

# Preparation and physico-chemical investigation of anatase TiO<sub>2</sub> nanotubes for a stable anode of lithium-ion battery

## Supporting Information

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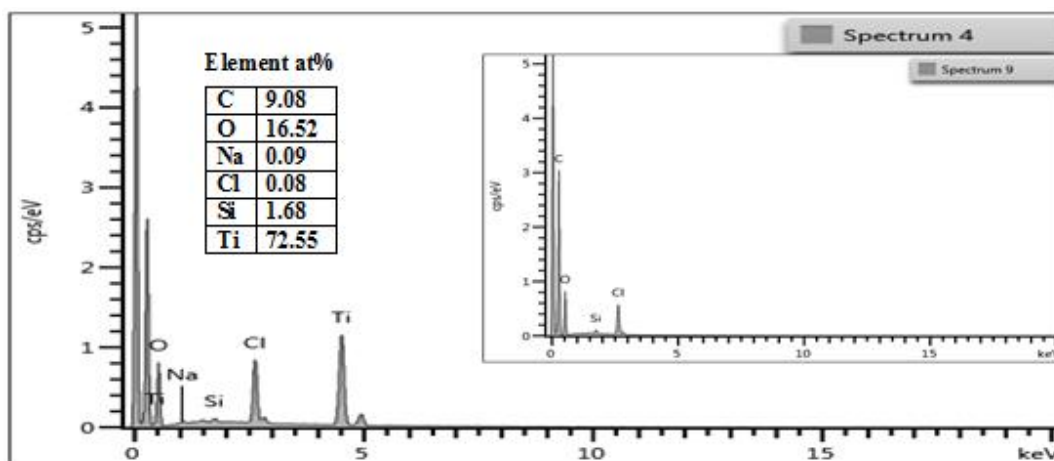
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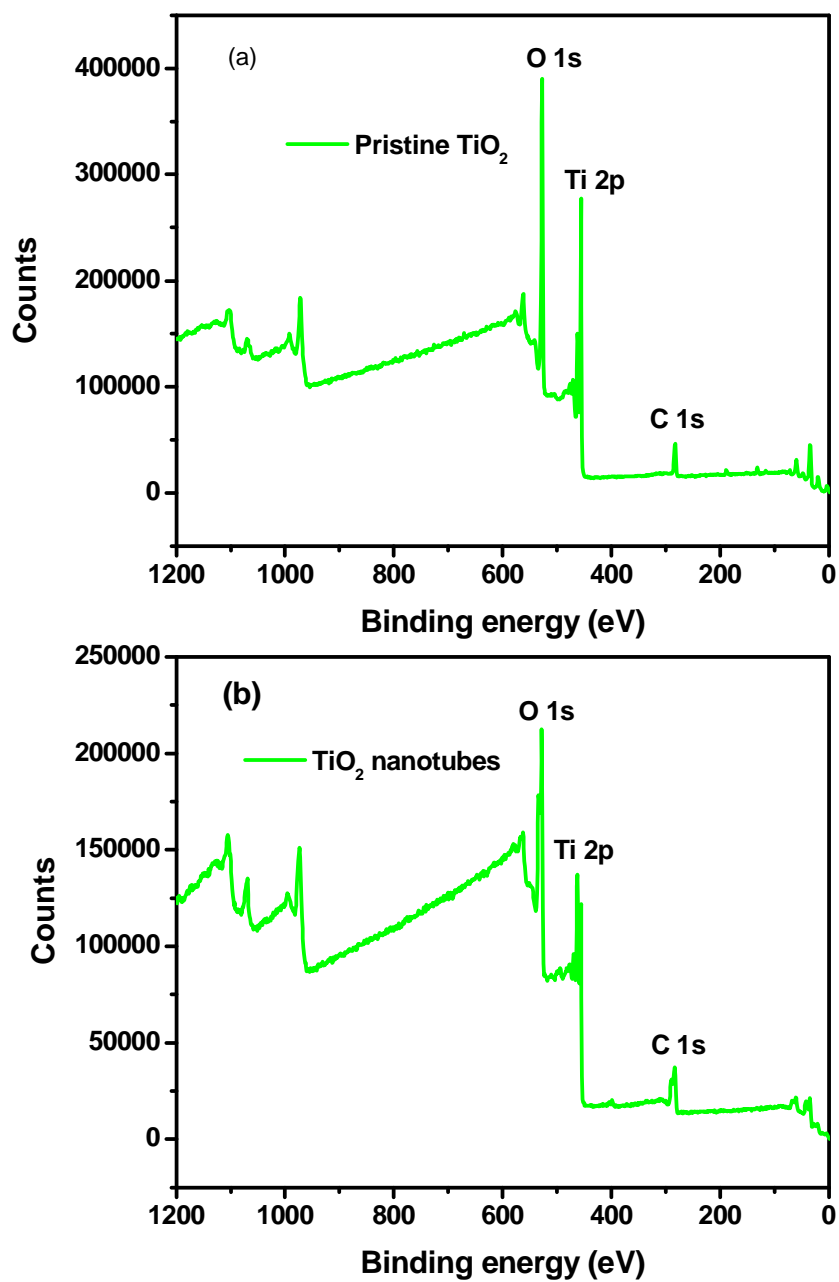
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**KEYWORDS:** Stirring hydrothermal, TiO<sub>2</sub> nanotubes, Anode, Lithium-ion battery, Capacity.



**Figure S1.** Energy dispersive X-ray (EDX) of plane epoxy resin substrate/ TiO<sub>2</sub> with compositional elements at % (inset shows EDX of plane epoxy resin substrate).



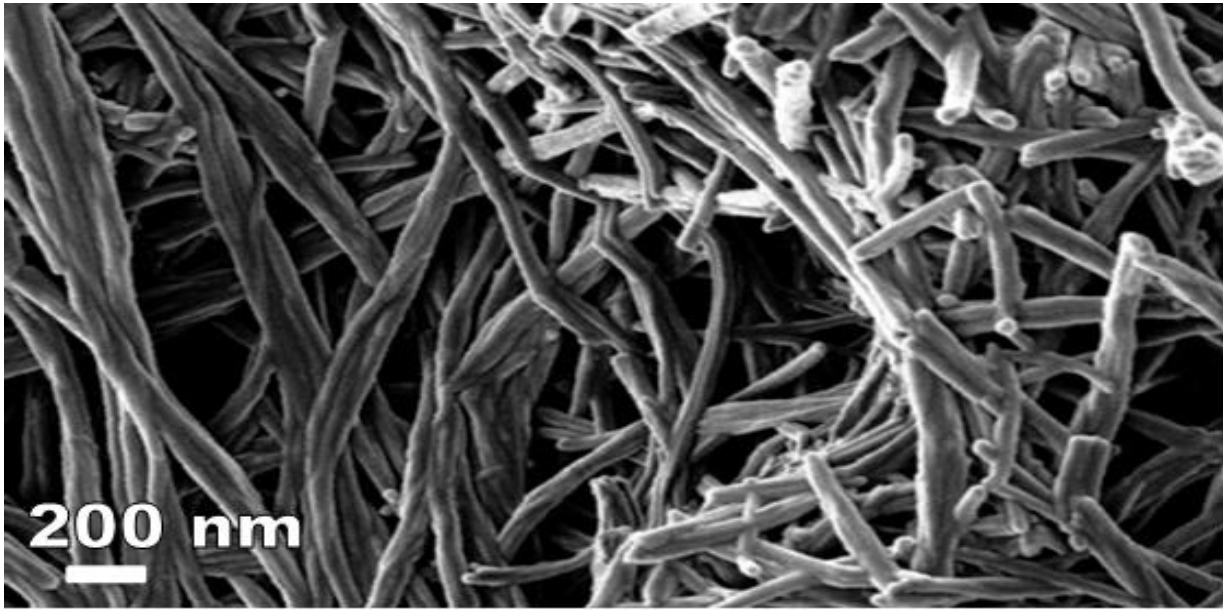
**Figure S2.** XPS survey spectra of (a) Anatase  $\text{TiO}_2$  pristine and (b) Anatase  $\text{TiO}_2$  nanotubes.

**Table S1a:** XPS Parameters of Pristine anatase TiO<sub>2</sub>

Core level	Position	Area	FWHM
Ti2p <sub>1/2</sub>	461.62	16163.47	1.437
Ti2p <sub>3/2</sub>	455.91	35110.84	0.705
O1s	528.93	10779.17	1.786
O1s	527.15	45213.7	0.89
C1s	283.52	2709.86	1.74
C1s	282.04	3922.80	1.02

**Table S1b:** XPS parameters of Anatase TiO<sub>2</sub> Nanotubes

Core level	Position	Area	FWHM
Ti2p <sub>1/2</sub>	462.22	25420.17	3.17
Ti2p <sub>3/2</sub>	455.95	10131.57	1.15
O1s	527.49	10014.57	1.16
O1s	529.86	15007.29	3.44
O1s	534.05	21339.18	2.37
C1s	283.00	3654.63	2.65
C1s	289.63	7195.26	3.94



**Figure S3.** SEM morphology of the TiO<sub>2</sub> nanotubes anode material after cycling test.