

## Supporting Information

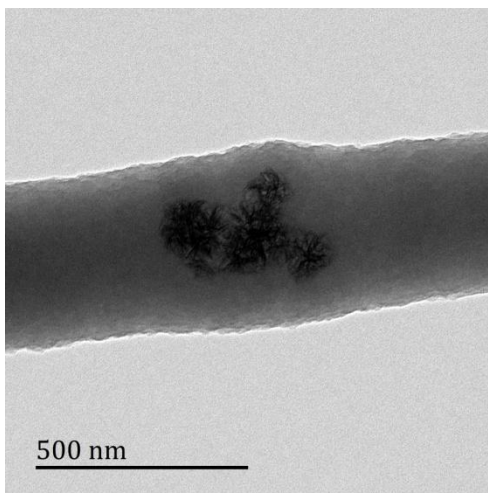


Figure S1. TEM image of  $\text{MnO}_2$  in Mn/C-1 nanofibers with a high magnification.

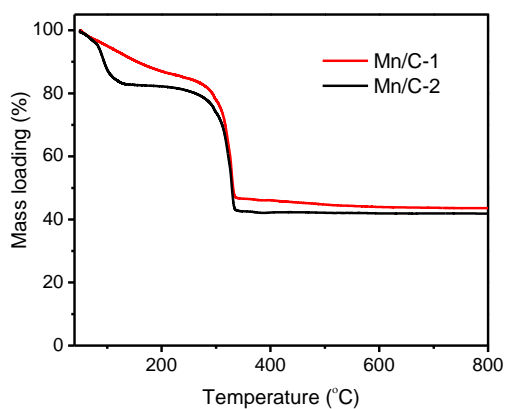


Figure S2. The TGA curves of Mn/C-1 and Mn/C-2.

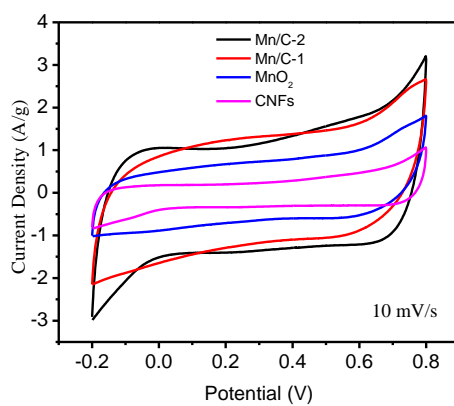


Figure. S3. CV curves at 10 mV/s for pure CNFs,  $\text{MnO}_x$ , Mn/C-1 and Mn/C-2

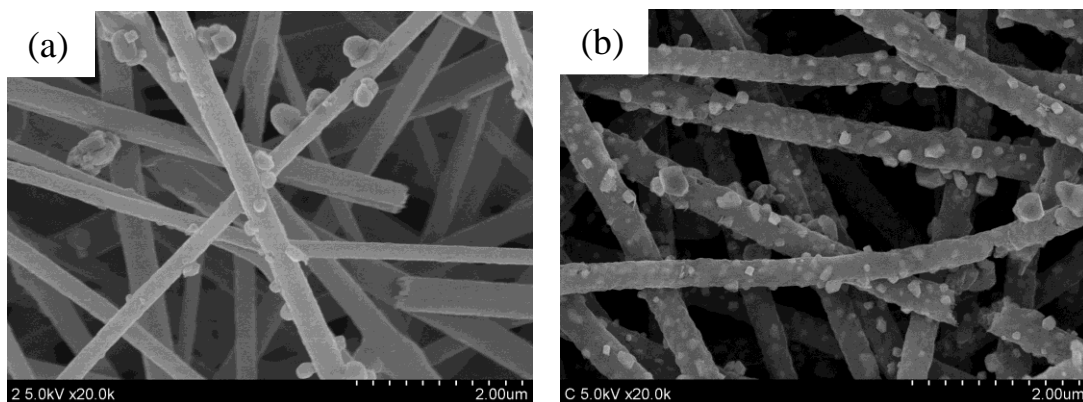


Figure. S4 SEM images of (a) Mn/C-1 and (b) Mn/C-2 tested at 1 A/g after 2000 cycles

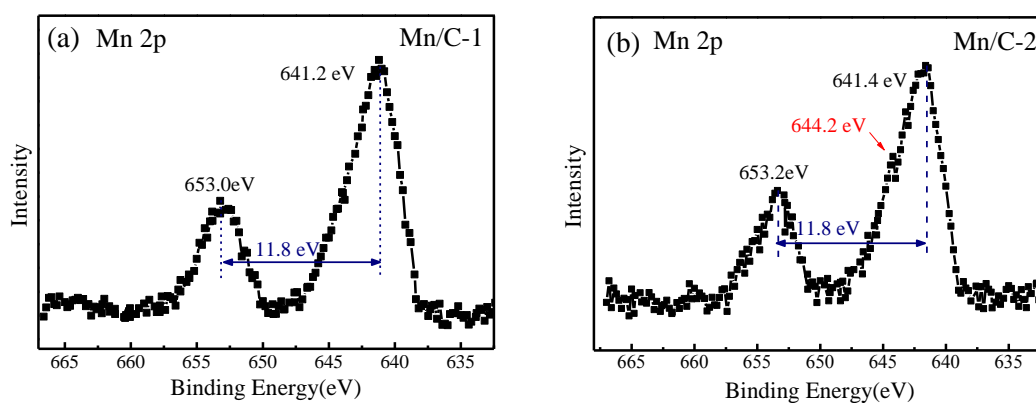


Figure. S5. XPS Mn 2p spectrum of Mn/C-1 and Mn/C-2 tested at 1 A/g after 2000 cycles

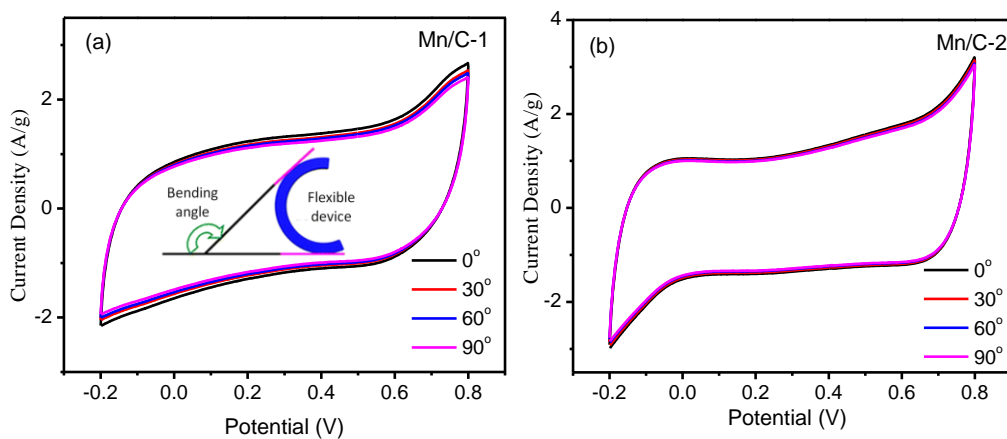


Figure S6. CV curves of (a) Mn/C-1 and (b) Mn/C-2 tested at various bending angles.