Electronic Supplementary Information

Titanium dioxide nanotrees for high capacity lithium-ion microbattery

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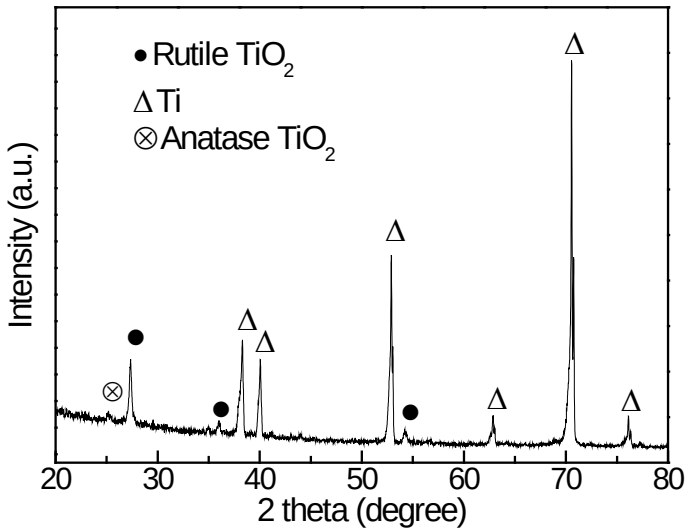

Fig. S1 XRD pattern of the TiO_2 film derived by direct oxidation of Ti foil in air at 550 ^oC for 3 h.

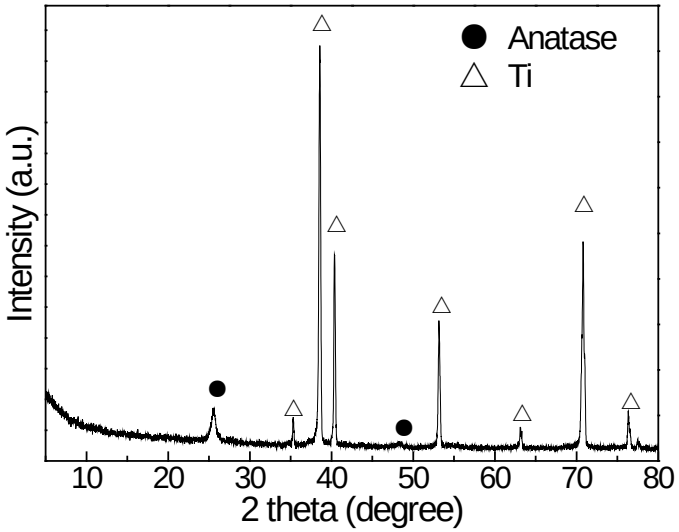

Fig. S2 XRD pattern of TiO_2 nanobelt arrays on the Ti foil.

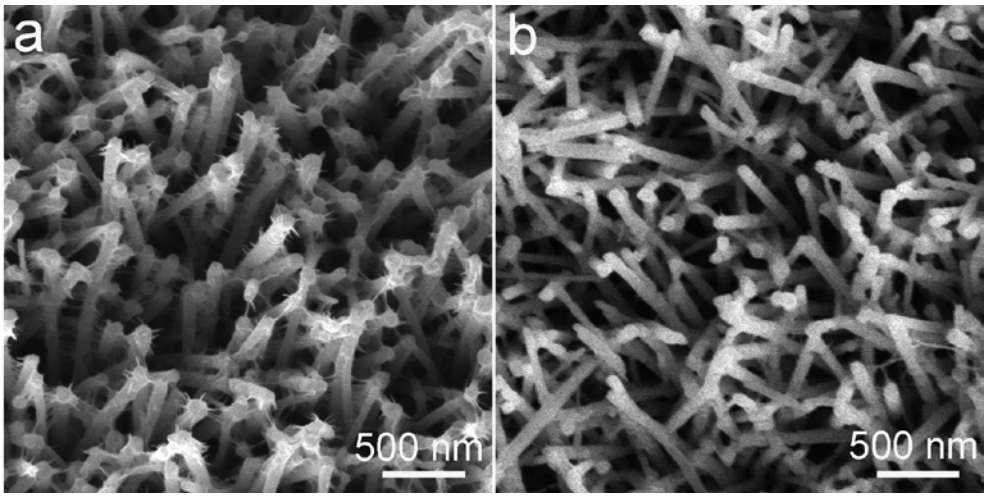

Fig. S3 The TiO_2 nanotrees derived via depositing branches on nanowire arrays calcined at 450 ^{o}C for 1 h (a) and 550 ^{o}C for 3 h (b). Herein a much diluted precursor solution (1/8 of the original concentration) was used to grow the branches. The deposition of the branches were conducted at 80 ^{o}C for 4.5 h. The coverage of the TiO_2 nanobelts was dependent of the crystallinity on the nanowire trunk.

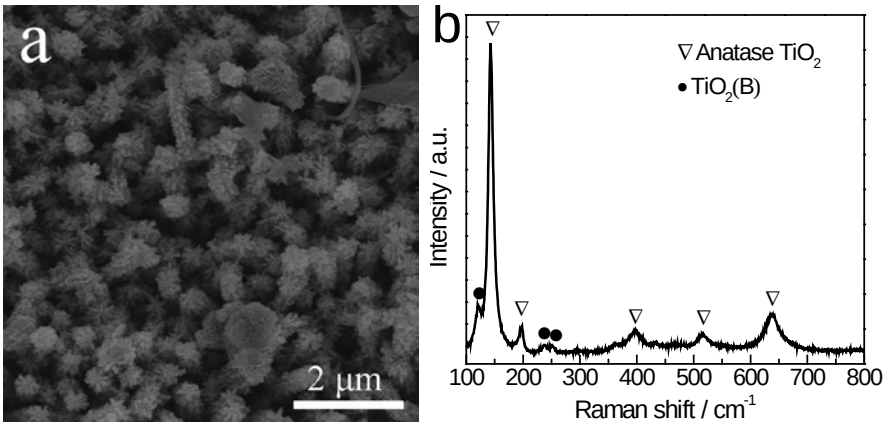

Fig. S4 Characterizations of TiO_2 nanotrees after rate perfromance tests: (a) SEM image and (b) Raman spectroscopy.