Supporting Information

A 3.0 V High Energy Density Symmetric Sodium-Ion Battery: $Na_4V_2(PO_4)_3||Na_3V_2(PO_4)_3$

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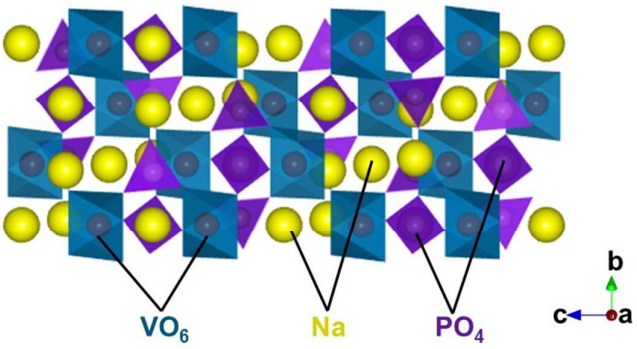

Figure S1. Crystal structure of $Na_3V_2(PO_4)_3$ (NVP).

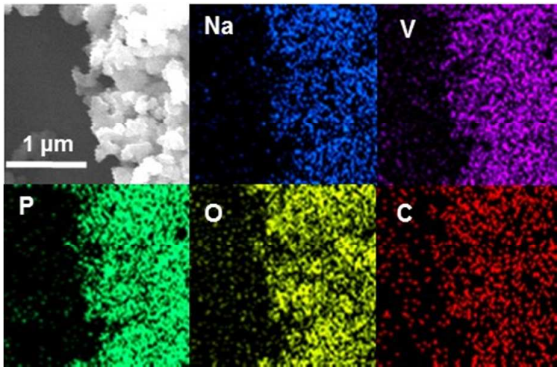

Figure S2. Energy dispersive spectrometry elemental mapping of NVP/C.

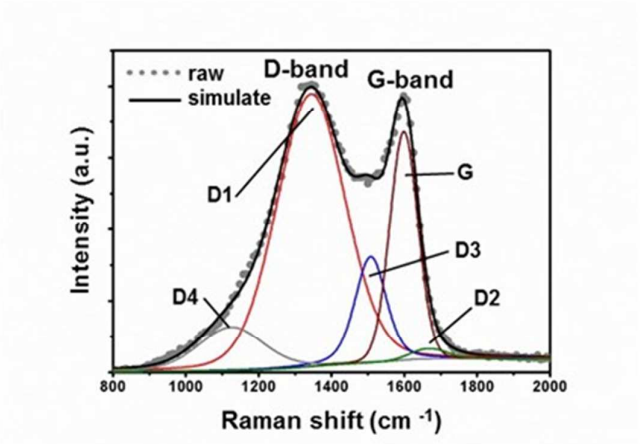

Figure S3. Raman spectrum of NVP/C.

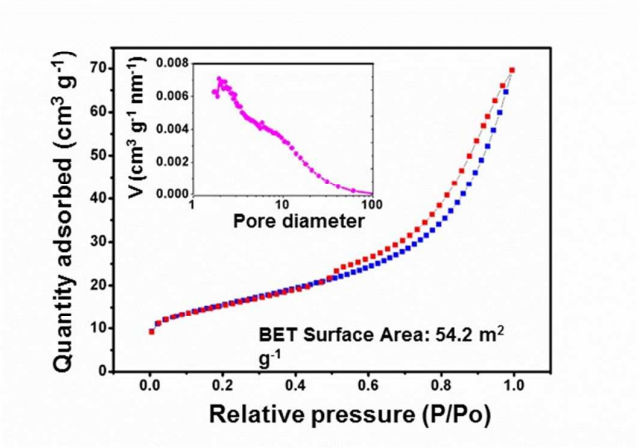

Figure S4. Nitrogen adsorption-desorption isotherms (inset is the corresponding pore size distribution) of NVP/C.

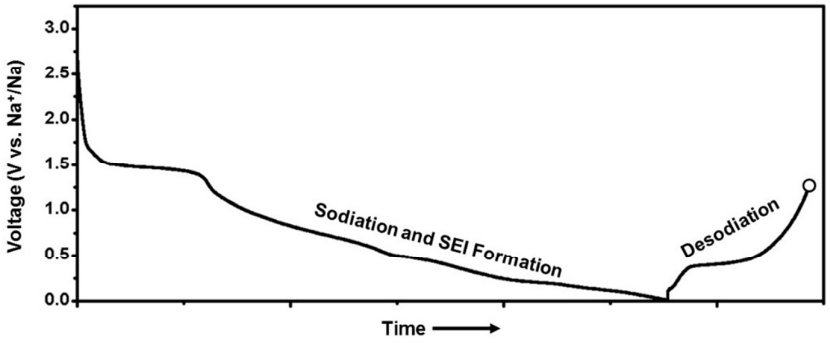

Figure S5. The anode materials obtained via discharge-charge process with coins cell.

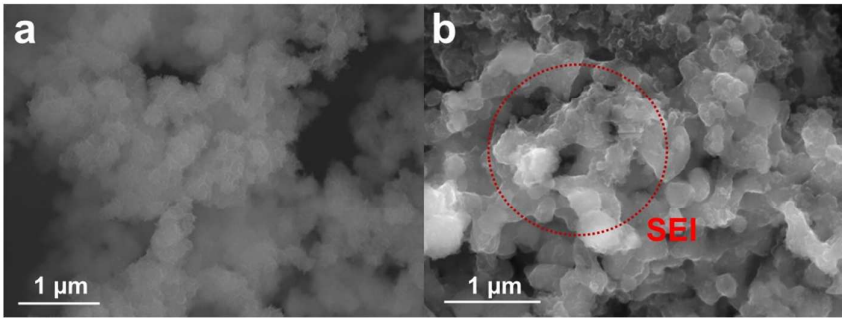

Figure S6. The morphological of (a) the NVP/C materials and (b) the anode material with pre-intercalation.

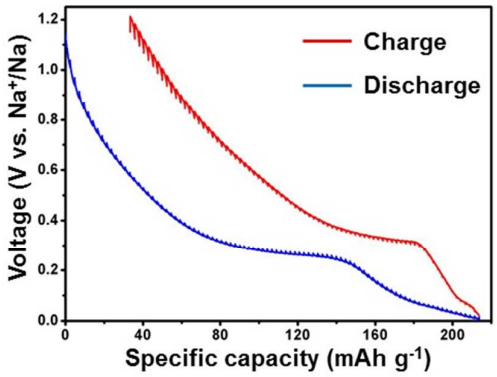

Figure S7. The GITT curves of $Na_4V_2(PO_4)_3$ in the third cycle.

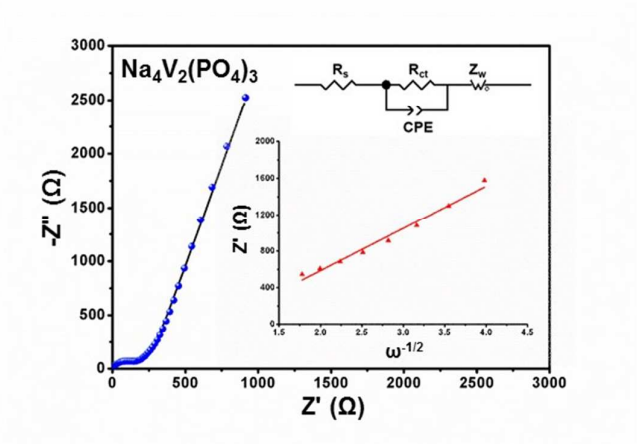

Figure S8. EIS results of $Na_4V_2(PO_4)_3$ electrode, inset is the calculation of Warburg factor.

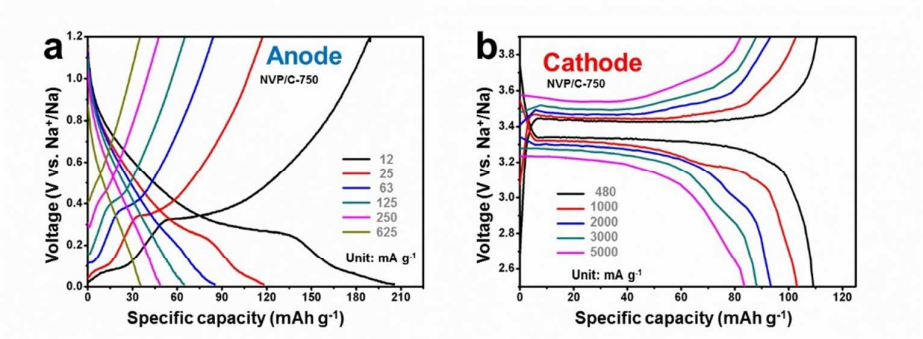

Figure S9. Typical voltage profiles of NVP/C as (a) cathode and (b) anode in different current densities.

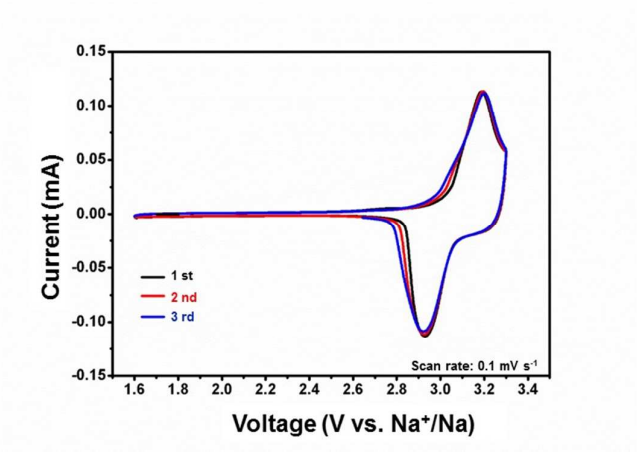

Figure S10. CV curves of the full cell in the initial three cycles.

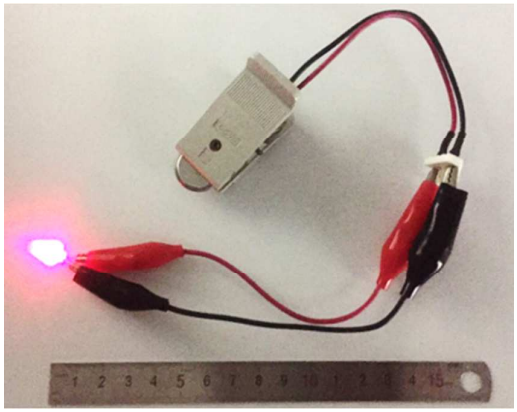

Figure S11. The lighted LED bulb driven by the full cell.

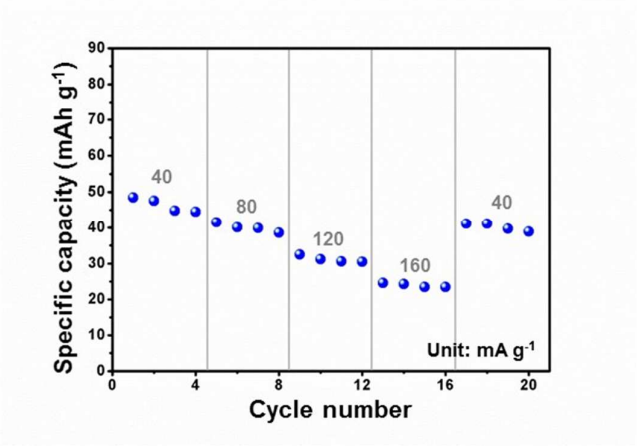

Figure S12. Rate performance of the symmetric full cell.