

Supporting Information

High-performance Zn-ion batteries constructed by in situ conversion of surface-oxidized vanadium nitride into $\text{Zn}_3(\text{OH})_2\text{V}_2\text{O}_7 \cdot 2\text{H}_2\text{O}$ with oxygen defects

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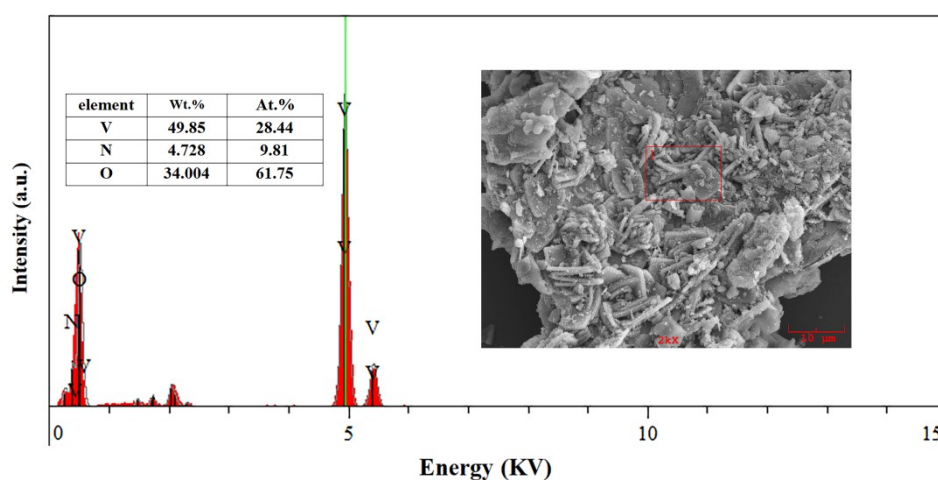


Fig. S1 EDS spectroscopy of O-VN.

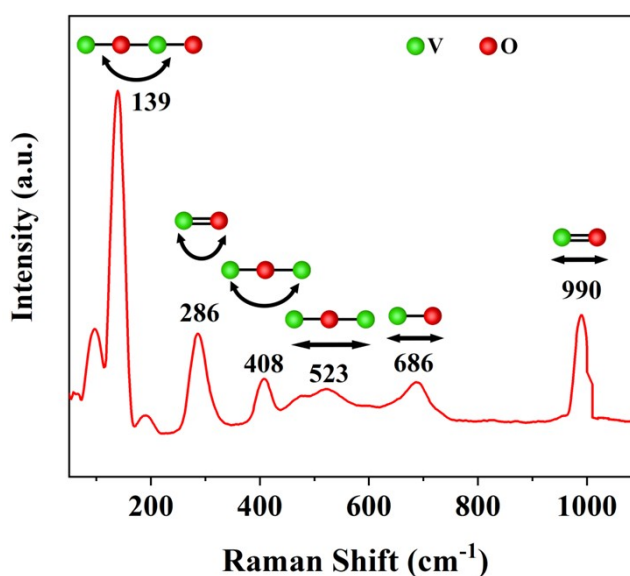


Fig. S2 Raman spectrum of the O-VN nanoparticles.

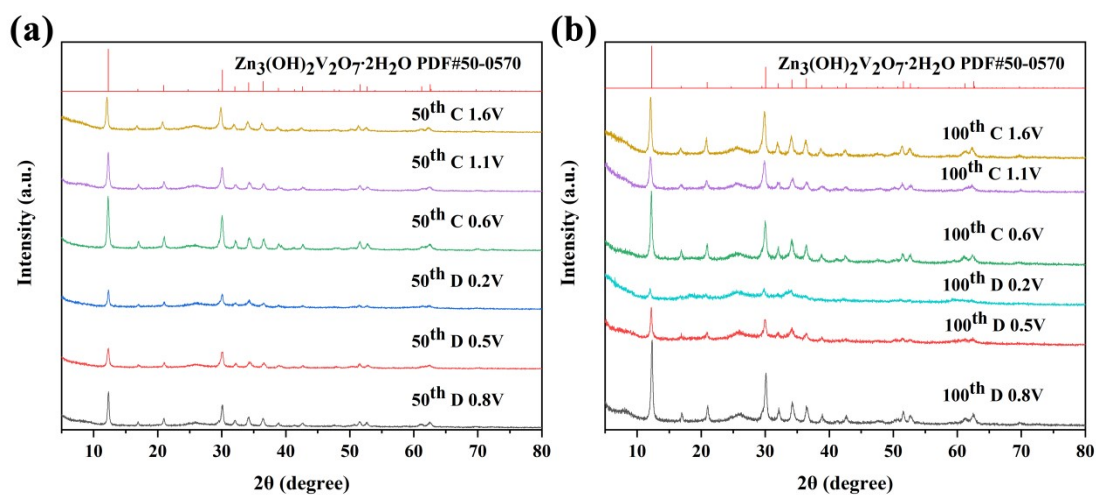


Fig. S3 The XRD patterns of the O-VN electrode at various states in the (a) 50th and (b) 100th cycles.

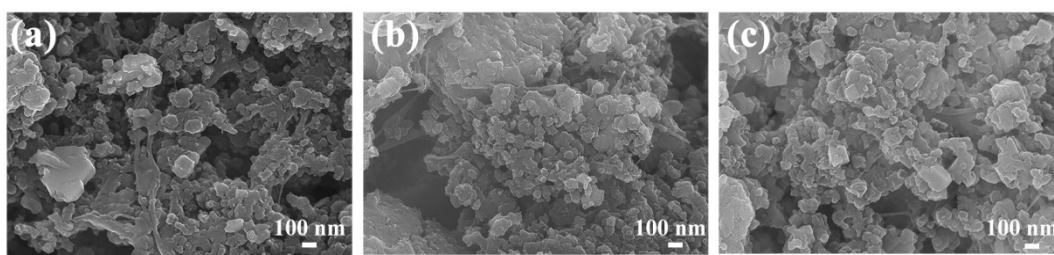


Fig. S4 The SEM images of O-VN after (a) 1st, (b) 2nd, (c) 100th cycles.

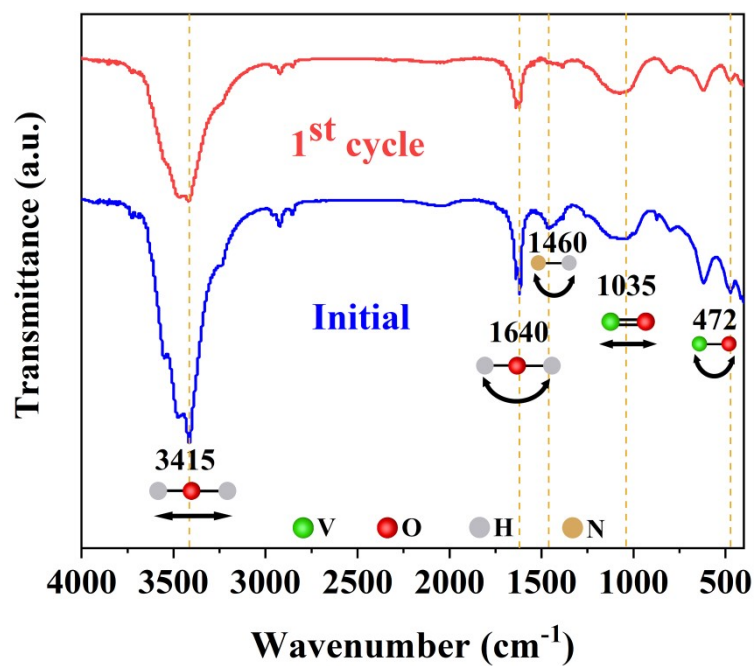


Fig. S5 The IR spectra of the O-VN electrode material before cycling and after

different cycles.

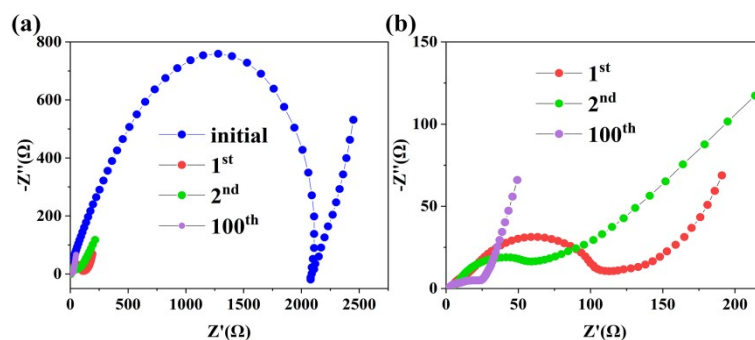


Fig. S6 Nyquist plots of the O-VN electrode material before cycling and after different cycles.

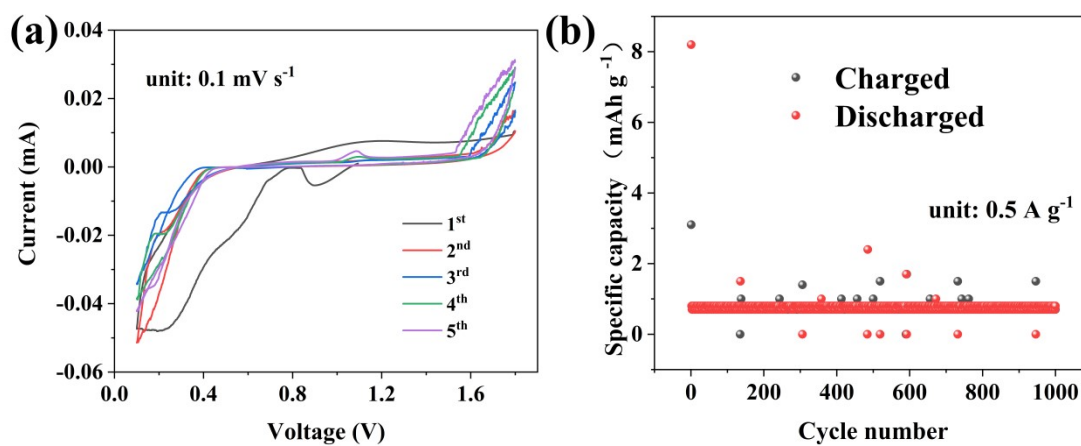


Fig. S7 CV curves (a) and cycle performance curve (b) of O-VN electrode material at a current density of 0.1 A g^{-1} using $0.5\text{M Zn}(\text{CF}_3\text{SO}_3)_2$ solution as electrolyte prepared with isopropanol as solvent.