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## Supporting information

Electrostatic assembly of composite supercapacitor electrodes, triggered by charged dispersants

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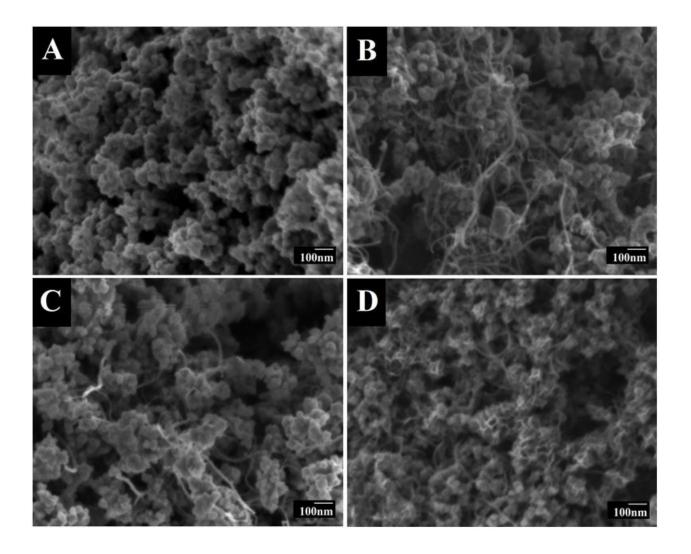


Figure S1. SEM images of (A)  $MnO_2$  powder, (B)  $MnO_2$ -MWCNT composite prepared without dispersants, (C)  $MnO_2$ -MWCNT composite prepared using PHA and NB dispersants before electrochemical cycling, (C)  $MnO_2$ -MWCNT composite prepared using PHA and NB dispersants after 1000 cycles.

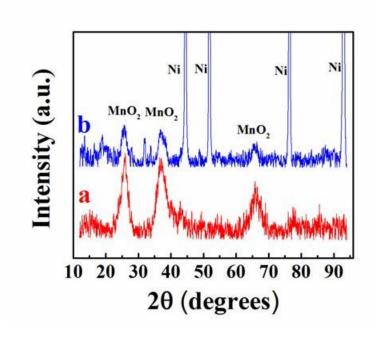


Figure S2. X-ray diffraction patterns of (a) as-prepared  $MnO_2$  powder and (b)  $MnO_2$ -MWCNT electrode, prepared using PHA and NB dispersants and Ni current collector, after 1000 cycles.



Figure S3. 4 g  $L^{-1}$  MnO<sub>2</sub> suspensions, containing 0.2 g  $L^{-1}$  of (A) PCA and (B) PHA 3 days after ultrasonication

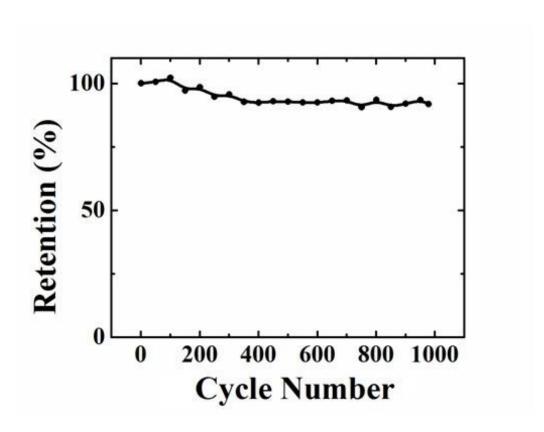


Figure S4. Capacitance retention versus cycle number at a scan rate of 50 mV s<sup>-1</sup> for MnO<sub>2</sub>-MWCNT electrodes, prepared using PHA and NB dispersants.