Electronic Supplementary Material (ESI) for Energy & Environmental Science.

Supplementary Information

Encapsulation of Organic Active Material in Carbon Nanotubes for Application to High-Electrochemical-Performance Sodium Batteries

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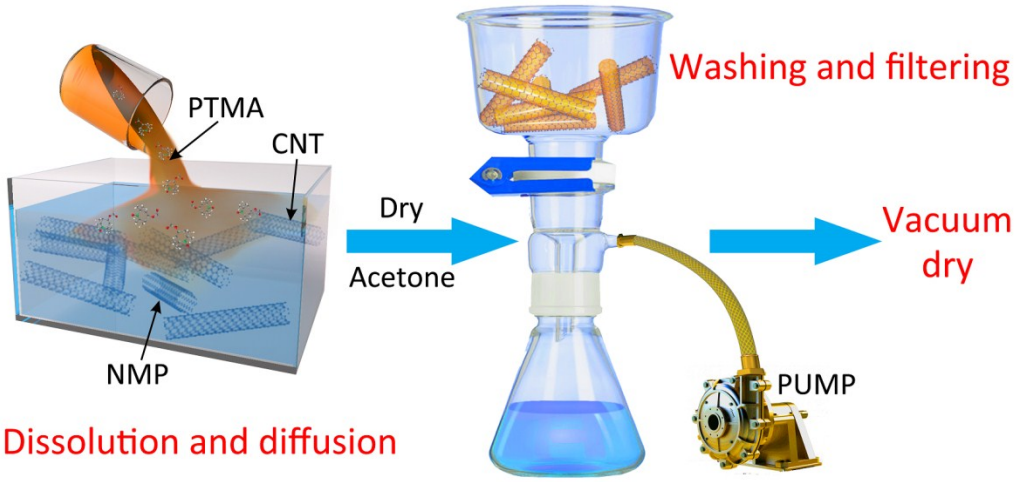

Fig. S1. Schematic diagram for the preparation of PTMA-impregnated CNT.

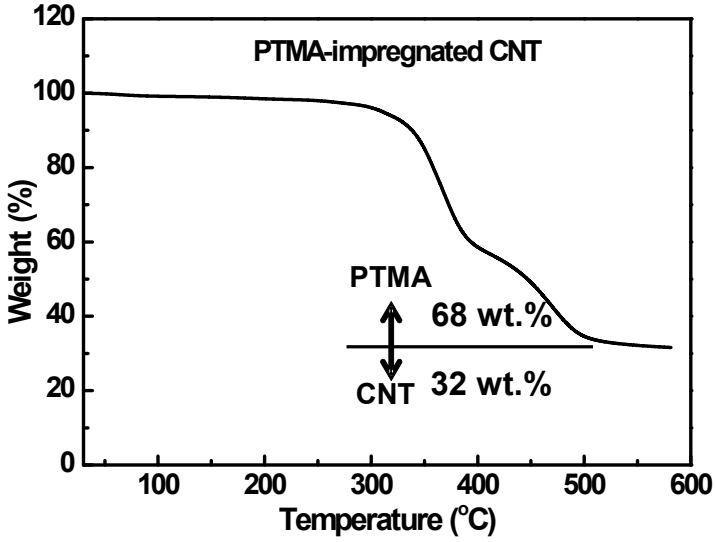

Fig. S2. TGA curve of the PTMA-impregnated CNT.

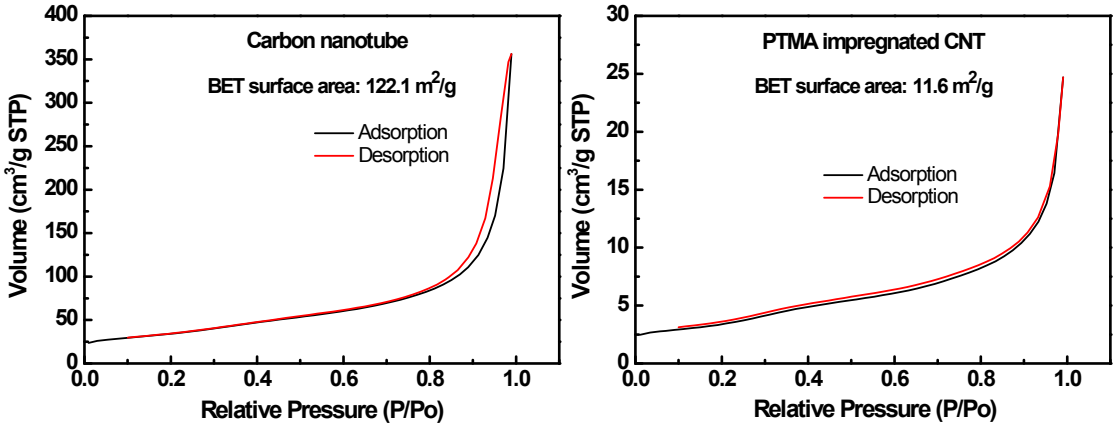

Fig. S3. BET surface area of CNT and PTMA-impregnated CNT.

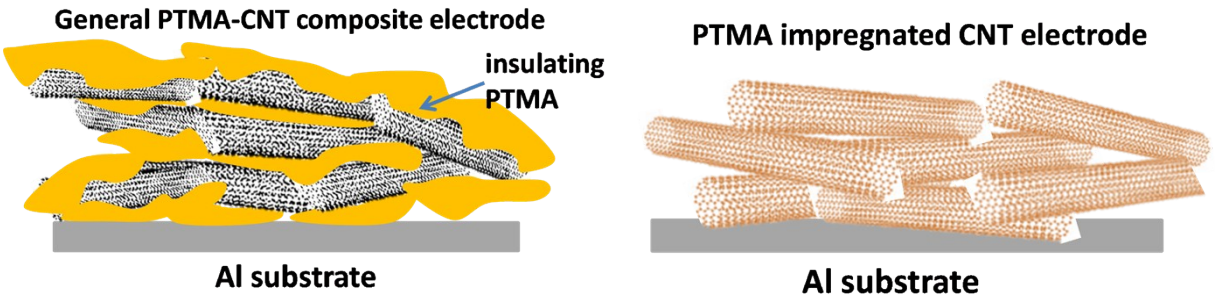

Fig. S4. Schematic illustration of PTMA-CNT composite and PTMA-impregnated CNT electrodes.

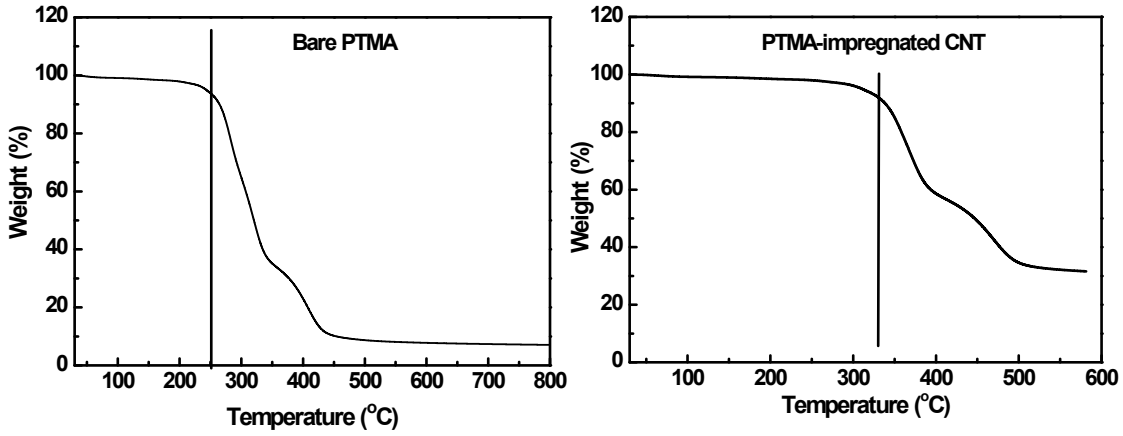

Fig. S5. TGA curves of the bare PTMA and PTMA-impregnated CNT.

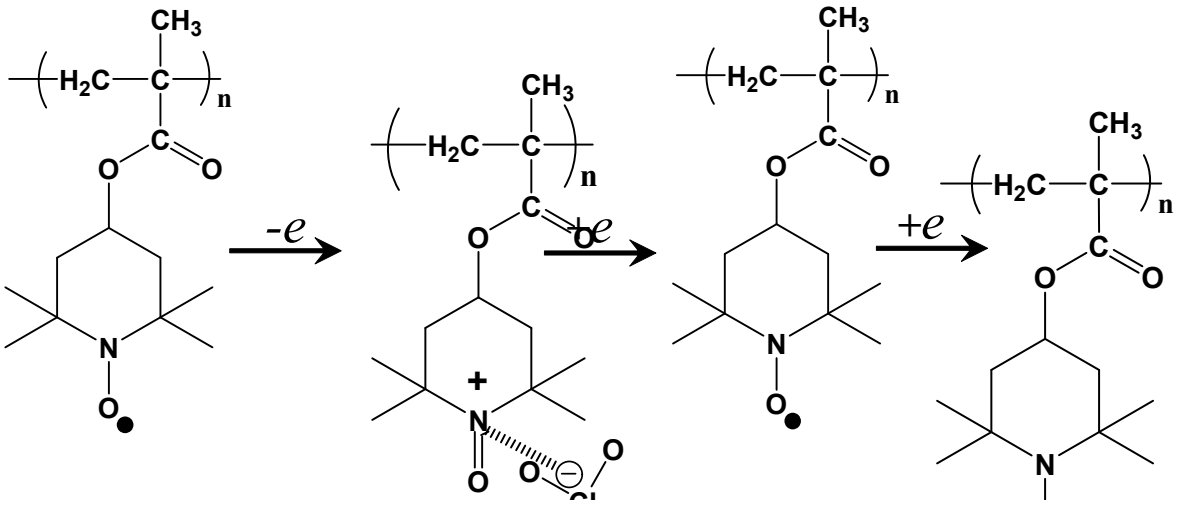

Fig. S6. Electrochemical reaction mechanism of PTMA at initial charge-discharge process.

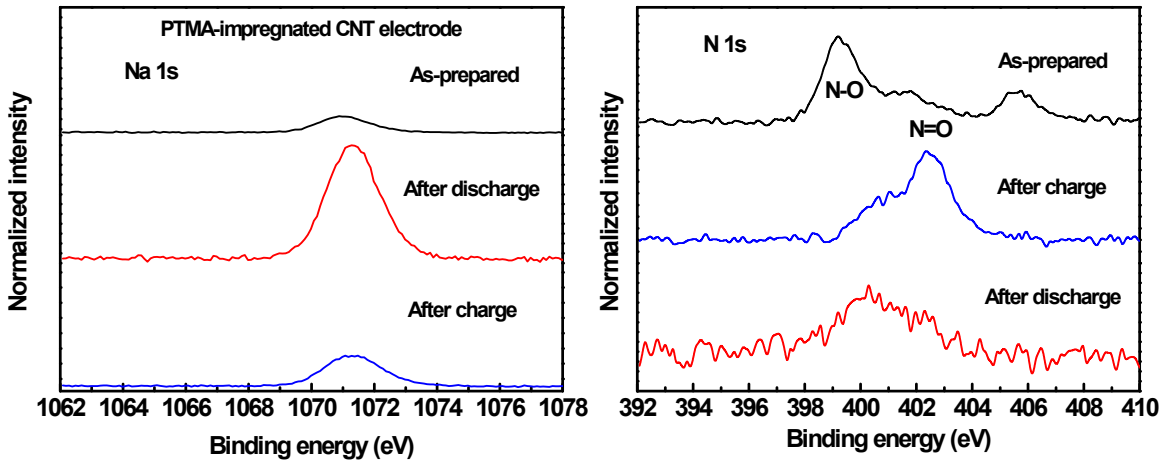

Fig. S7. Ex-situ XPS of Na1s (b) and N1s in PTMA-impregnated CNT electrodes.

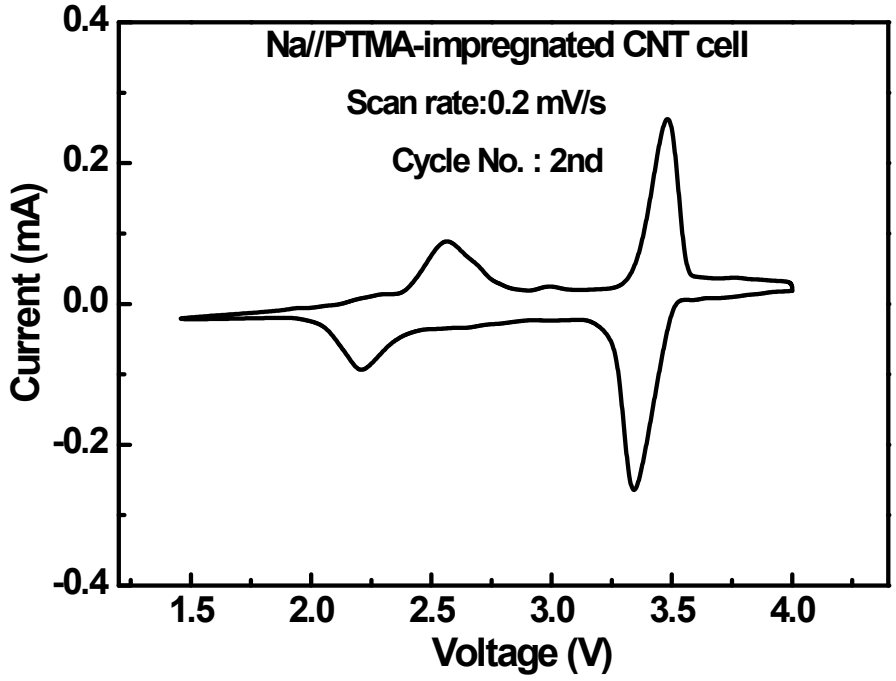

Fig. S8. Cyclic voltammograms (CV) of PTMA-impregnated CNT sodium cell at a scan rate of 0.2 mV s^{-1}.

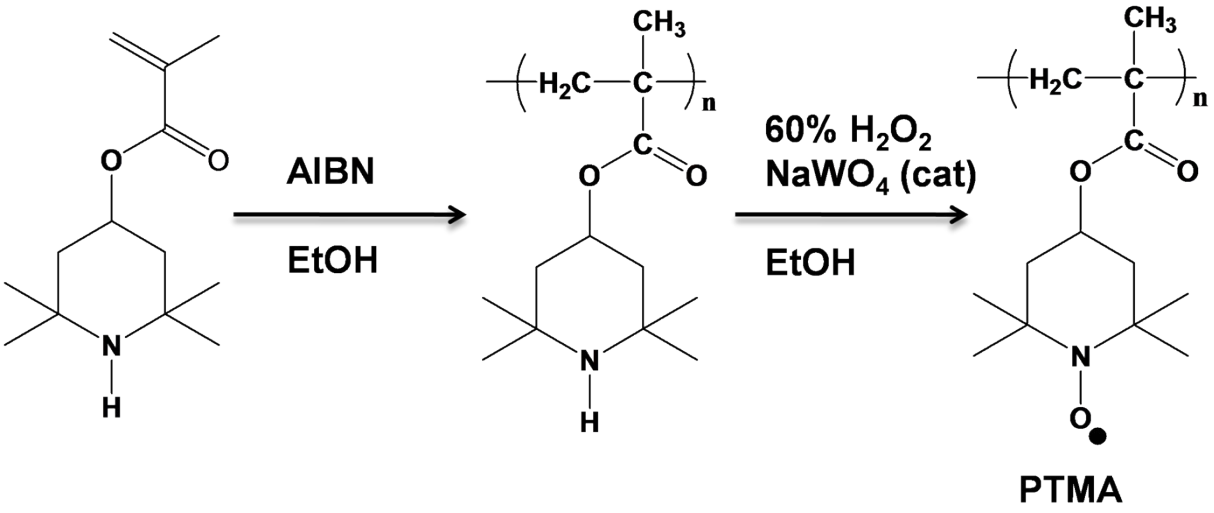

Fig. S9. Preparation of PTMA by the radical polymerization method.

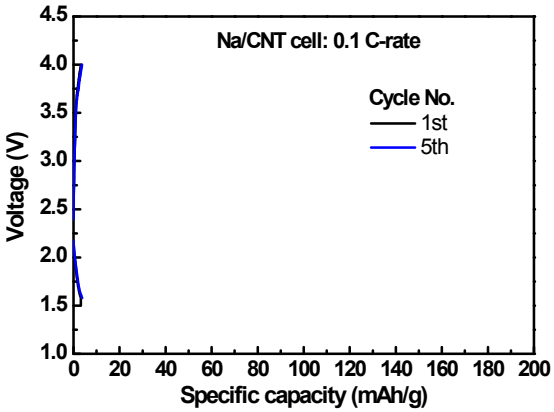

Fig. S10. Charge-discharge curves of Na/CNT cell at same current density with PTMA-impregnated CNT cell.

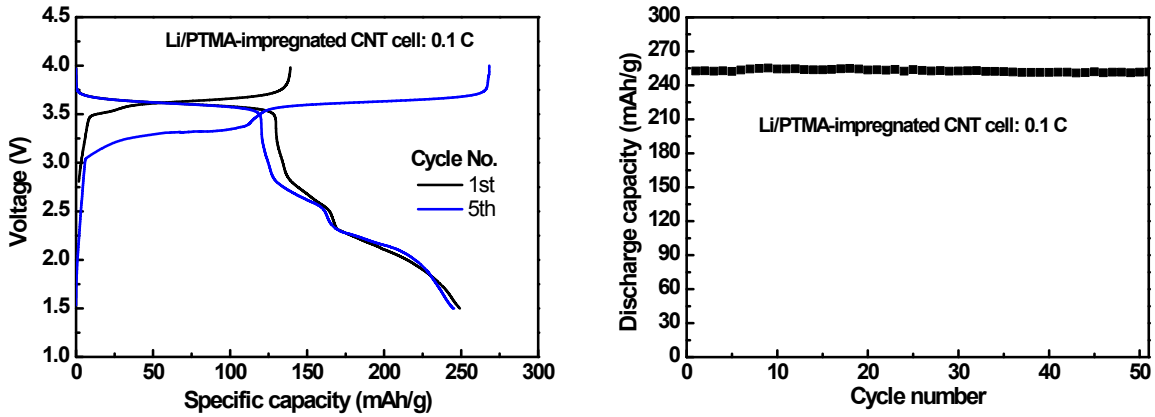

Fig. S11. Charge-discharge curves and cycle performance of the PTMA-impregnated CNT electrode on lithium battery at room temperature.