Supporting Information Available

Synthesis of titanate-based nanotubes for one-dimensionally confined electrical properties

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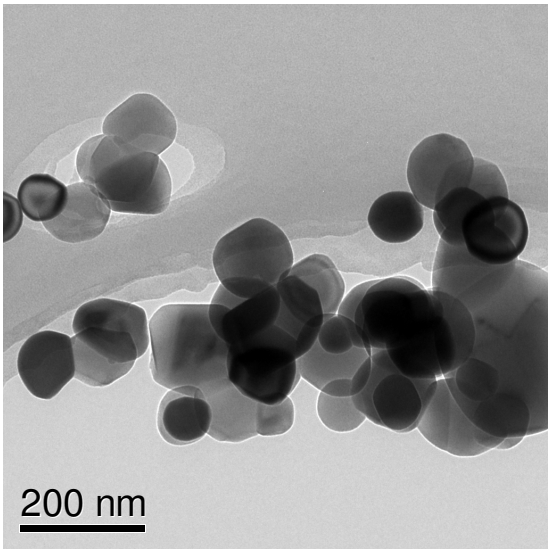

Figure S1. TEM image of the starting material of TiO_2.

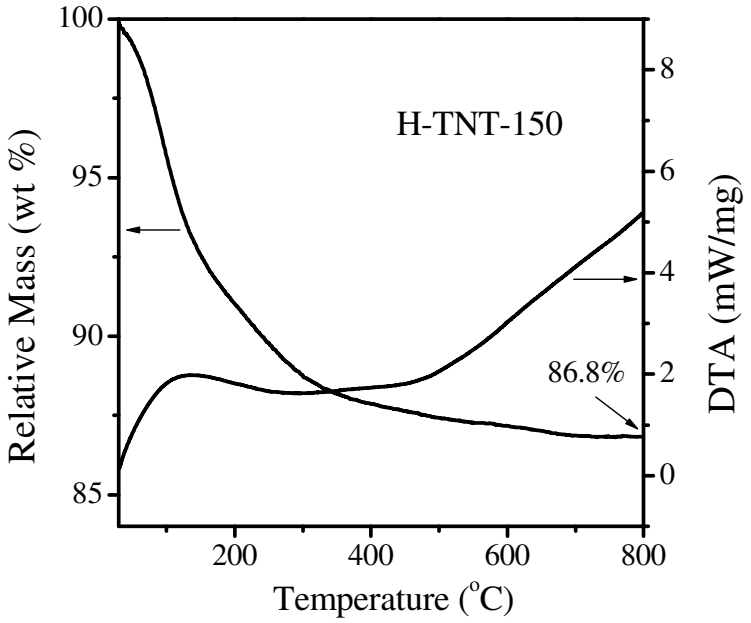

Figure S2. TG-DTA data of H-TNT-150. When the temperature increased to 800 °C, H-TNT-150 showed a total mass loss of 13.2 wt%, which is much smaller than that of 20.5 wt% for H-TNT as indicated in Figure 3 of the text. This observation strongly evidenced the irreversible processes of water desorption and readsorption behavior.

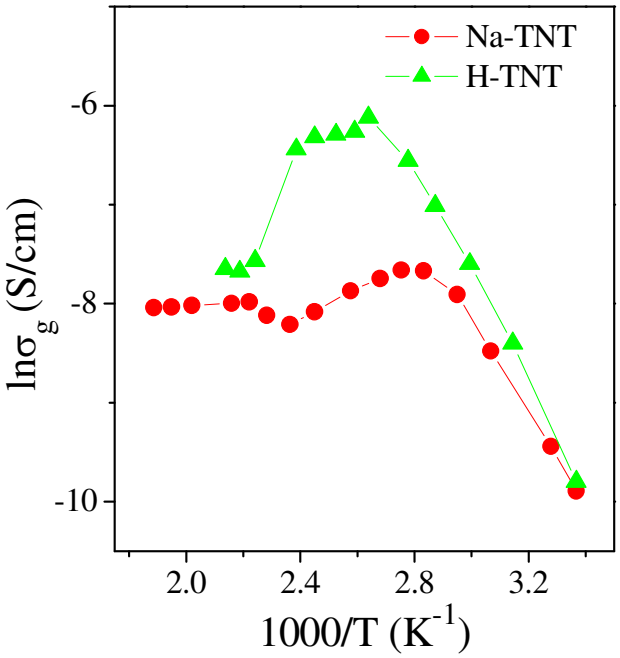

Figure S3. Temperature dependence of grain conductivities (σ_g) of Na-TNT and H-TNT. On removal of water from the nanotubes during heating, the number of protons decreases, causing a deviation from a simple thermal activation process and hence a nonlinear increase of grain conductivities. As a result, the conduction did not follow Arrhenius law, and no activation energy can be expected.