

High performance flexible double-sided micro-supercapacitors with an organic gel electrolyte containing a redox-active additive

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Supplementary Information

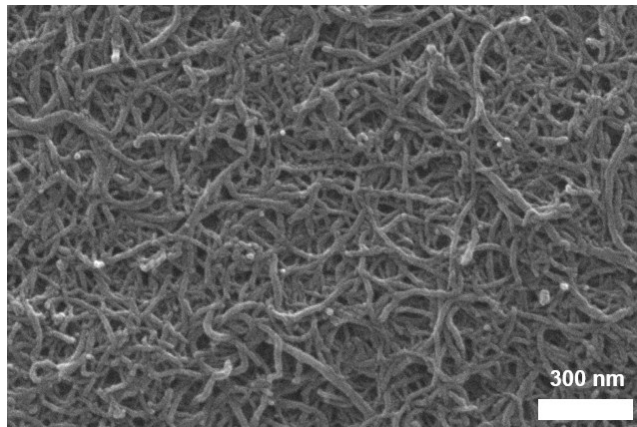


Figure S1. SEM image of a spray-coated functionalized MWNT film (top view).

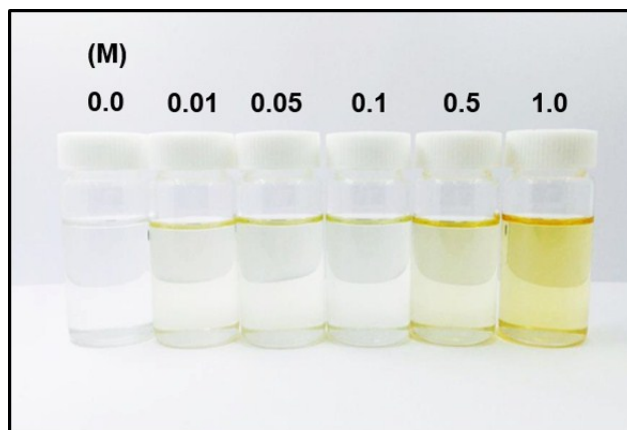


Figure S2. Image of PMMA-PC-LiClO₄-HQ solutions containing various concentrations of HQ.

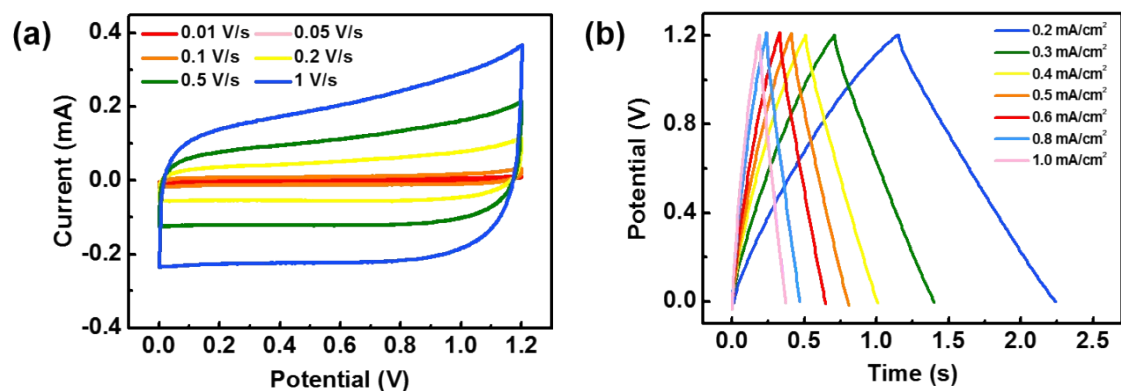


Figure S3. Electrochemical performance of a single MSC containing PMMA-PC-LiClO₄. (a) CV curves obtained at scan rates from 0.01 to 1.0 V s⁻¹. (b) GCD curves measured at current densities from 0.2 to 1.0 mA cm⁻².

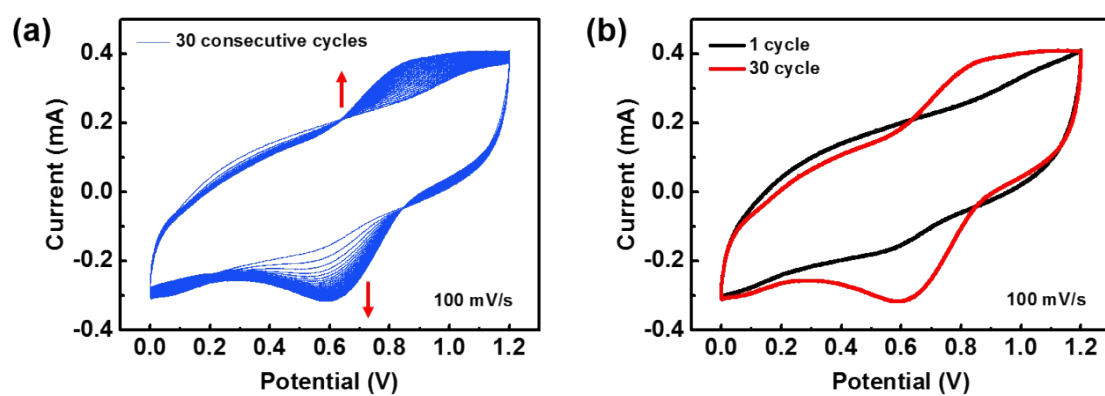


Figure S4. Change of CV curves with repetition cycles up-to 30 times (left) and the comparison of the CV curves between the initial and 30th cycles (right).

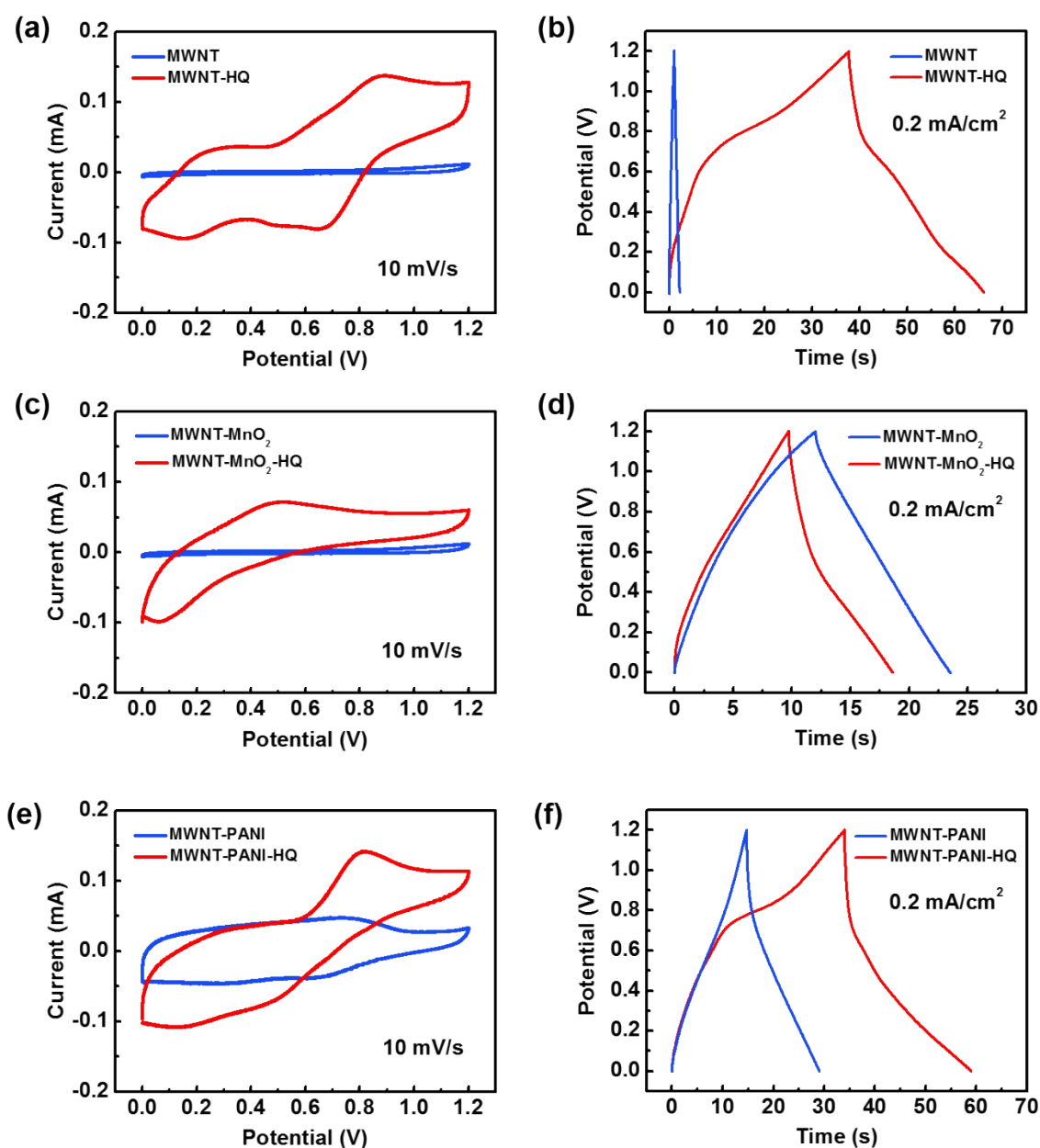


Figure S5. Effect of HQ with different electrode materials. (a, b) CV and GCD curves of MWNT electrodes. (c, d) CV and GCD curves of MWNT-MnO₂ electrodes. (e, f) CV and GCD curves of MWNT-PANI electrodes.

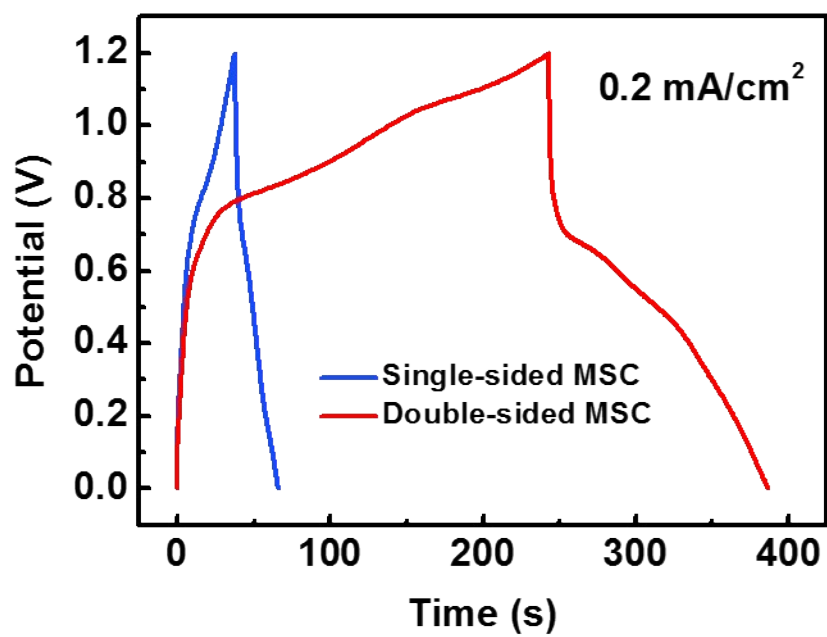


Figure S6. Galvanostatic charge-discharge curve of double-sided MSC based on PMMA-PC-LiClO₄-HQ at low current density of 0.2 mA cm⁻².

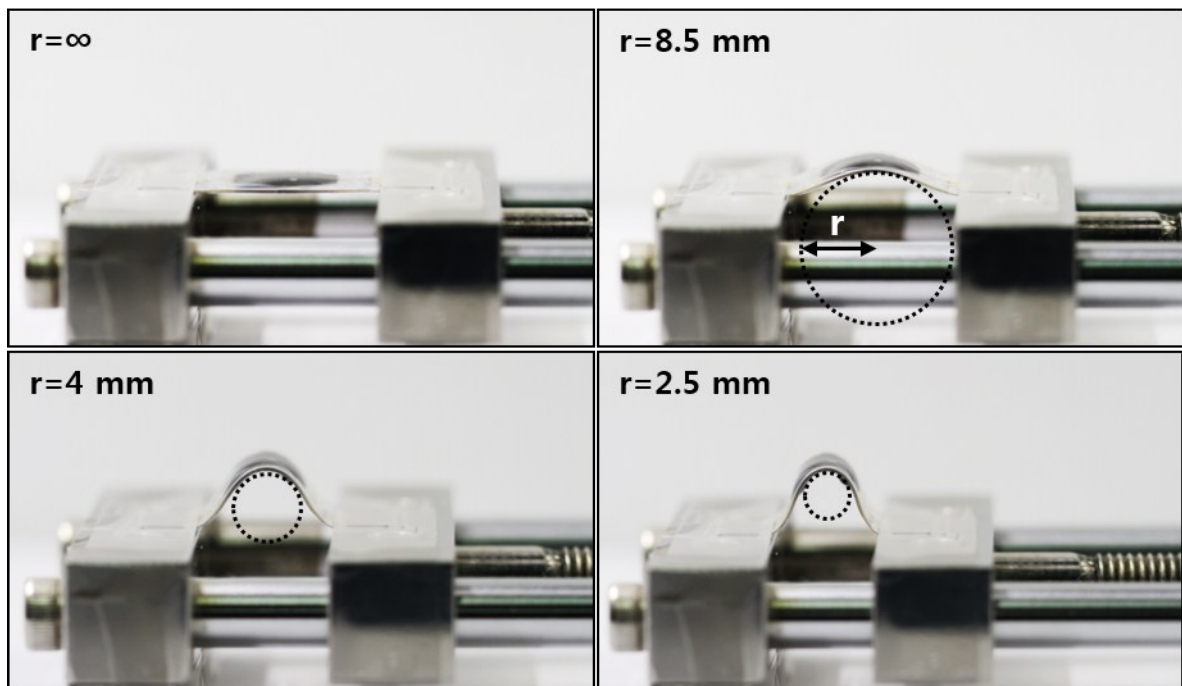


Figure S7. Photographs of the encapsulated double-sided MSC at various bending radii.