Supplementary Material

Boosting Zn-Ion Energy Storage Capability of Graphene Sandwiched Nanoporous VO_x Derived From MXene

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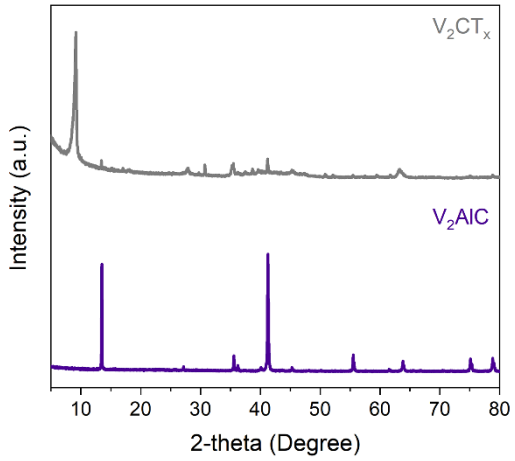

Fig. S1. XRD patterns of V_2AlC and V_2CT_x.

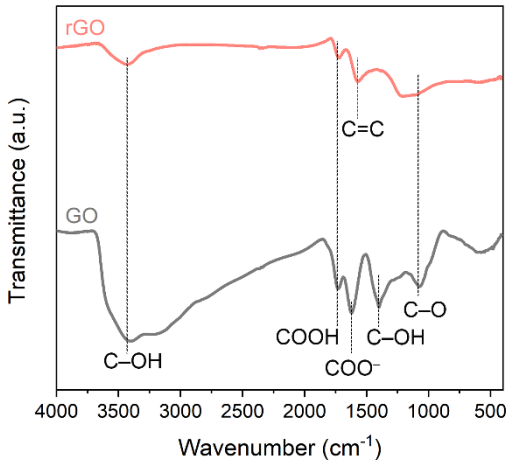

Fig. S2. FT-IR spectra of GO and rGO.

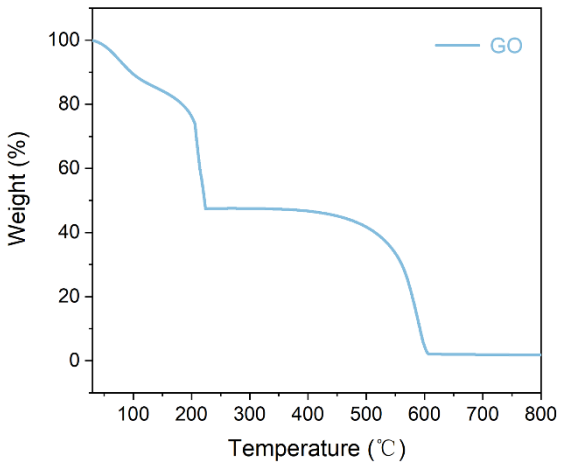

Fig. S3. TGA plot of GO annealing in air.

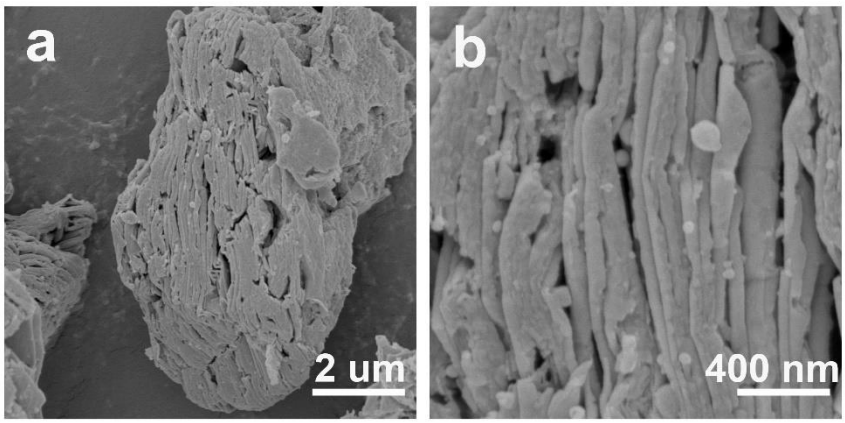

Fig. S4. SEM of V_2CT_x.

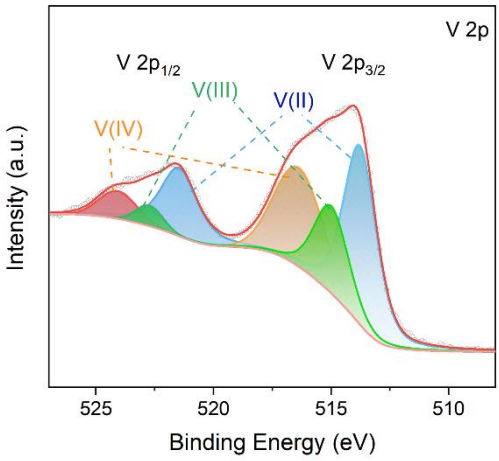

Fig. S5. V 2p XPS spectra of V_2CT_x.

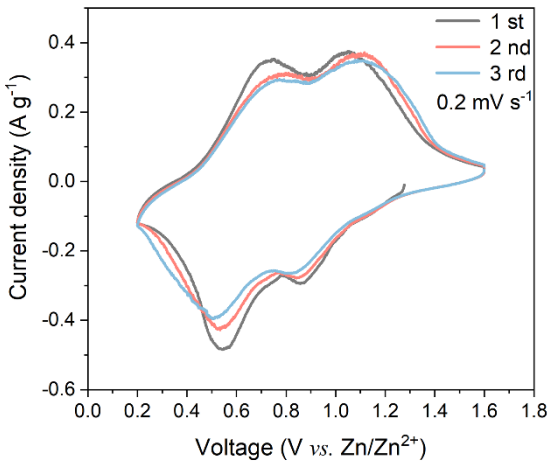

Fig.S6. CV curves for the first three cycles of VO_x.

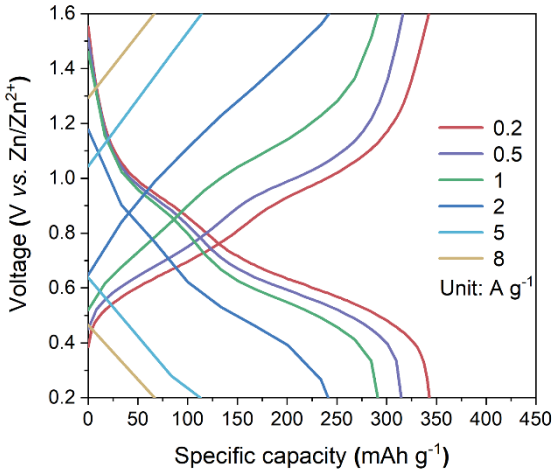

Fig. S7. Charge and discharge curves at the current density from 0.2 to 8.0 A g^{-1}.

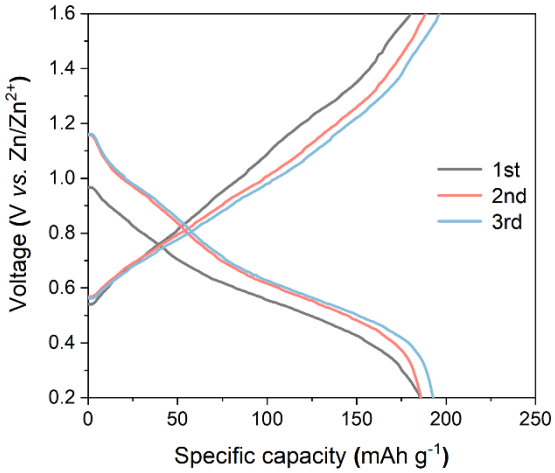

Fig. S8. The GCD curves of the first three cycles at 0.5 A g^{-1}.

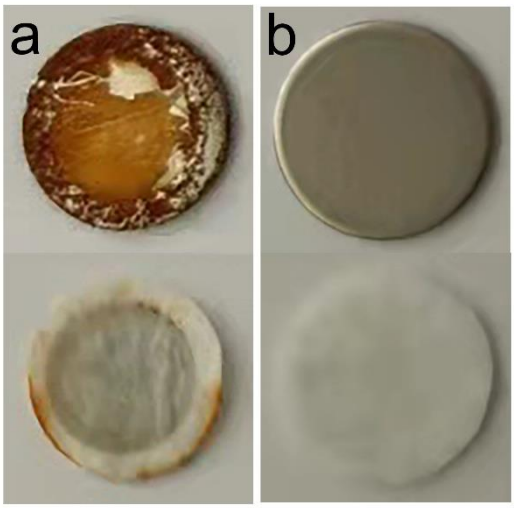

Figure S9. Photographs showing separators disassembled after 200 cycles of (a) VO_x and (b) rGO-VO_x cells.

Table S1. ICP-MS result of dissolved V in the electrolyte after 200 cycles.

Sample	VO_x	rGO-VO_x
Dissolved V (mg L^{-1}) after 200th	4.417	0.0183

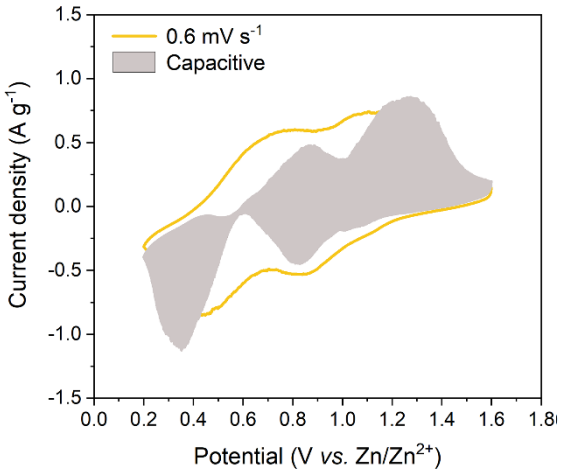

Fig. S10. CV curve displaying the capacitive contribution (gray region) to the total current at 0.6 mV s^{-1}.

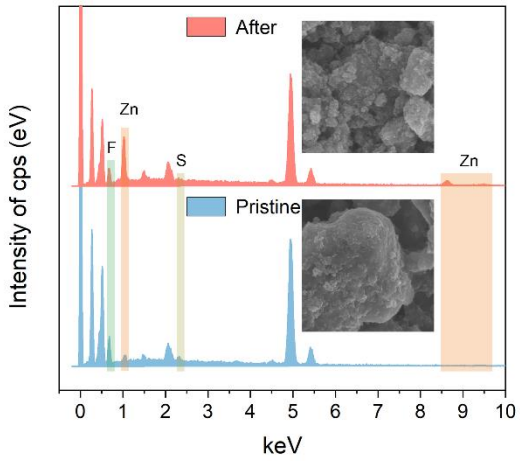

Fig. S11. SEM images (inset) and corresponding EDX of rGO-VO_x composite electrode before and after long cycling.

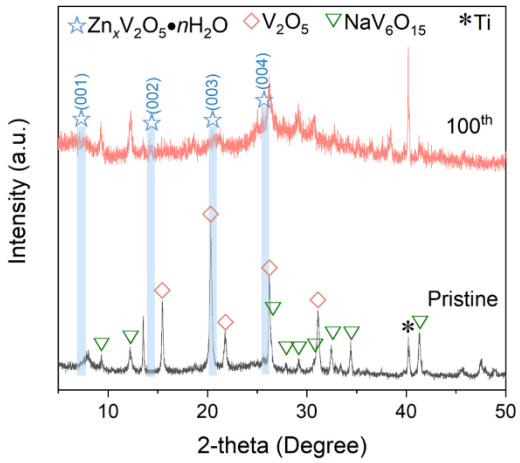

Fig. S12. XRD of rGO-VO_x composite electrode before and after long cycling.

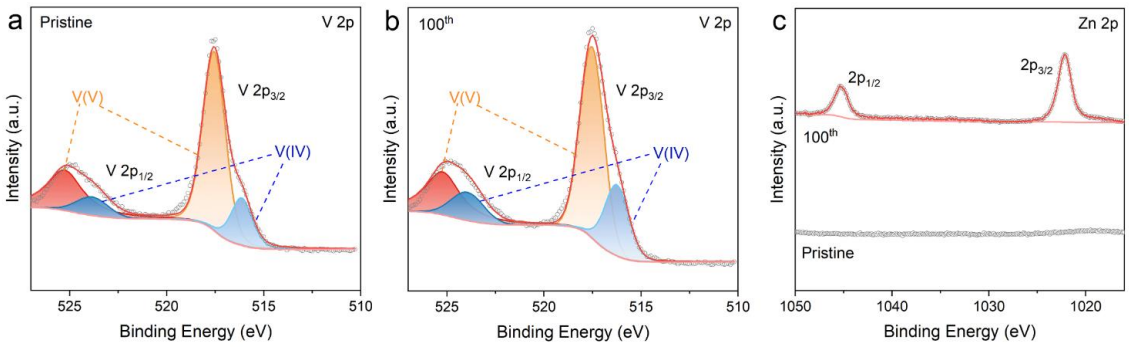

Fig. S13. XPS of rGO-VO_x composite electrode before and after long cycling.