## **Supporting Information**

## NiCo<sub>2</sub>O<sub>4</sub>/MnO<sub>2</sub> core/shell arrays as binder-free catalytic cathode for

## high-performance lithium-oxygen cells

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Fig. S1. Voltage profiles of the Li cells with NiCo<sub>2</sub>O<sub>4</sub> cathode tested in O<sub>2</sub> and Ar.



Fig. S2. Voltage profiles of the Li–O<sub>2</sub> cells at a vide electrochecmial window.



Fig. S3. LSV of  $MnO_2@NiCo_2O_4$  and  $NiCo_2O_4$  at 0.1 mV s<sup>-1</sup>.



**Fig. S4** SEM image of the MnO<sub>2</sub>@NiCo<sub>2</sub>O<sub>4</sub> electrode after 168 cycles.