

ADVANCED MATERIALS

Supporting Information

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A Novel Slicing Method for Thin Supercapacitors

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Supporting Information

Supporting Video

Video S1. A sliced electrode being proposed to connect a circuit that was composed of a light emission diode (LED) and a button battery. Once it was connected, the LED was lightened up. When the electrode was bent into different angles and shapes, no obvious changes on the brightness of the LED had been observed.

Video S2. Three units being connected in series and fixed on a fingernail. They had been charged to reach a voltage of 3 V through an electrochemical work station at a current of 20 μA . They were connected to lighten up an LED immediately.

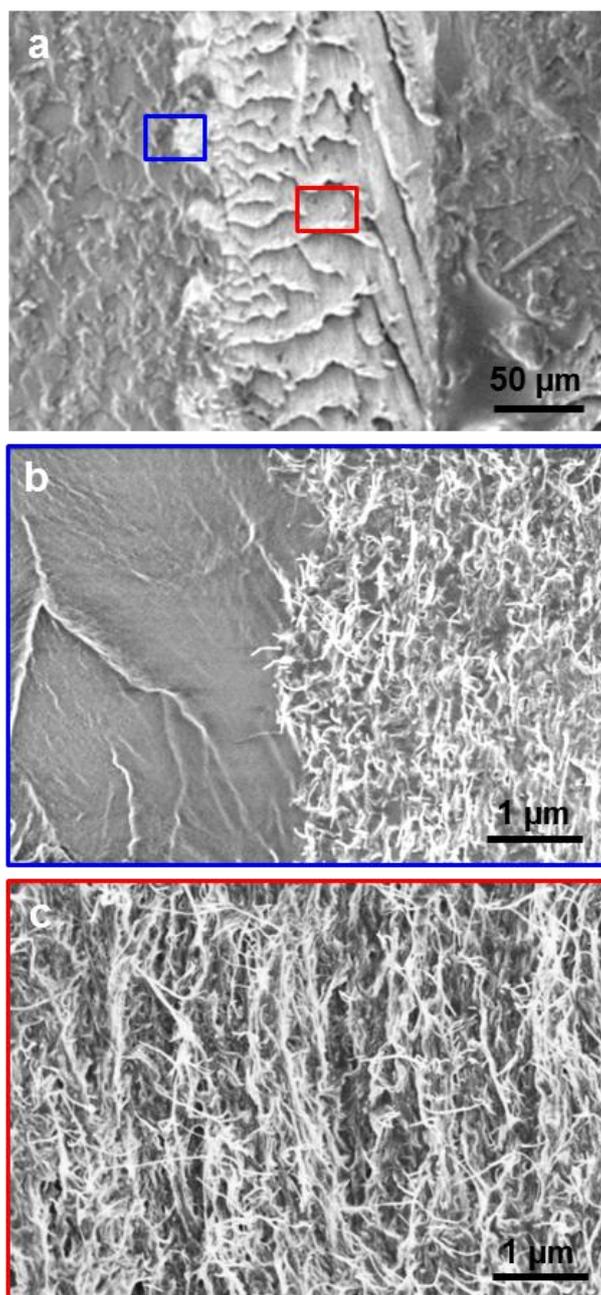


Figure S1. a-c. SEM images of a bare aligned MWCNT sandwiched by epoxy resin (**b** and **c** correspond to the blue and red rectangles at **a**, respectively).

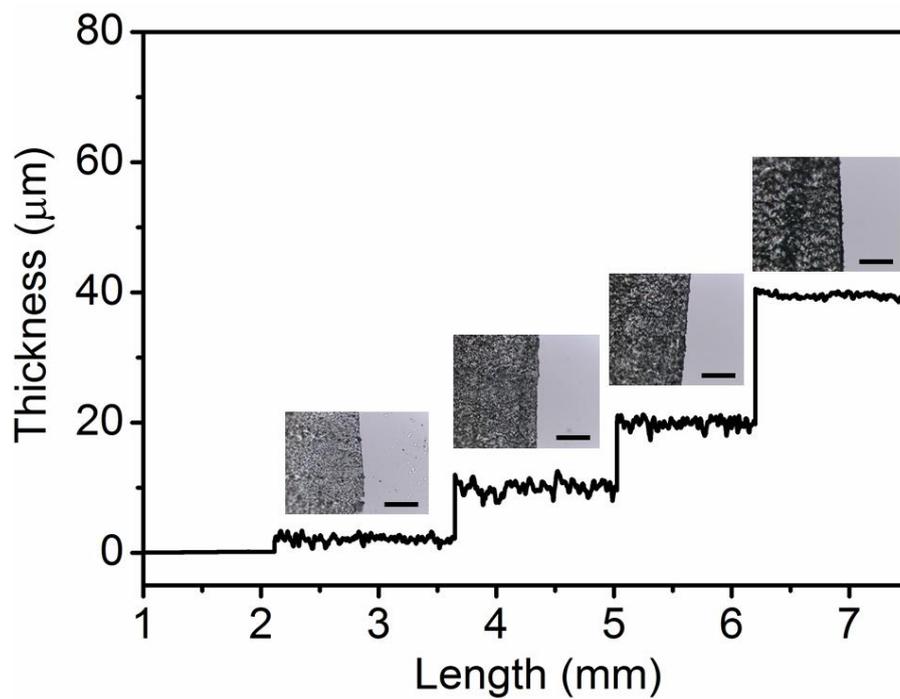


Figure S2. Thickness measurements and corresponding optical micrographs of thin supercapacitors with increasing thicknesses from 2 to 40 μm under the same condition. Scale bar, 500 μm .

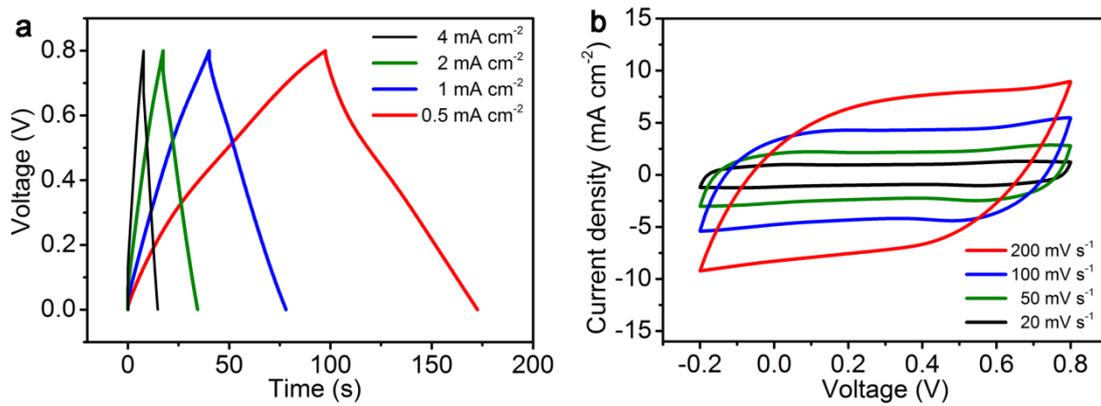


Figure S3. a, b. Galvanostatic charge-discharge curves and cyclic voltammograms of a supercapacitor fabricated from bare MWCNT films before embedding at increasing current densities and scan rates, respectively.

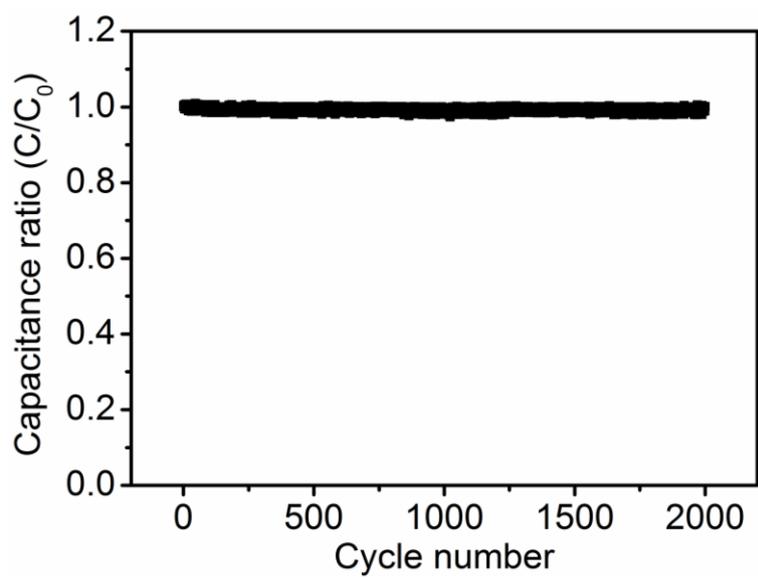


Figure S4. Cyclic stability for a supercapacitor from bare MWCNT films. Current density of 4 mA cm^{-2} .

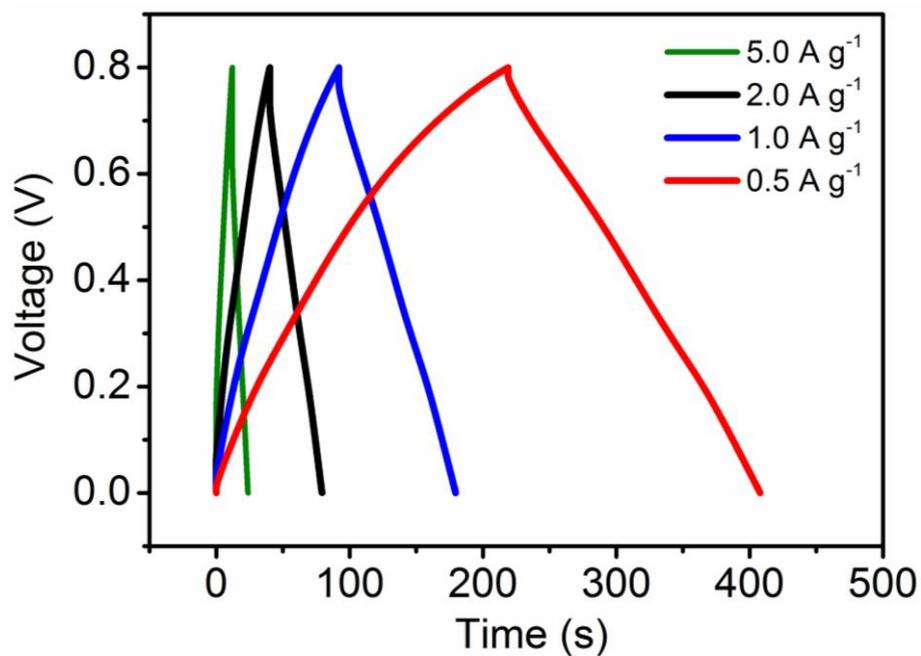


Figure S5. Galvanostatic charge-discharge curves of a thin supercapacitor based on MWCNT/PANI electrodes at different current densities.

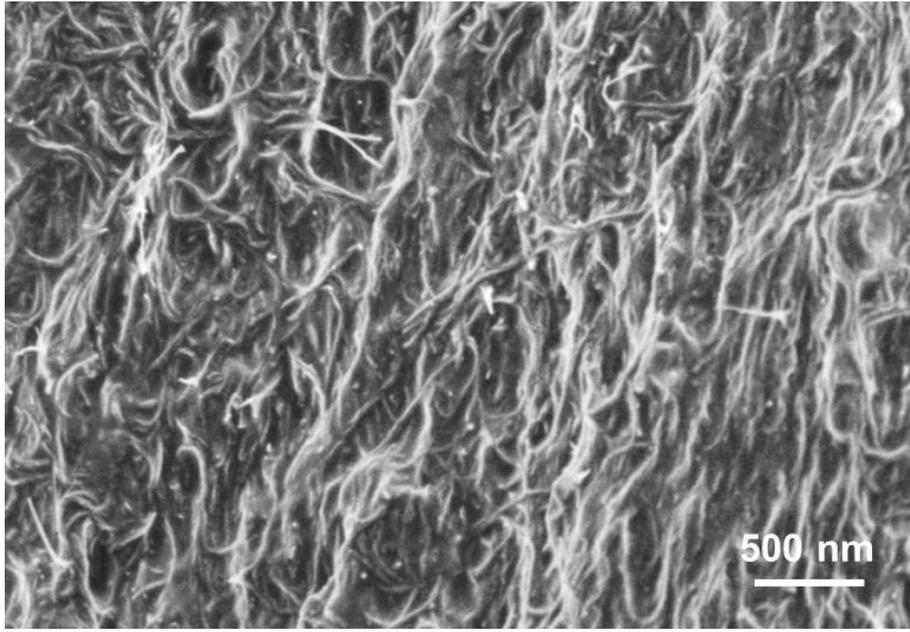


Figure S6. SEM image of an MWCNT/PANI composite electrode.

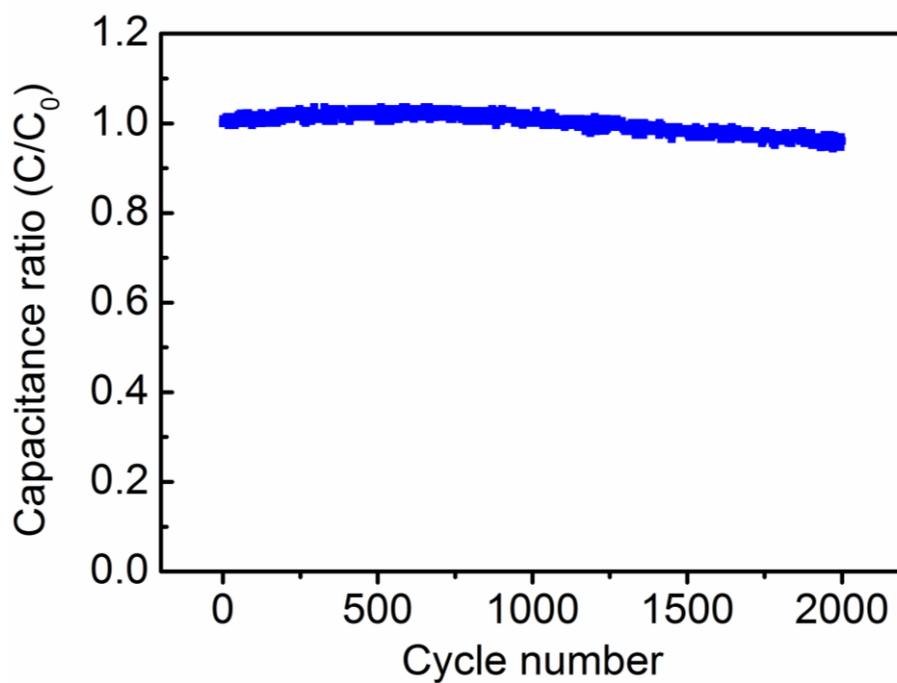


Figure S7. Cyclic stability for a thin supercapacitor from MWCNT/PANI composites (thickness of 20 μm and current density of 10 A g^{-1}).

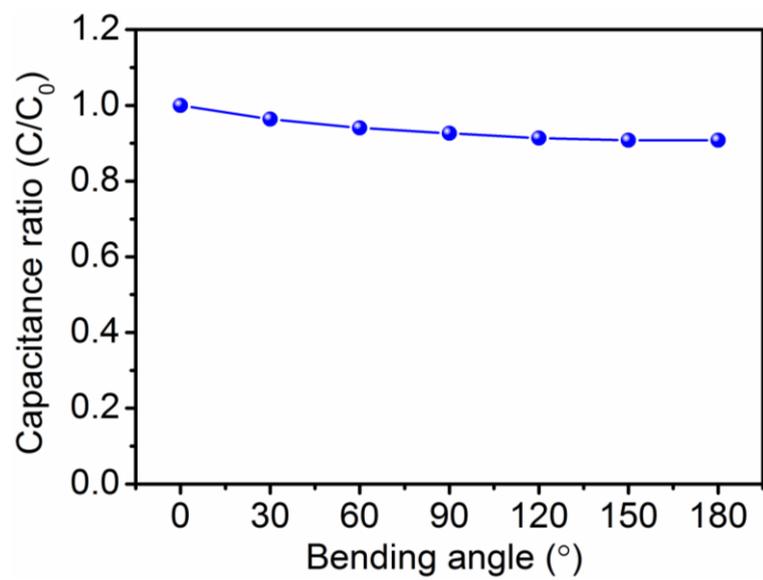


Figure S8. Dependence of specific capacitance on bending angle of a thin supercapacitor derived from MWCNT/PANI composites with a thickness of 40 μm .

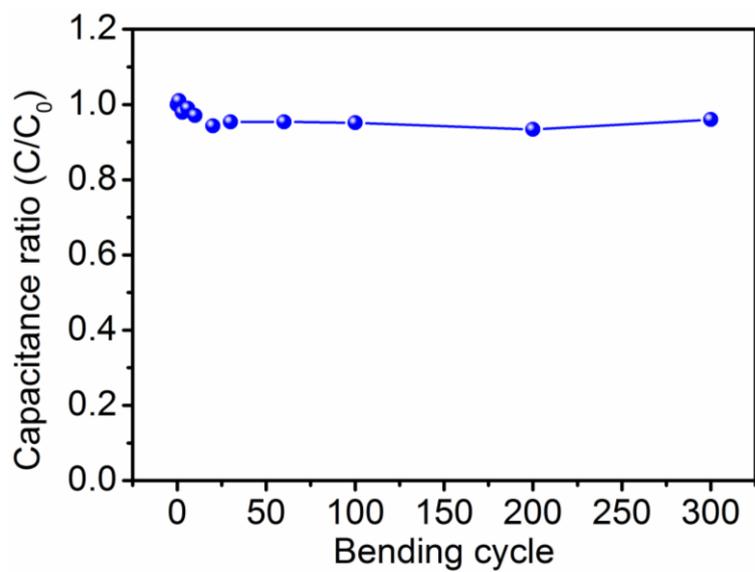


Figure S9. Dependence of specific capacitance on bending cycle of a thin supercapacitor derived from MWCNT/PANI composites with a thickness of 40 μm (bending angle of 90 $^\circ$).