Supporting Information

Tunable pseudocapacitive contribution in nanosheet-constructed titania hierarchical tubes to achieve superior lithium-storage properties by phase control

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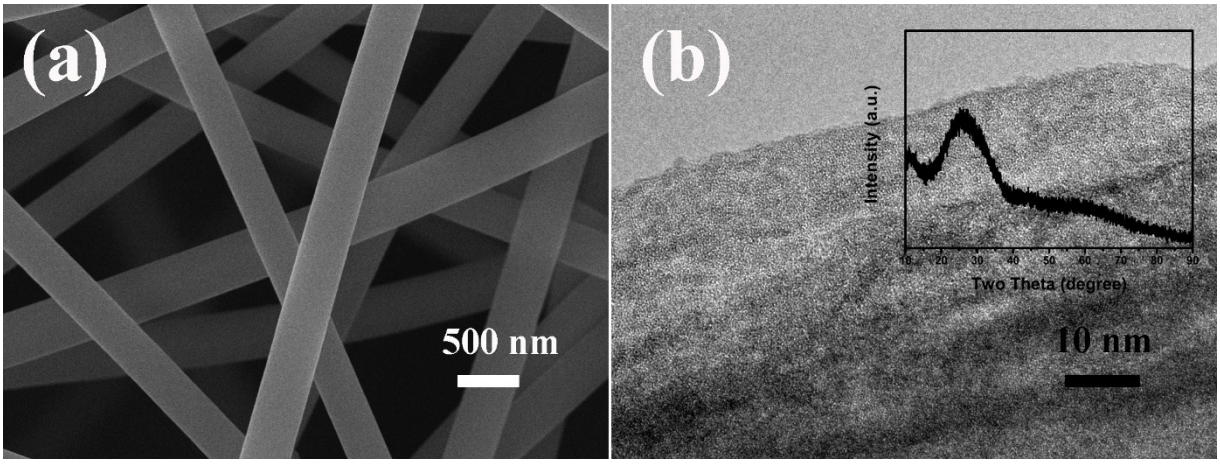

Fig. S1. (a) SEM and (b) HR-TEM images of the amorphous TiO_2/SiO_2 composite fibers. Inset in (b) is the XRD pattern of amorphous TiO_2/SiO_2 composite fibers.

The amorphous TiO_2/SiO_2 composite fibers were prepared by calcining of the electrospun fibers at

450 °C. As shown in Fig. S1a, these electrospun fibers are well-defined without any agglomeration, and have lengths in the range from several to tens of micrometers. The HR-TEM image (Fig. S1b) and the XRD pattern in Fig. S1b demonstrate the amorphous nature of the TiO_2/SiO_2 composite fibers.

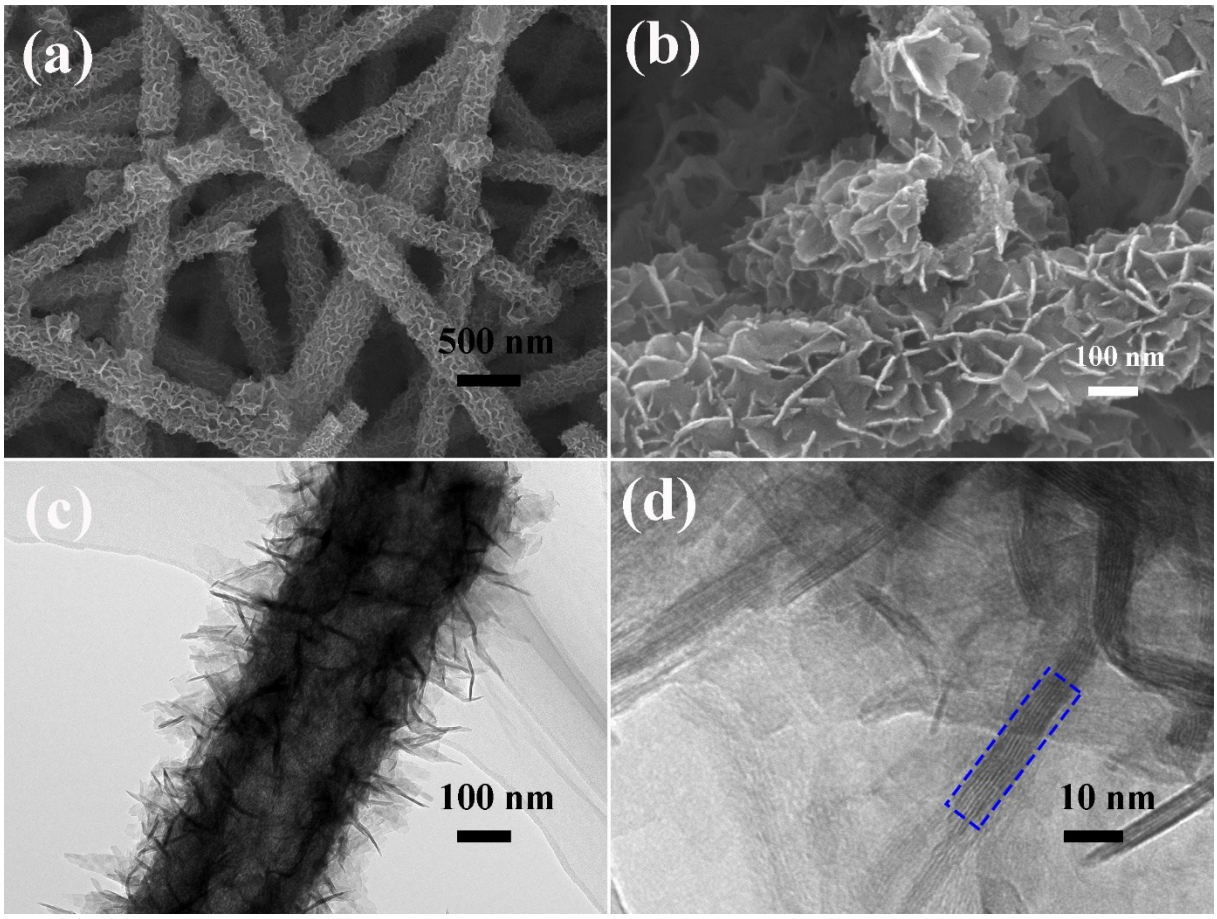

Fig. S2. (a, b) SEM, (c) TEM and (d) HR-TEM images of the layered hydrate titanate.

Fig. S2a-c show that these layered hydrate titanates tubes possess very rough shells that constructed by numerous nanosheets, and these nanosheets align vertically along the axial orientation of the tubes. Every nanosheet has the layered structure as shown by Fig. S2d.

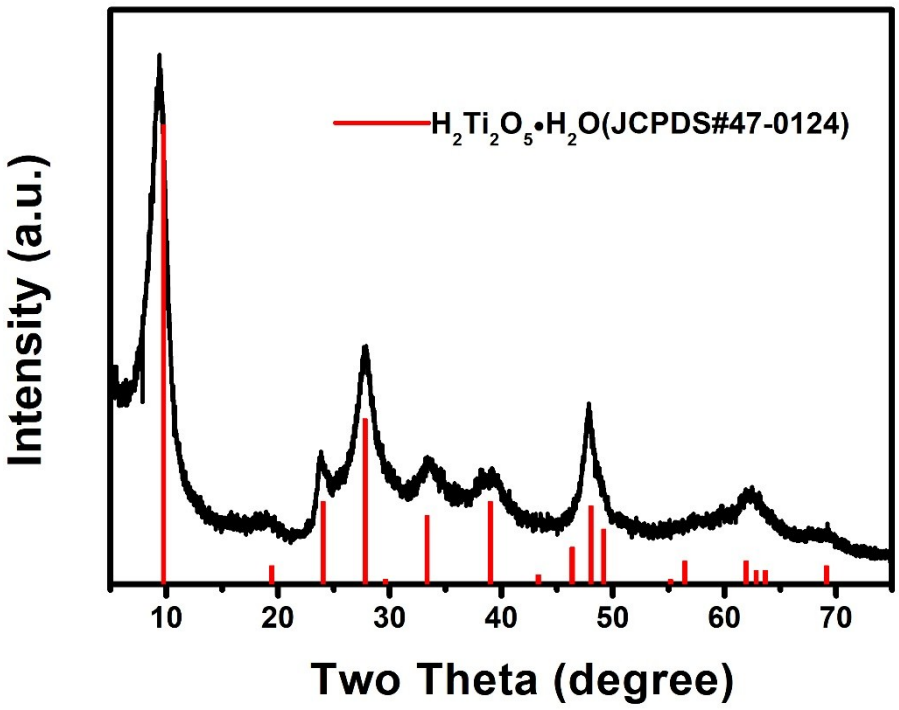

Fig. S3. XRD patterns of nanosheets-assembled $H_2Ti_2O_5 \cdot H_2O$ tubes.

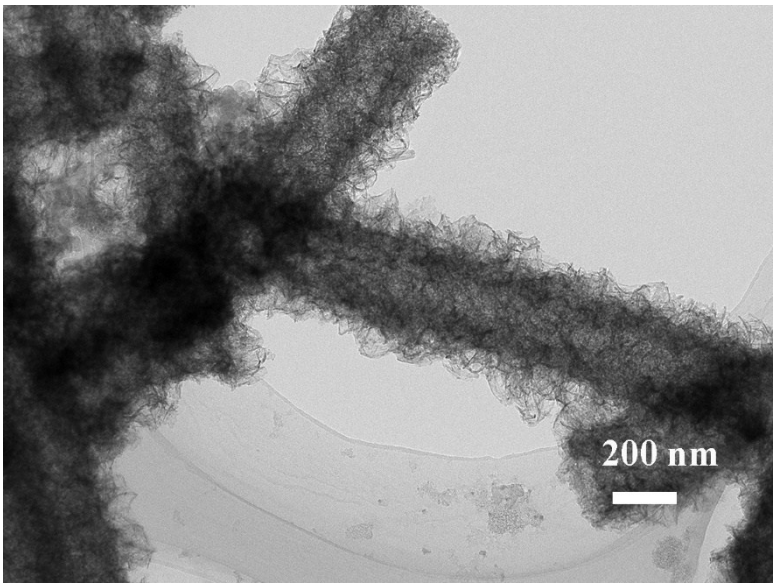

Fig. S4. TEM images of the nanosheet-assembled TiO_2 tubes (400 °C) after 1000 cycles.

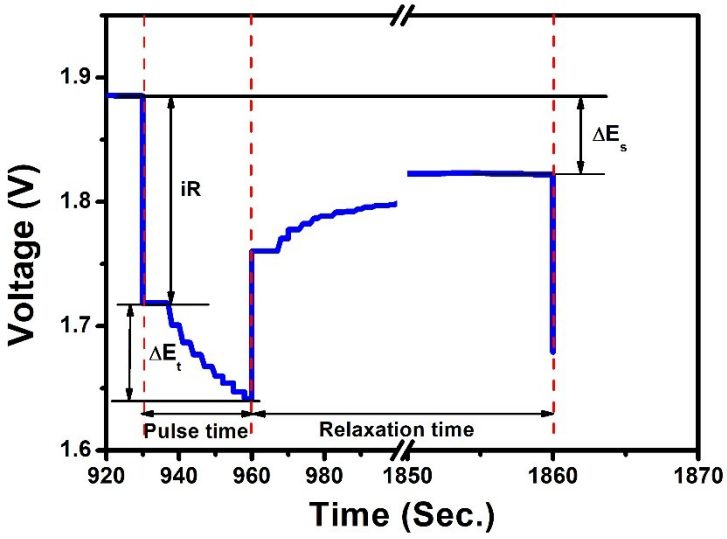

Fig. S5. E vs. t curves of TONS-HT-400 electrode for a single GITT during discharge process.

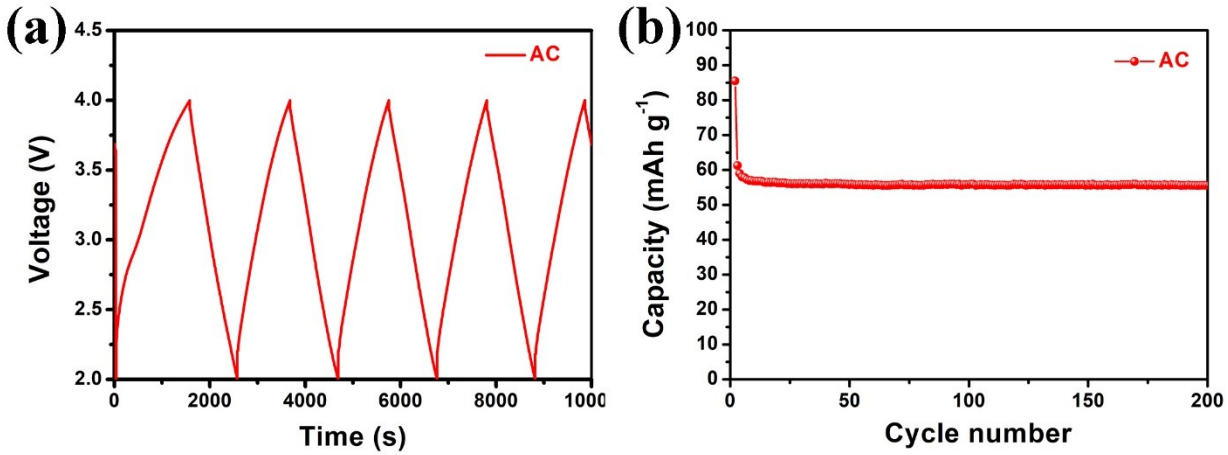

Fig. S6. (a) Galvanostatic charge-discharge curve and (b) cycling performance of the AC electrode at 1.0 A g^{-1} between 2.0 and 4.0 V.