Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Energy Efficient Bi-Functional Electrode for Continuous Cation-Selective Capacitive Deionization

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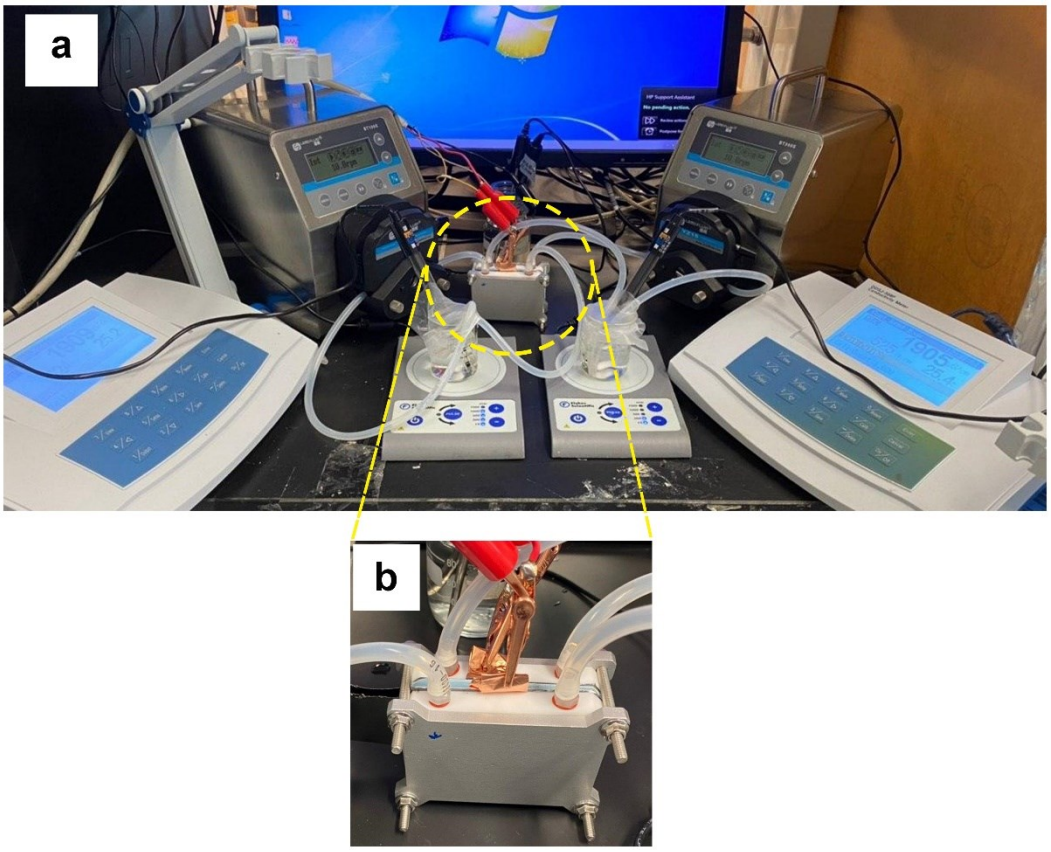

Figure S1, a) The photograph of full cation-selective CDI set-up. b) the desalination cell.

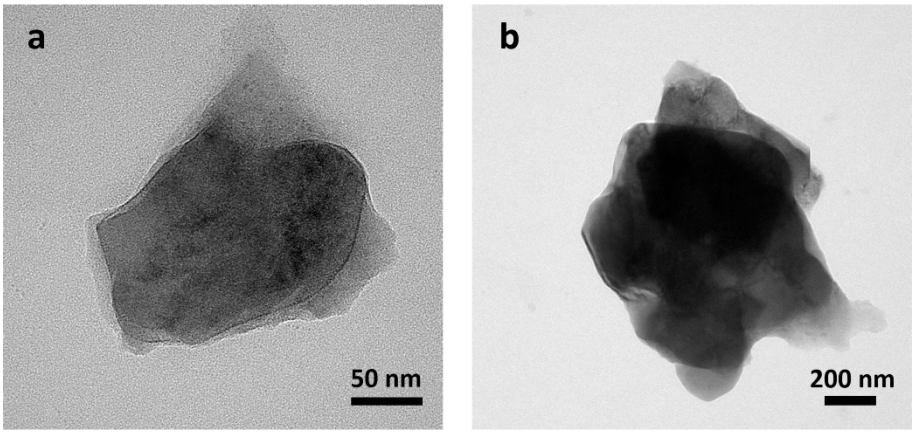

Figure S2, (a) and (b) the TEM images $Na_2VTi(PO_4)_3$ @ C revealing the average size of particles coated with the amorphous carbon layer.

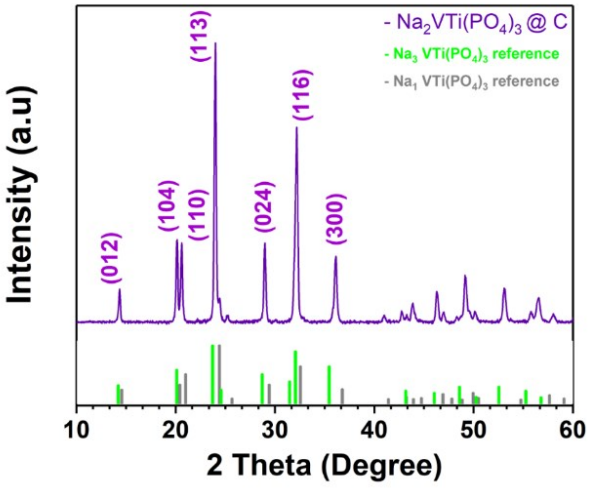

Figure S3, The X-ray diffraction patterns for $Na_2VTi(PO_4)_3$ @ C, and two reference patterns of $NaVTi(PO_4)_3$ (PDF#00-049-1114) and $Na_3VTi(PO_4)_3$ (PDF#00-049- 1109).

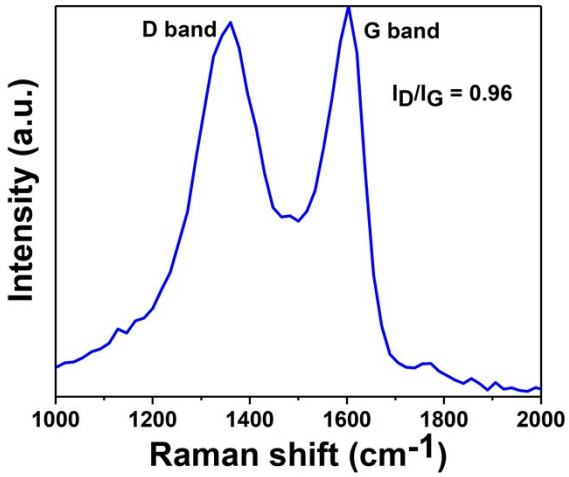

Figure S4, Raman spectrum for $Na_2VTi(PO_4)_3$ @ carbon.

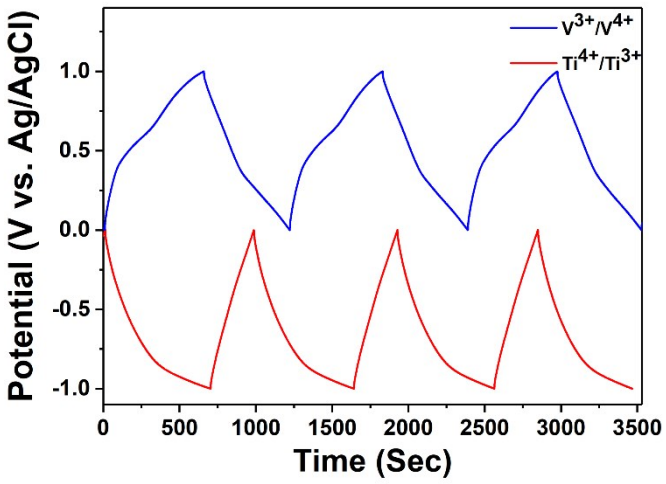

Figure S5, The Galvanostatic Charge Discharge (GCD) results for cathode and anode voltage window at the current density of 0.2 A g^{-1}.

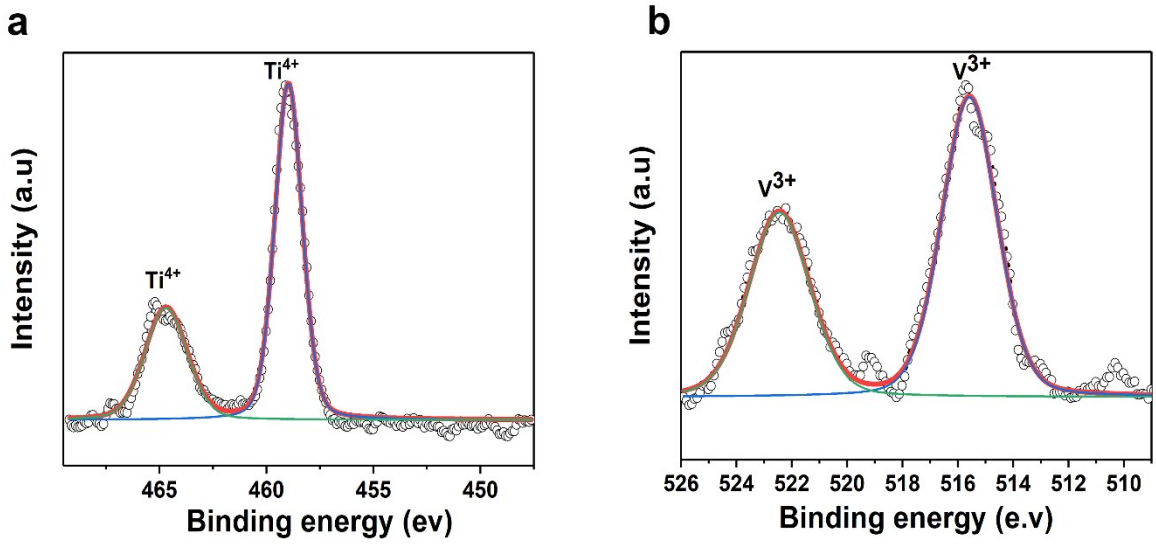

Figure S6, , XPS spectra of a) Titanium element in cathode after charging to 1 V (vs. Ag/AgCl). b) Vanadium element in anode after charging to -1 V (vs. Ag/AgCl).

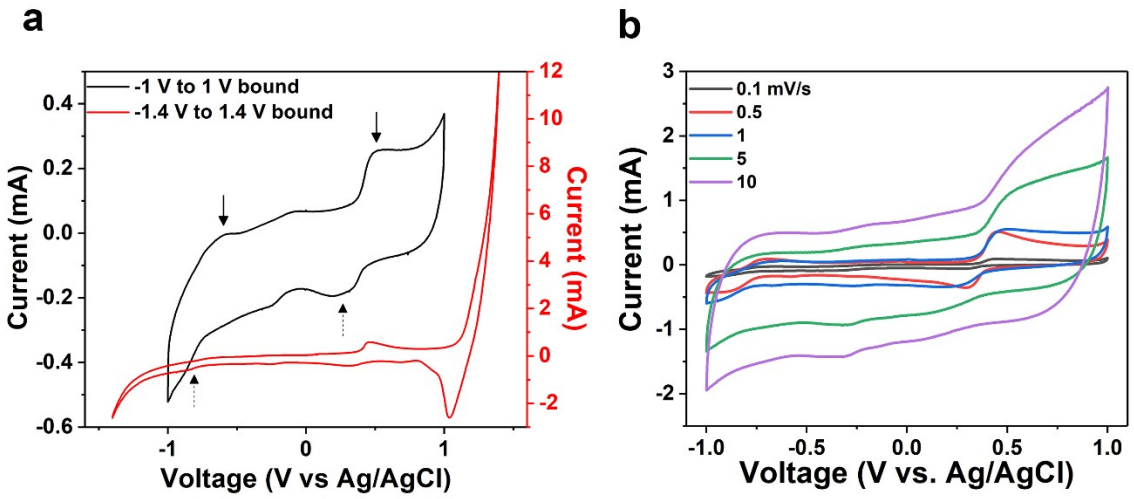

Figure S7, The CV experiment for two voltage window range of -1 V to 1 V and -1.4 V to 1.4 V.