

Supporting Materials

For

Novel Approach toward Binder-free and Current Collector-free Anode Configuration: Highly Flexible Nanoporous Carbon Nanotube Electrodes with Strong Mechanical Strength Harvesting Improved Lithium Storage

Xifei Li,¹ Jinli Yang,¹ Yuhai Hu,¹ Jiajun Wang,¹ Yongliang Li,¹ Mei Cai,² Ruying Li,¹
Xueliang Sun^{1*}

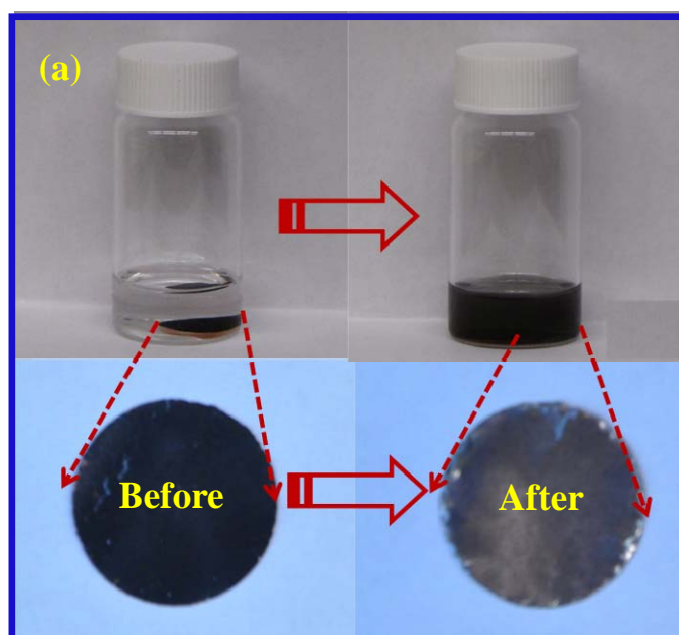
¹Department of Mechanical and Materials Engineering, University of Western
Ontario, London, Ontario, N6A 5B9, Canada

*Corresponding author: Tel: +1 519 661 2111 Ext 87759; Fax: +1 519 661 3020;

E-mail address: xsun@eng.uwo.ca (X.L. Sun)

²General Motors R&D Center

Warren, MI 48090-9055, USA



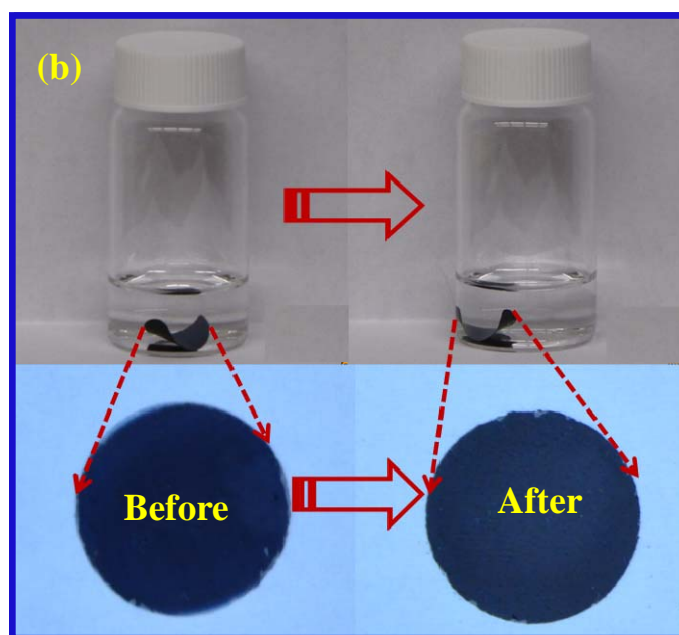


Fig. S1 The digital optical images of (a) the CNTs-Cu and (b) the CNTs-Separator with the diameter of 9/16 inch were treated in the alcohol by an ultrasonic.



Fig. S2 A digital optical image of vacuum filtration derived free-standing CNT films rolled up and folded.

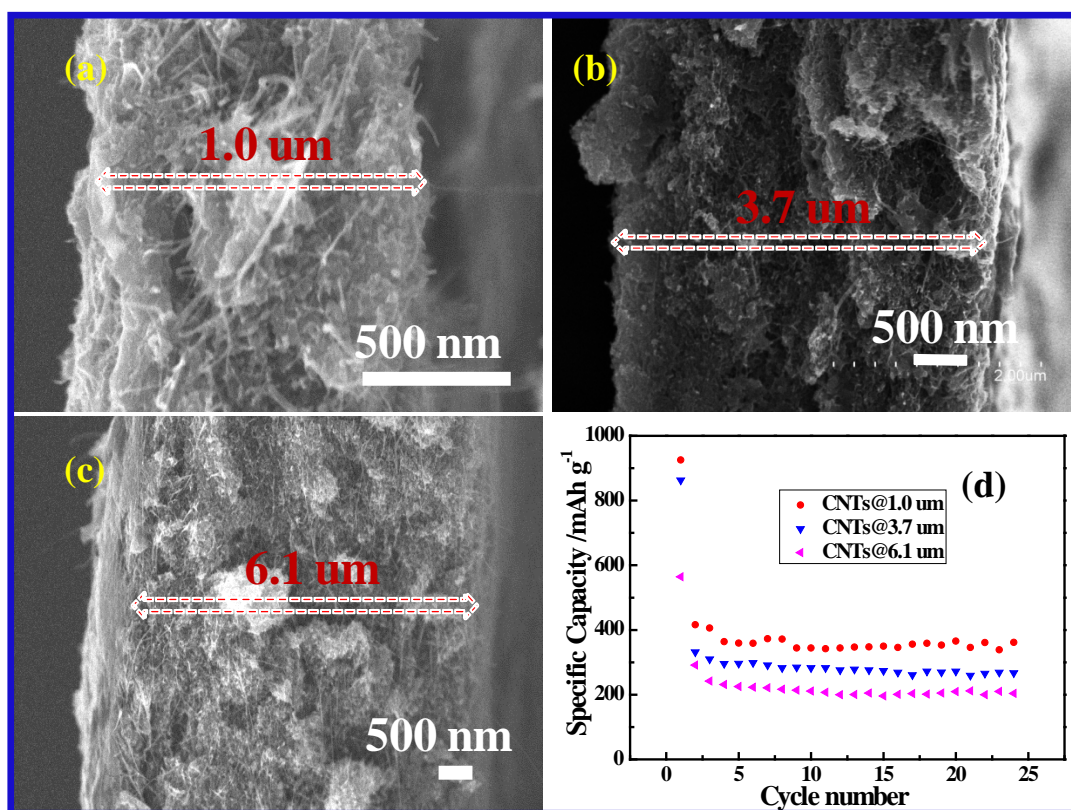


Fig. S3 SEM images of the CNTs-Separator with three thickness: (a) 1.0 μm, (b) 3.7 μm, (c) 6.0 μm; and (d) the comparison of cycling performance of the CNTs-Separator with three thicknesses at a current density of 100 mA g⁻¹.

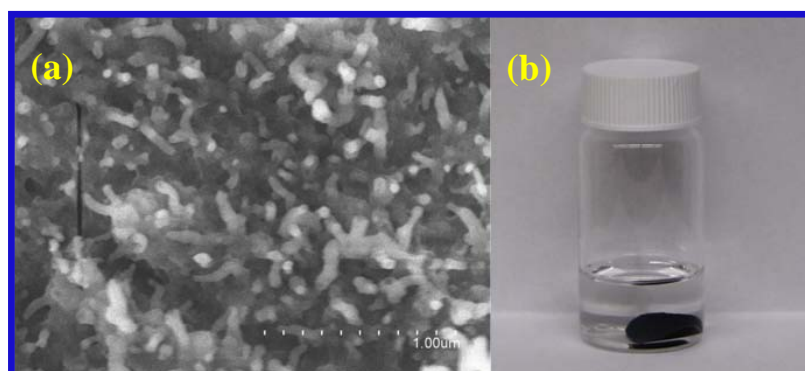


Fig. S4 SEM image and the ultrasonic impact treatment of the CNTs-Separator after charge/discharge cycles.