## Supplementary Materials: Electrolytic Manganese Dioxide Coatings on High Aspect Ratio Micro-Pillar Arrays for 3D Thin Film Lithium Ion Batteries

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EDX analysis using NOVA 200 Microscope.

Figure S1a and b show the EDX spectra for the as-deposited  $\gamma$ -MnO<sub>2</sub> film carried out on different points of the sample. The presence of manganese and oxygen peaks confirm that the deposited material on carbon coated TiN/Si pillars is a manganese oxide. The morphology of the tested sample is also illustrated in SEM images on the left of EDX spectra in figure 1.

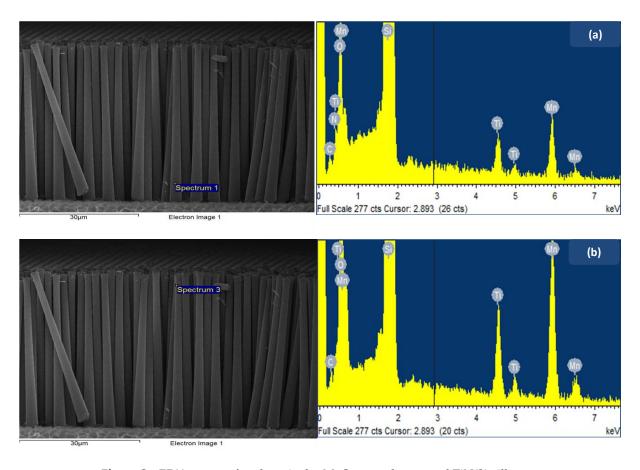


Figure S1. EDX spectra of as-deposited  $\gamma$ -MnO<sub>2</sub> on carbon coated TiN/Si pillars.