Electronic Supplementary Material (ESI) for Nanoscale.

Supplementary Information

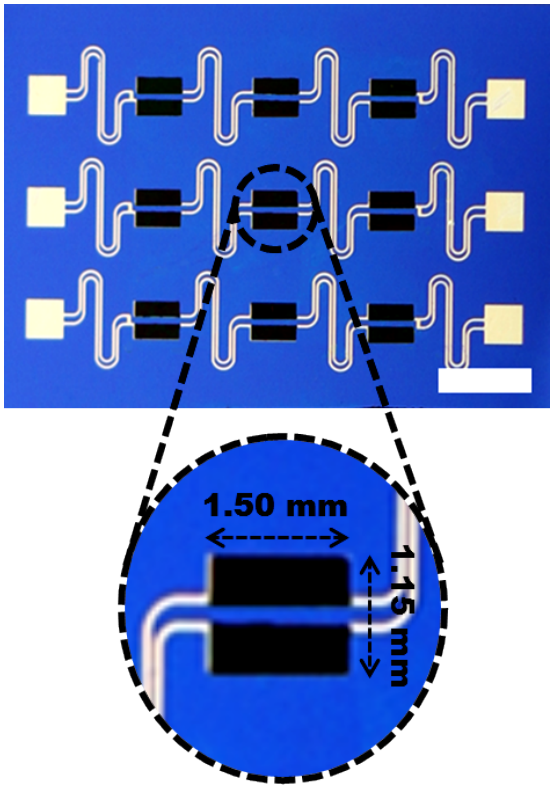

Figure S1. Photograph of an LbL-MWNTs/MnO_x MSC array with a scale bar of 3 mm.

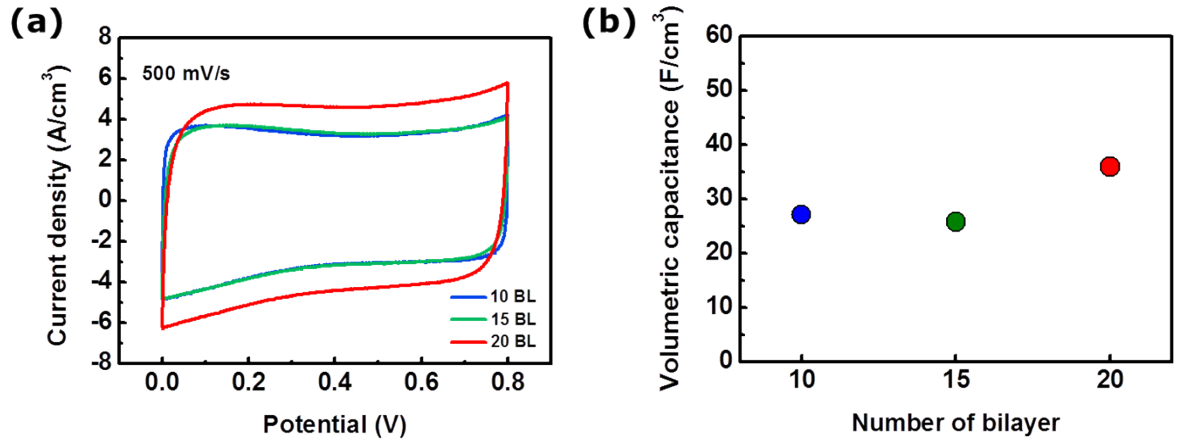

Figure S2. (a) CV curves taken from MSCs with 10 (blue), 15 (green) and 20 (red) LbL fil ms of MWNT/MnOx at scan rate of 500 mV/s. (b) Volumetric capacitance of LbL-MWNT /MnOx MSC with various number of bilayer.

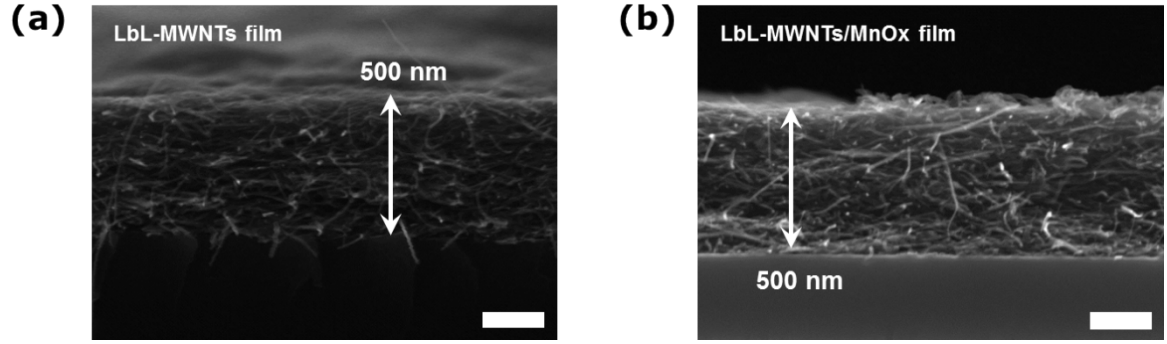

Figure S3. Cross-sectional SEM image of (a) 20 LbL-MWNTs electrode and (b) 20 LbL-M WNTs/MnOx electrode. The scale bar corresponds to 200 nm.

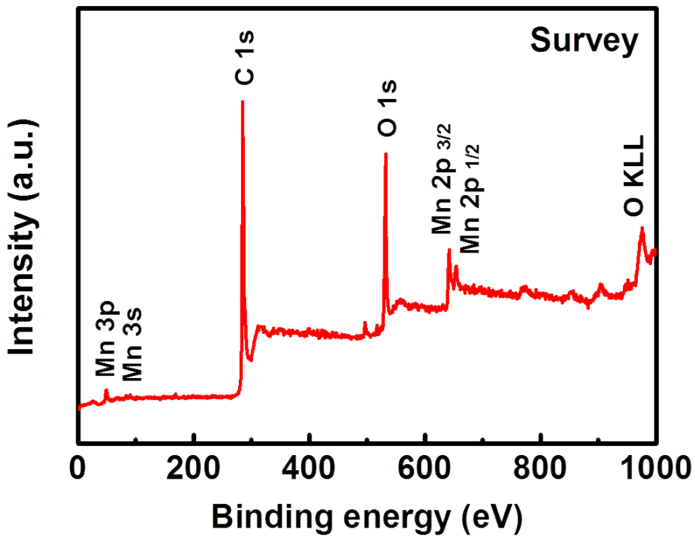

Figure S4. XPS spectra of the survey of MWNT-COOH/MnO_x nanocomposites.

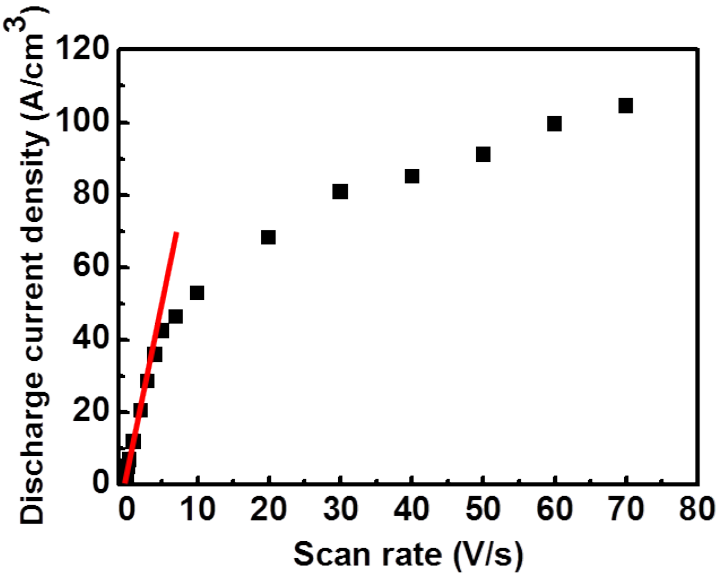

Figure S5. Linear dependence (red line) of the discharge current density *vs.* scan rate.

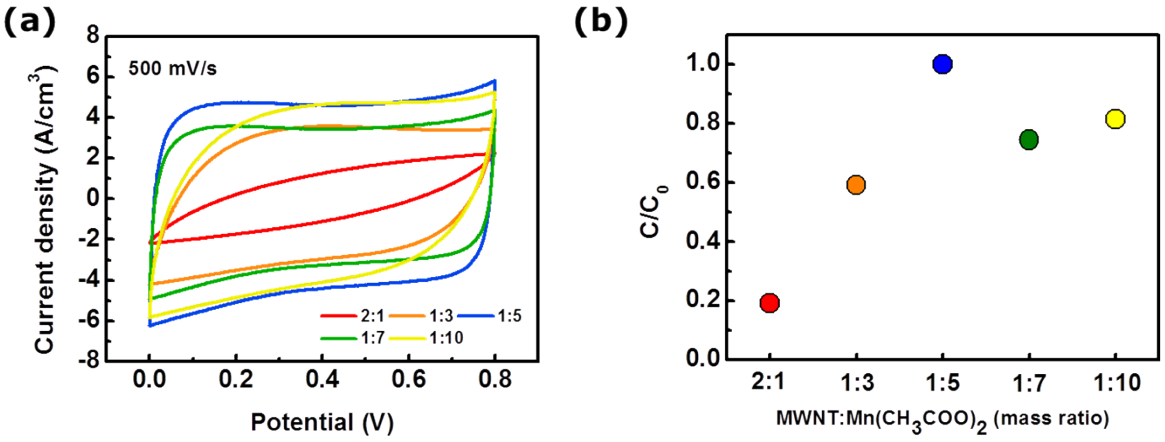

Figure S6. (a) CV curves taken from MSCs with five different mass ratio of MWNT-CO OH to MnOx at scan rate of 500 mV/s. (b) Normalized specific capacitance of the MSCs with different mass ratio of MWNT-COOH to MnOx. C is the volumetric capacitance of MSCs with different mass ratio and C_0 is the volumetric capacitance of MSC with mass ra tio of 1:5.

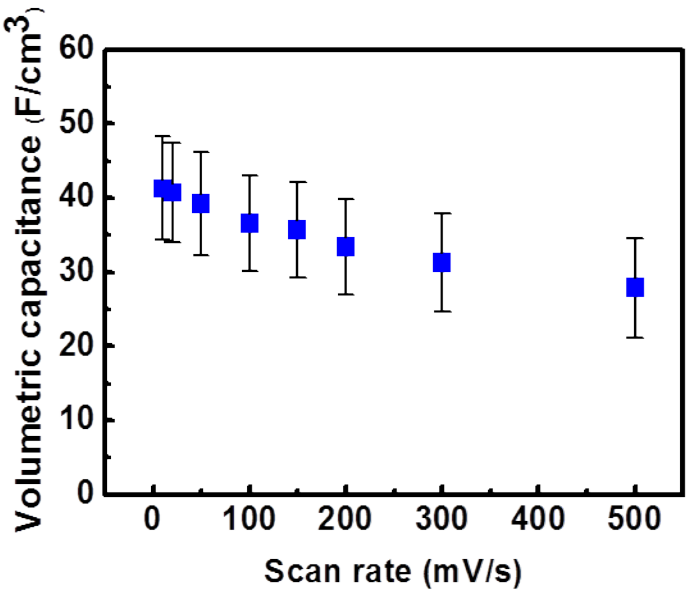

Figure S7. Volumetric capacitance taken from five different LbL-MWNTs/MnOx MSC devices with error bars.

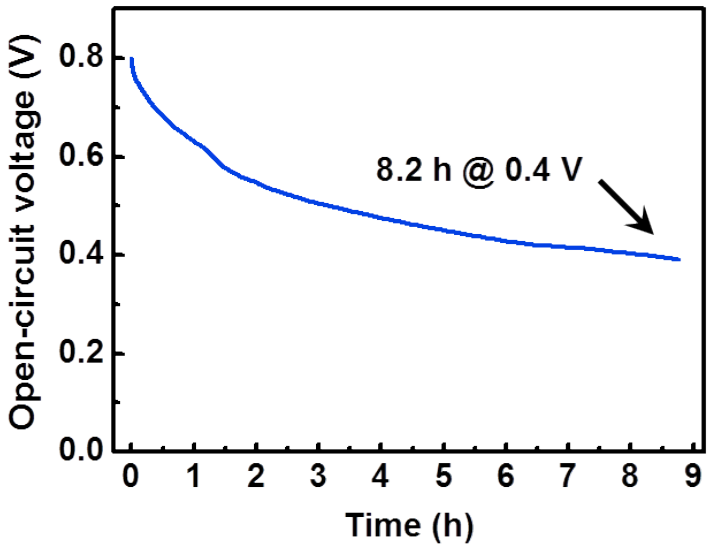

Figure S8. Self-discharging of an LbL-MWNTs/MnO_x MSC.

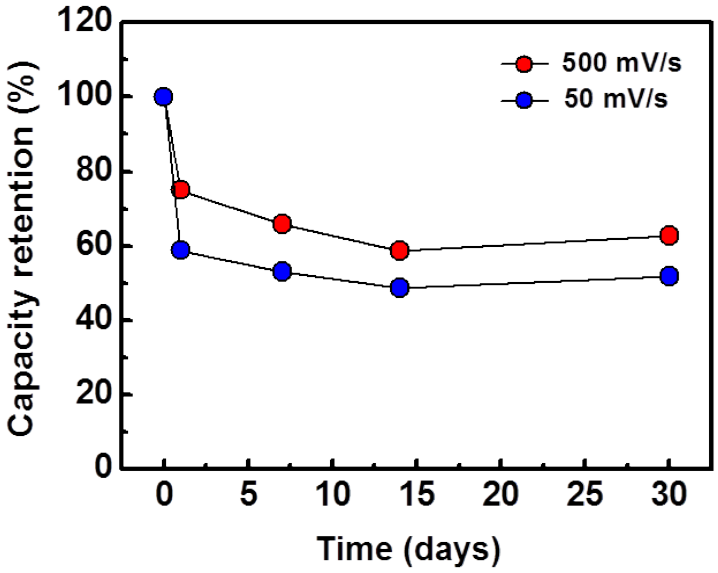

Figure S9. Capacity retention in dependence of time under ambient-air condition.

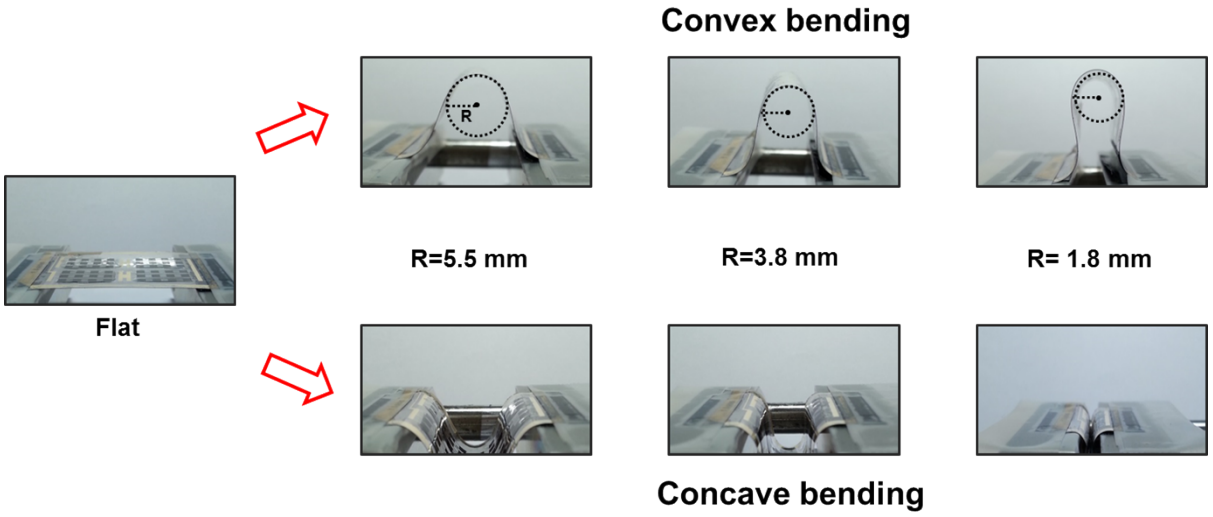

Figure S10. Photographs of LbL-MWNTs/MnOx MSC circuit on a PET film under various b ending conditions.