Electronic Supplementary Material (ESI) for RSC Advances

Supplementary Material (ESI) for

Freestanding Co_3O_4 nanowire array for high performance supercapacitor

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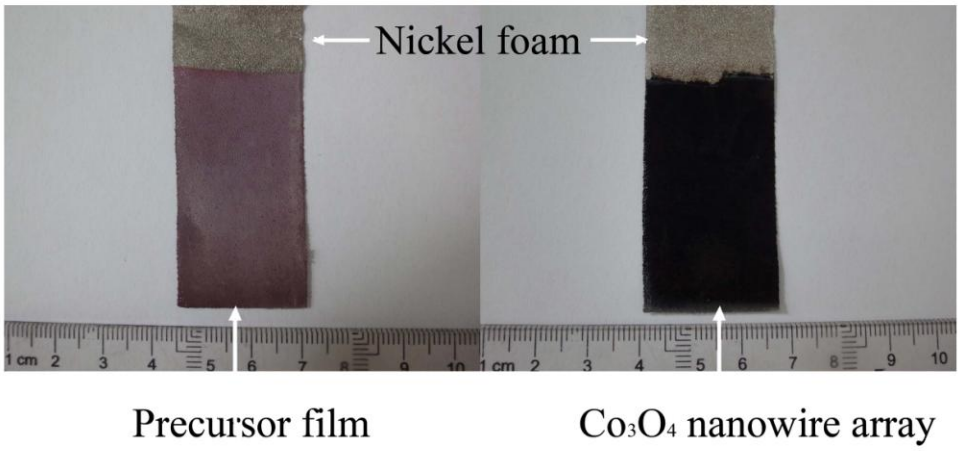

Fig. S1 Photographs of the precursor film and single-crystalline Co_3O_4 nanowire array grown on nickel foam substrate.

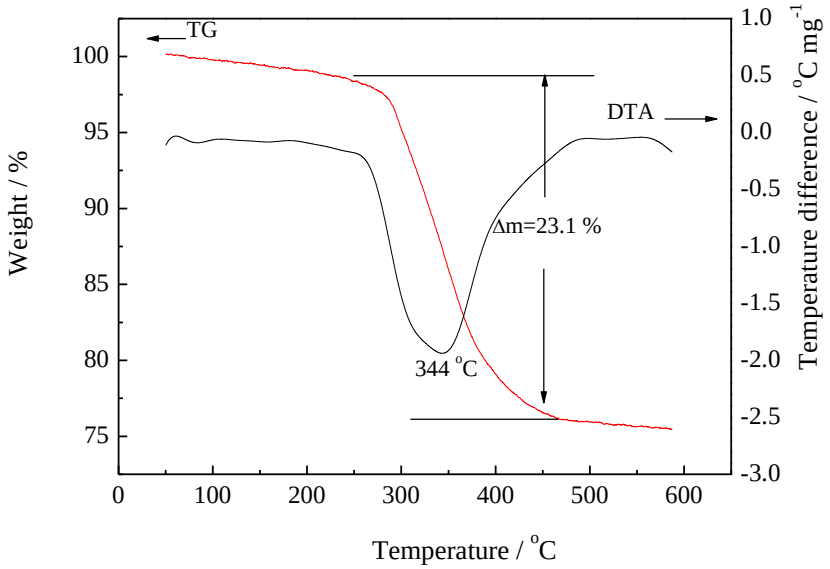

Fig. S2 TG/DTA curves of the precursor film

The weight loss stage below 250 °C is the result of the dehydration of physically absorbed water. The major weight loss is between 270 and 450 °C in which a dominant endothermic peak centered at 344 °C is noticed in the DTA curve. This acceleratory stage is attributed to the loss of water through decomposition of basic cobalt carbonate hydroxide prior to the formation of Co_3O_4. In addition, 23 wt.% of mass loss is also consistent with the calculated value from basic cobalt carbonate hydroxide to Co_3O_4.

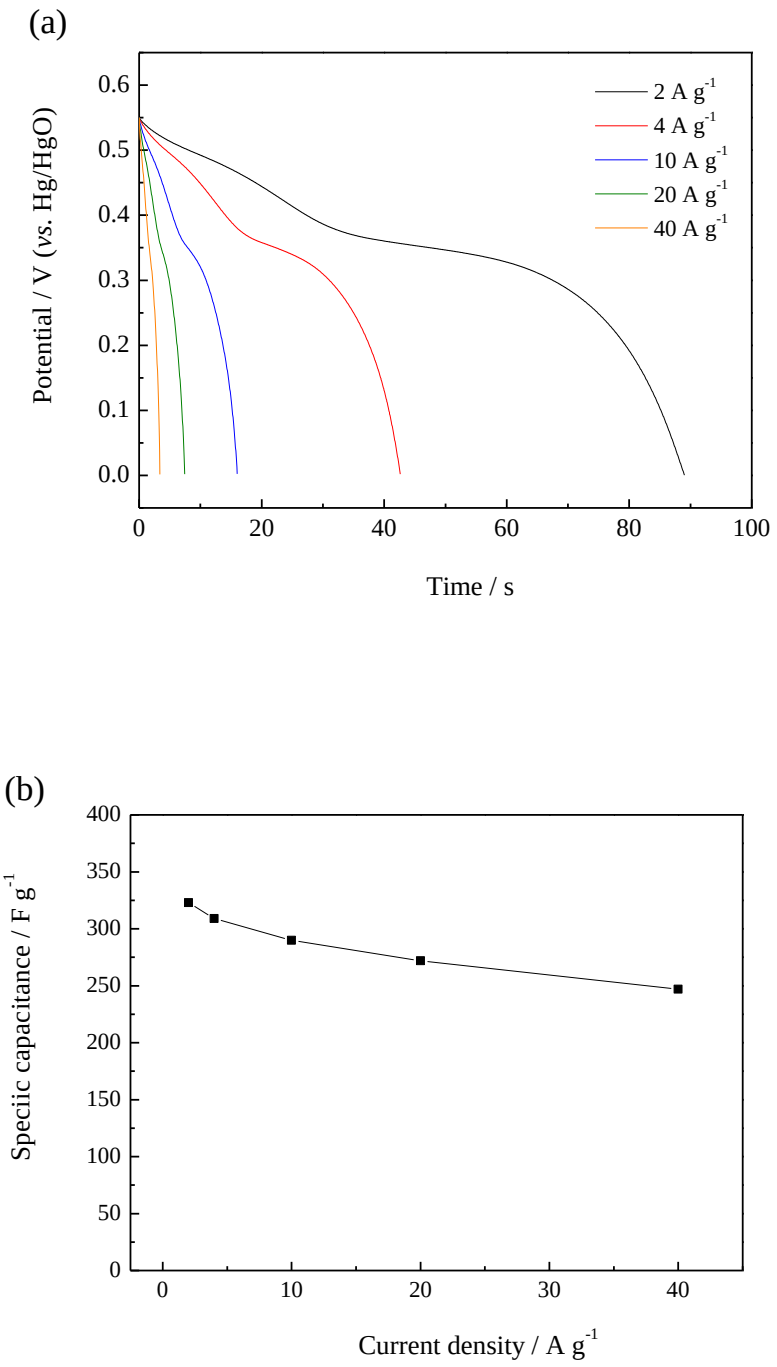

Fig. S3 (a) Discharge curves of the single-crystalline Co_3O_4 nanowire array at various discharge current densities without activation and (b) corresponding specific capacitances.