

Electronic supplementary information

**Dual conducting network corbelled hydrated
vanadium pentoxide cathode for high-rate aqueous
zinc-ion batteries**

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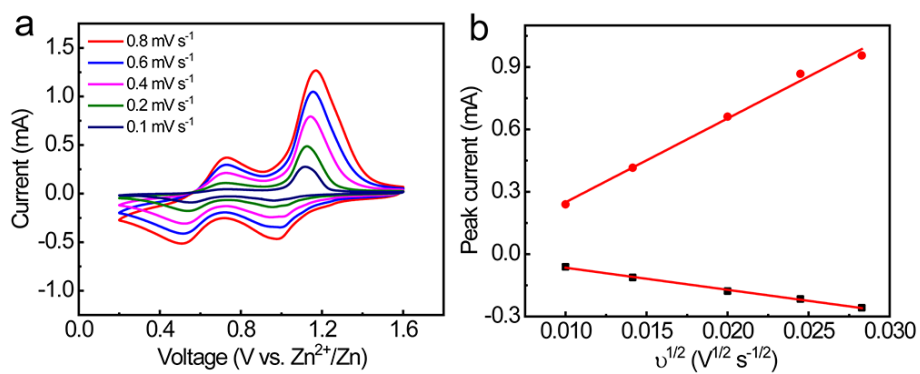


Fig. S1 (a) Cyclic voltammograms of V₂O₅@CC at different scan rates and (b) corresponding relationship of peak current versus square root of scan rate.

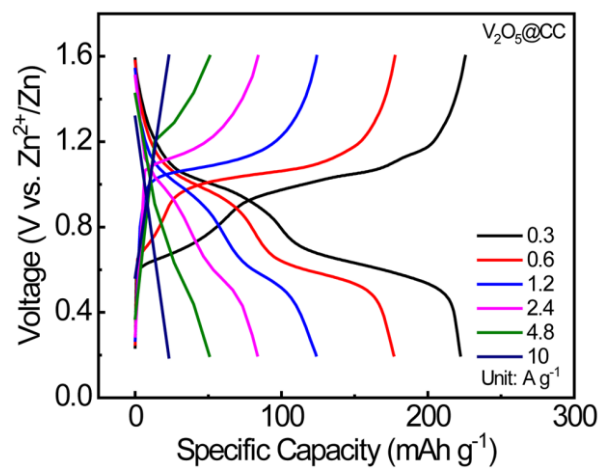


Fig. S2 (a) The charge/discharge profiles at 0.3, 0.6, 1.2, 2.4, 4.8, 10 A g⁻¹ for V₂O₅@CC/Zn cell.

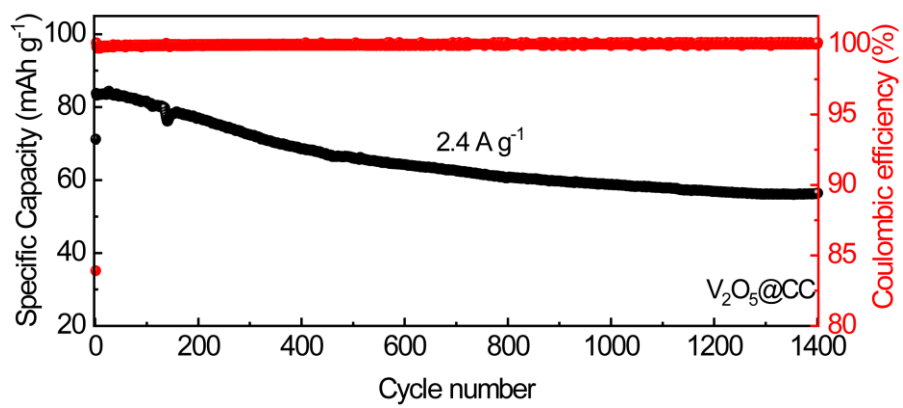


Fig. S3 Long-term cycling performance for $V_2O_5@CC/Zn$ cell.

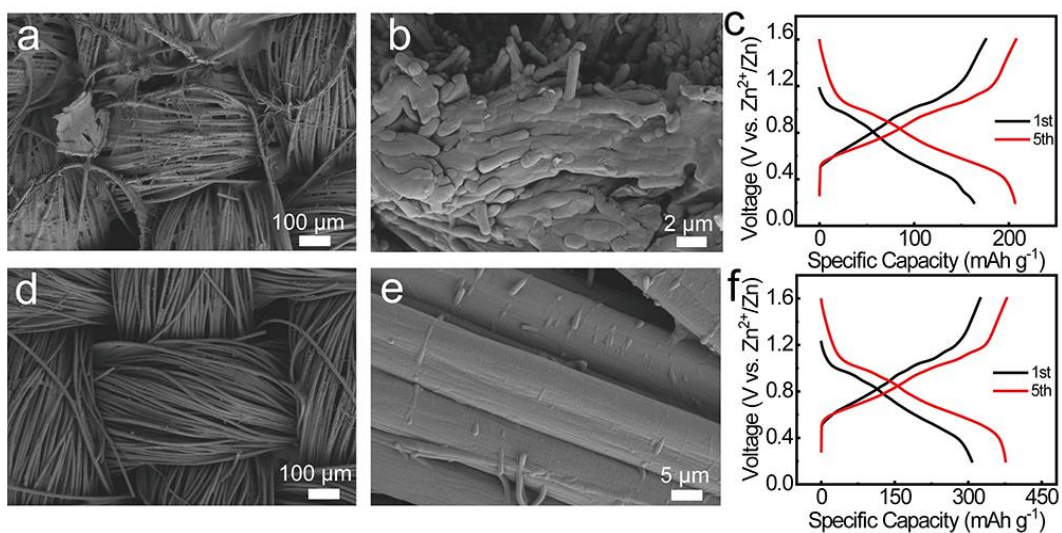


Fig. S4 SEM images of PPy@V₂O₅@CC cathode with different amount of V₂O₅ loading by controlling the amount of V₂O₅ precursor (a, b: 0.9 g) and (d, e: 0.72 g), and corresponding (c: 0.9 g: and f: 0.72 g) electrochemical performance curves for PPy@V₂O₅@CC cathode at 0.3 A g⁻¹.

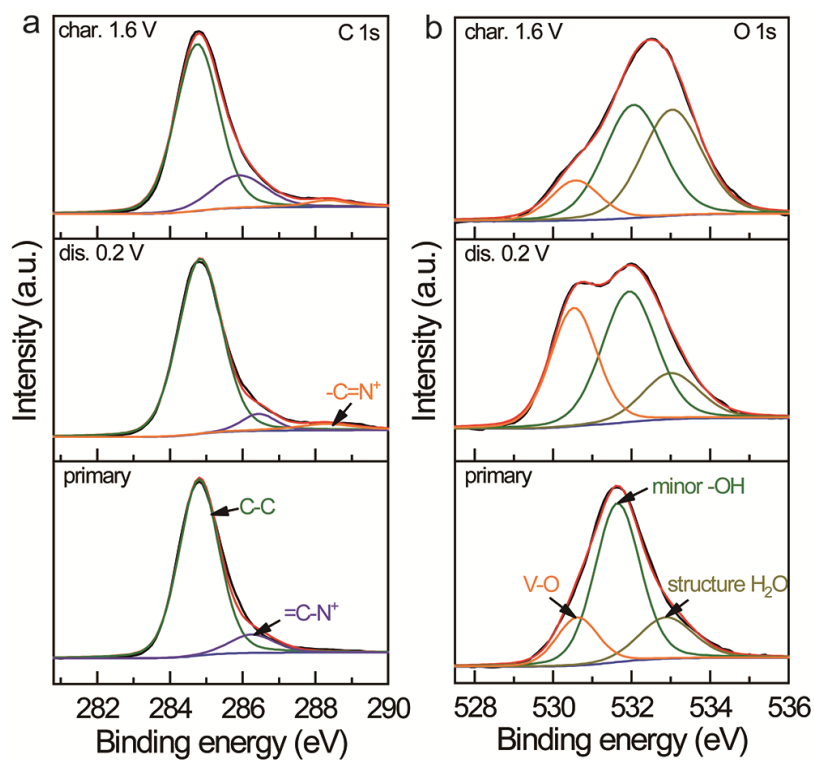


Fig. S5 XPS plots of C 1s (a) and O 1s (b) for PPy@V₂O₅@CC cathode at primary state, fully discharging state (0.2 V) and full charging state (1.6 V).