

Supplementary Information

Binder-free organic cathode based on nitroxide radical polymer-functionalized carbon nanotubes and gel polymer electrolyte for high-performance sodium organic polymer battery

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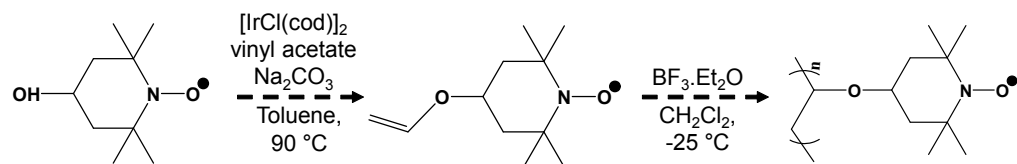


Figure S1. Schematic diagram for the preparation of PTVE.

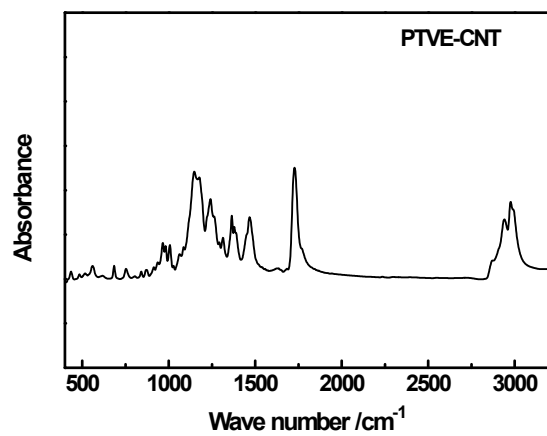


Figure S2. FT-IR spectrum of the PTVE-functionalized CNT.

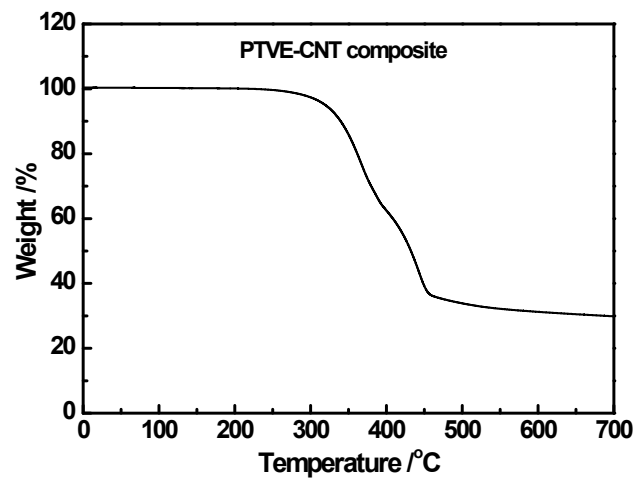


Figure S3. TGA curve of the PTVE-functionalized CNT.

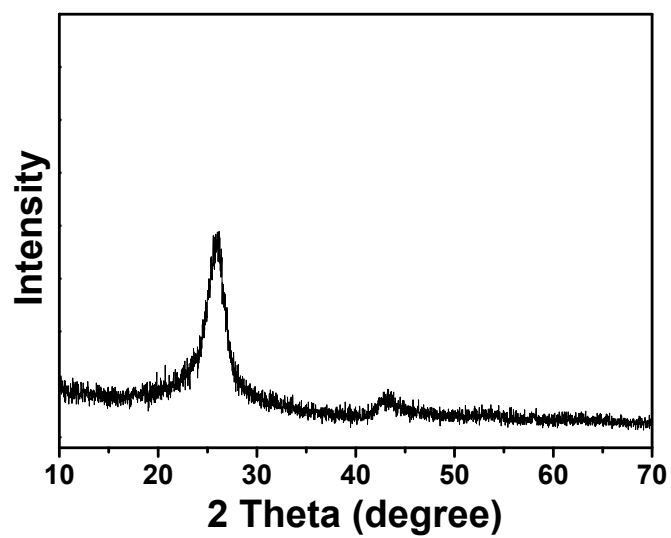


Figure S4. XRD pattern of PTVE-functionalized CNT.

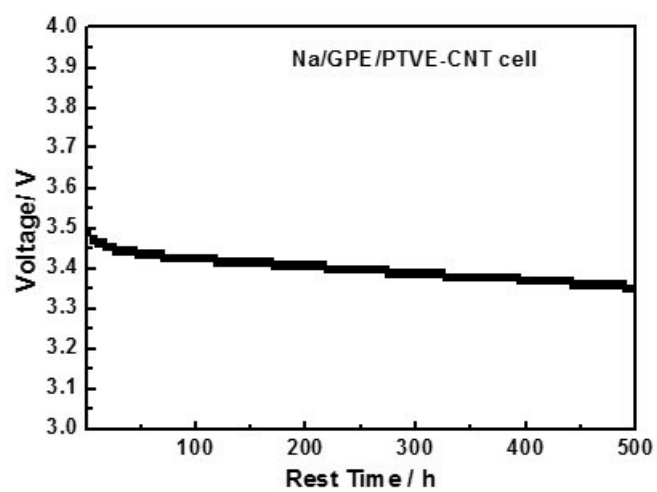


Figure S5. Open circuit voltage (OCV) of a PTVE-CNT composite based sodium batteries during 500h.

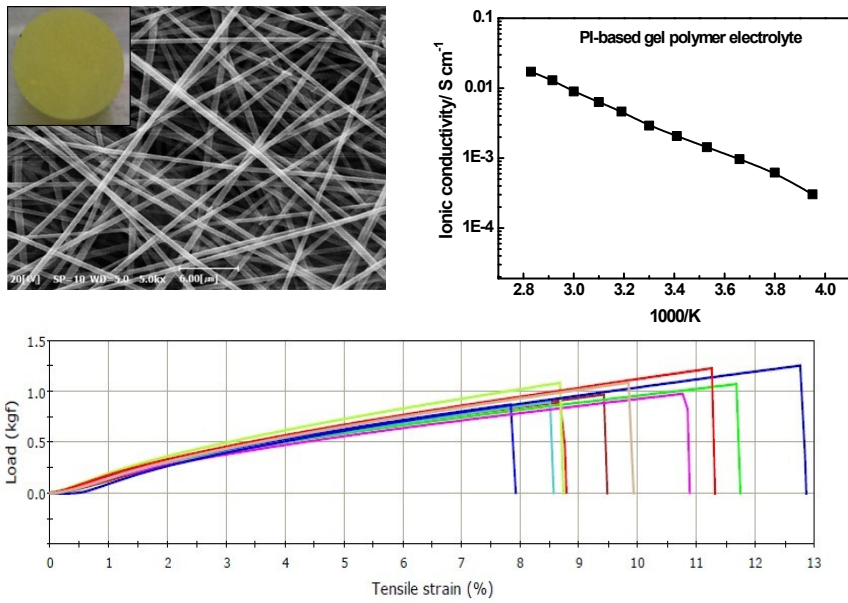


Figure S6. SEM and photo image of electrospun PI membrane, ionic conductivity and tensile strength of PI-based gel polymer electrolyte.

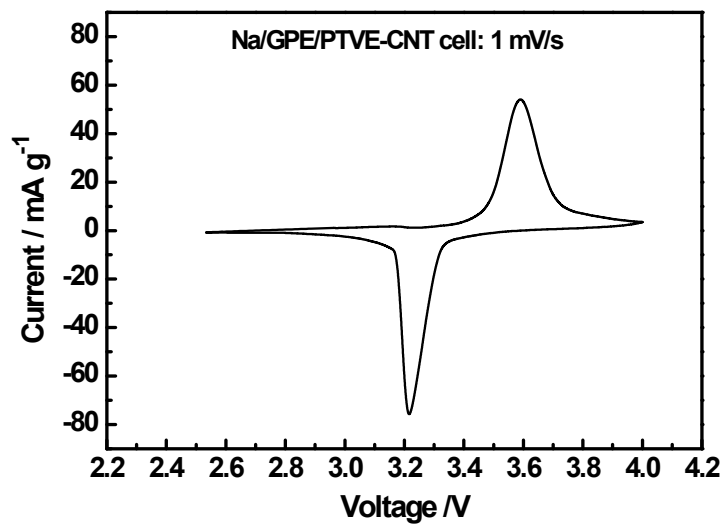


Figure S7. Cyclic voltammograms (CV) of PTVE-CNT sodium cell at a scan rate of 1 mV s⁻¹.

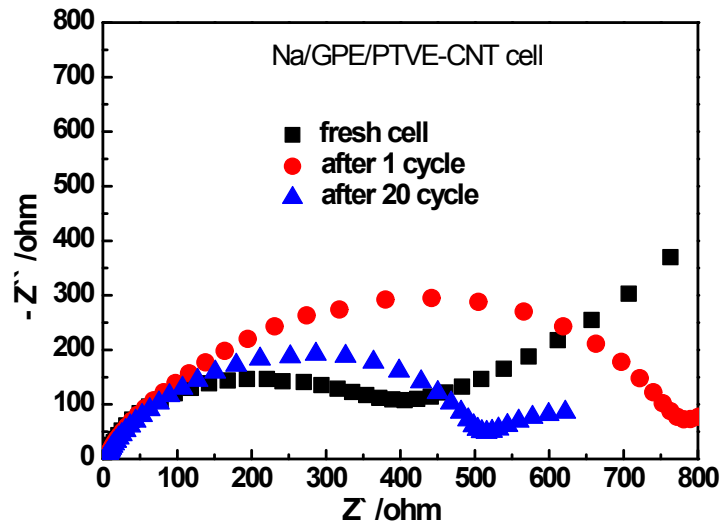


Figure S8. Impedance spectra of PTVE-CNT sodium cell according to cycling.



Figure S9. Photo image of the assembled organic sodium full-cell.

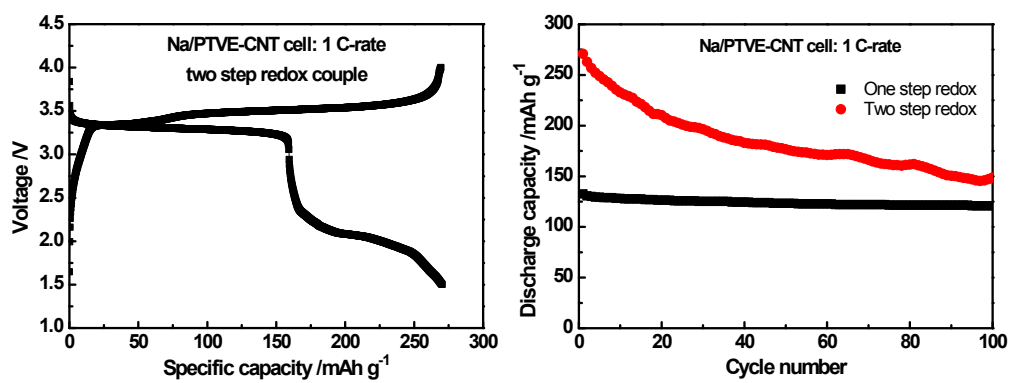


Figure S10. Charge-discharge curves and cycle performance of the PTVE-functionalized CNT electrode on sodium battery at room temperature.