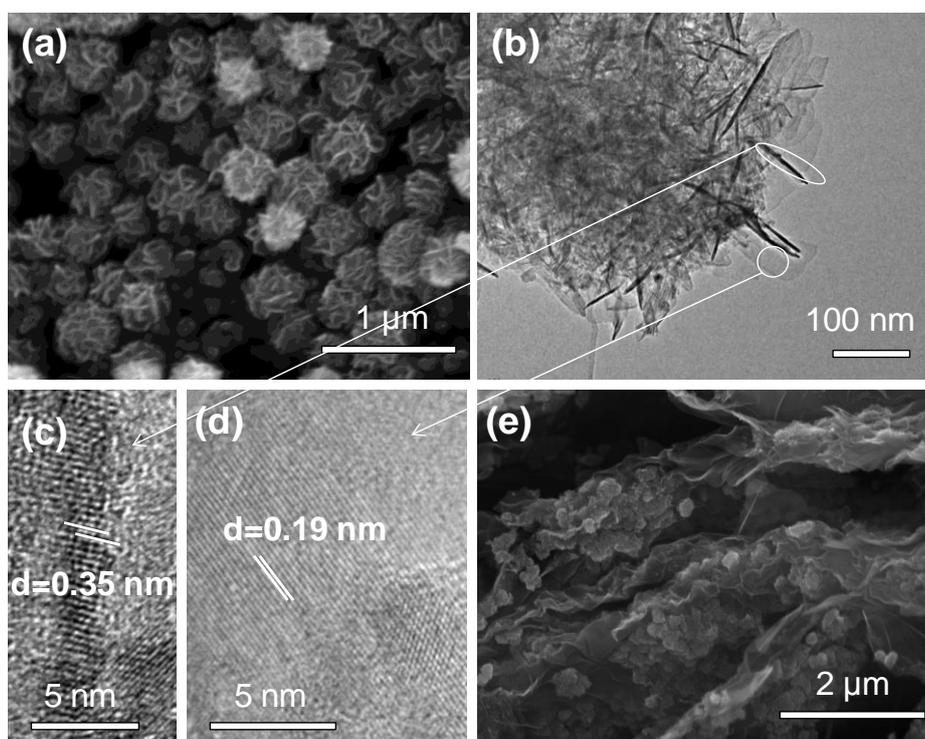


Figure S3 (a) SEM images of TiO_2 spheres assembled from nanosheets with exposed (001) facets. (b) TEM image of a single nanosphere and (c, d) high resolution images of a TiO_2 sphere composed of nanosheets with exposed (001) and (101) facets. (e) Side-view SEM image of the I-TO/GSP.

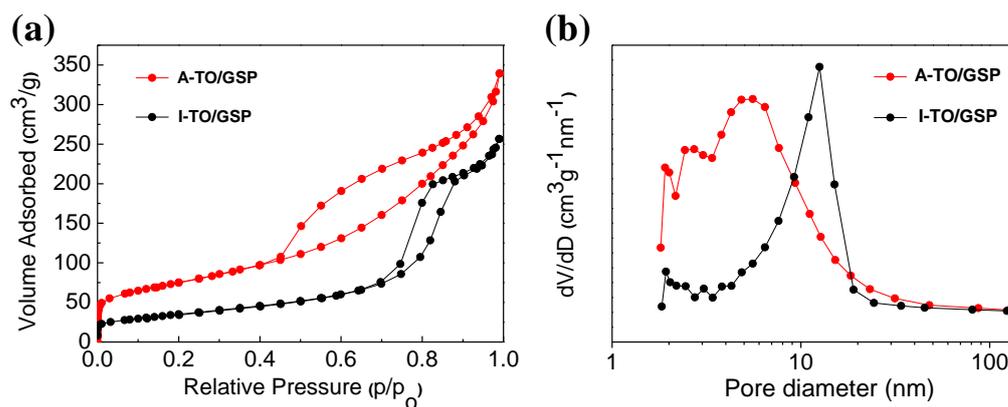


Figure S4 (a) N_2 adsorption/desorption isotherm and (b) pore size distribution of A-TO/GSP and I-TO/GSP.

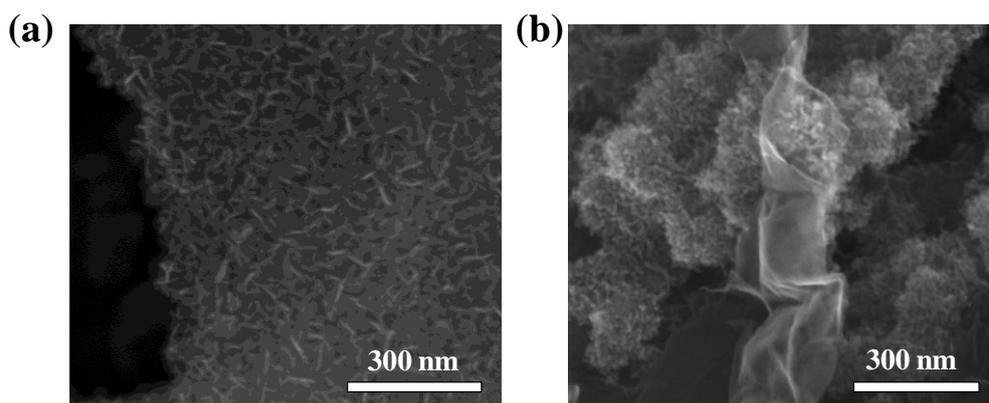


Figure S5 SEM images of (a) A-TO/GSP and (b) I-TO/GSP after 100 charge/discharge cycles at 10C.

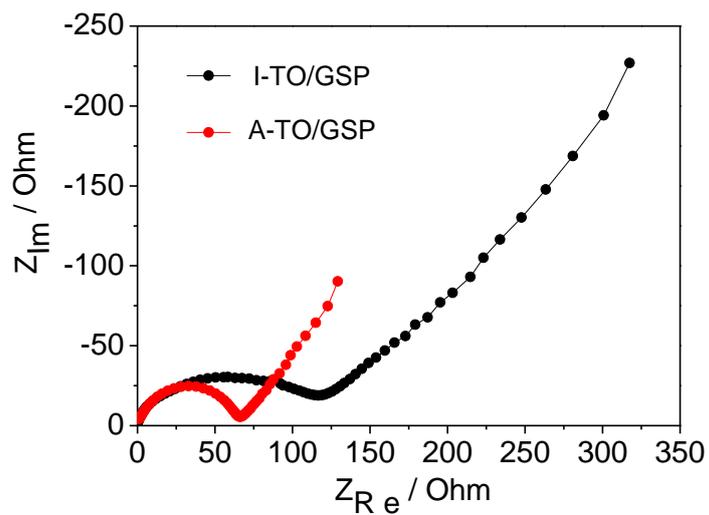


Figure S6 Nyquist plots of A-TO/GSP and I-TO/GSP measured after the first cycle at 1C in the charged state (3 V vs Li^+/Li).