Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting Information

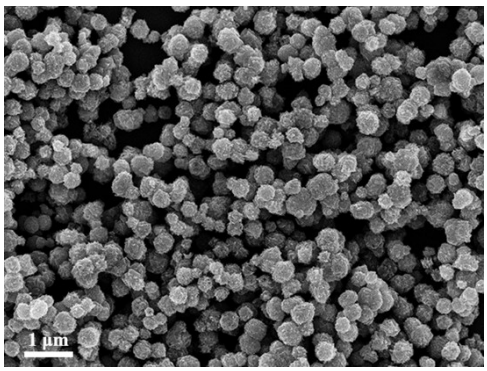

Fig. S1 SEM image of the V_2O_5 cathode.

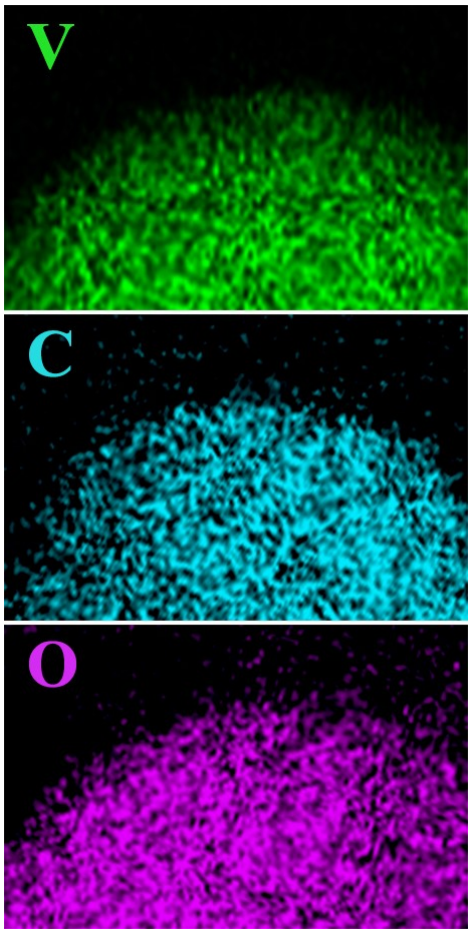

Fig. S2.The element mapping images of V_2O_5-TEMPO.

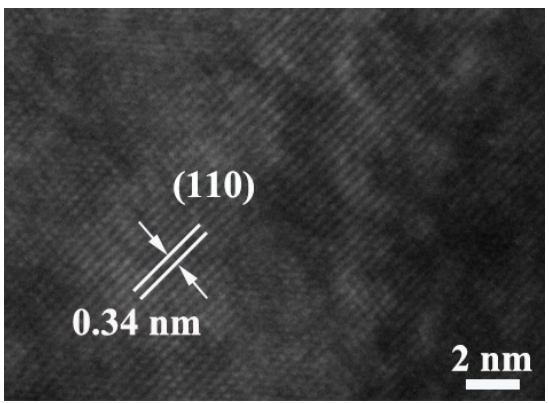

Fig. S3 HRTEM images of the V_2O_5 cathode.

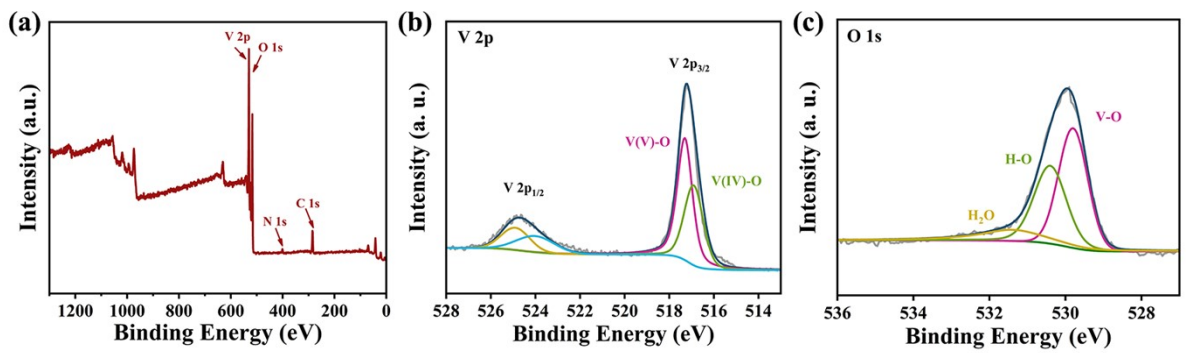

Fig. S4 (a) XPS full spectrum of V_2O_5-TEMPO electrode. The high-resolution signal fit spectrum of (b) V 2p and (c) O 1s in V_2O_5-TEMPO.

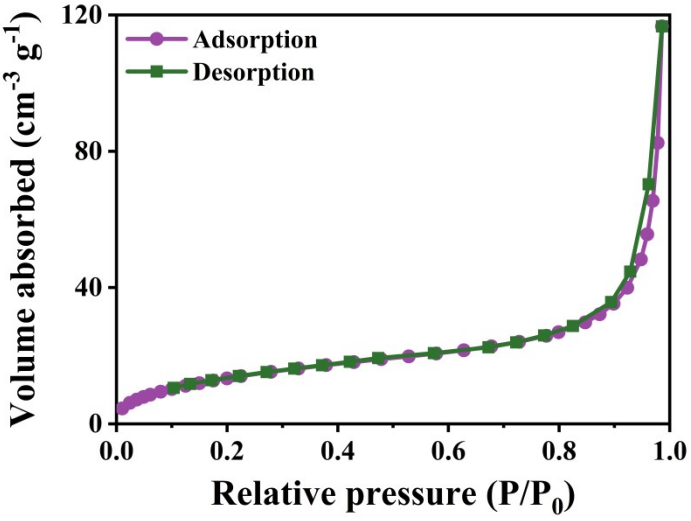

Fig. S5 N_2 adsorption/desorption isotherms of V_2O_5 cathode.

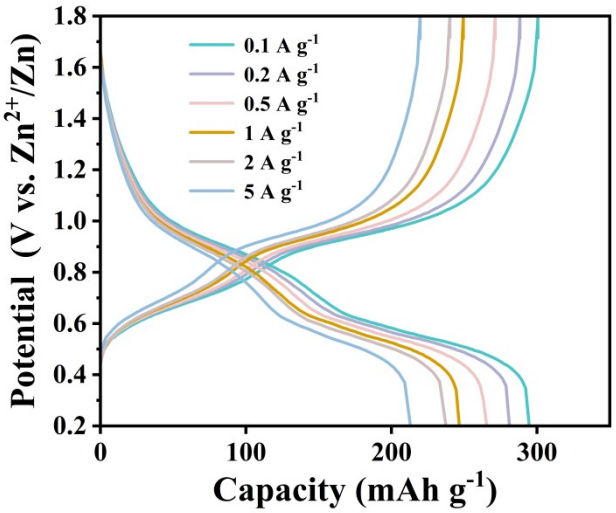

Fig. S6 GCD curves of Zn//V_2O_5 battery at different current densities.

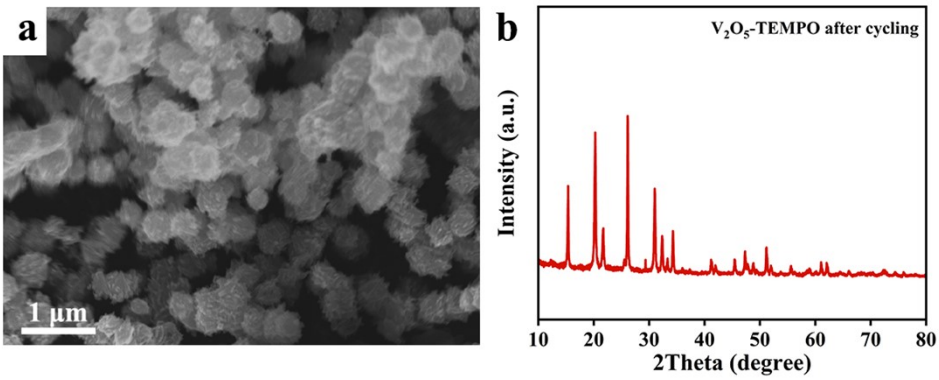

Fig. S7 (a) SEM image and (b) XRD pattern of V_2O_5-TEMPO after 5,500 charging/discharging cycles at 2 A g^{-1}.

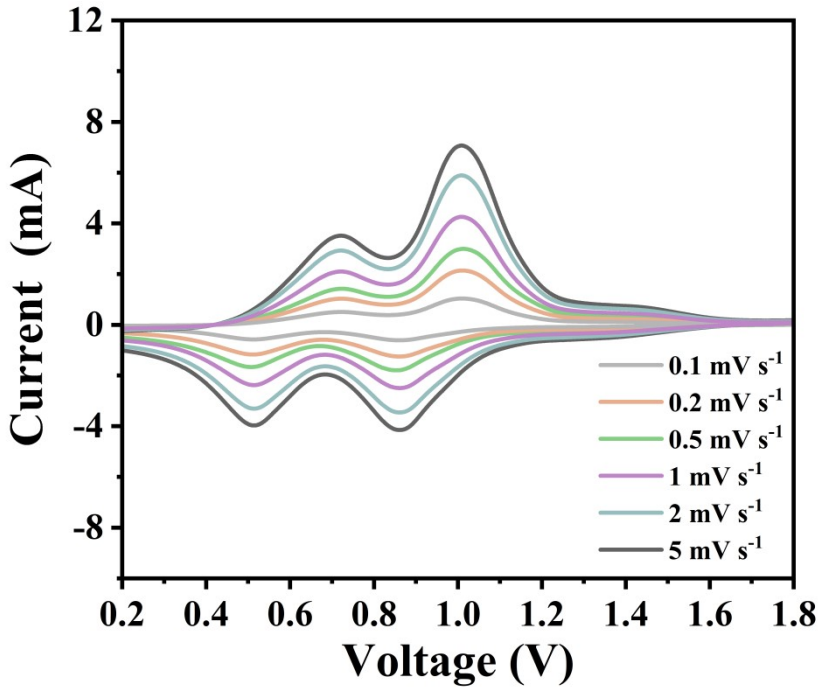

Fig. S8 CV curves of the Zn//V_2O_5 battery at various scan rates from 0.1 to 5 mV s^{-1}.

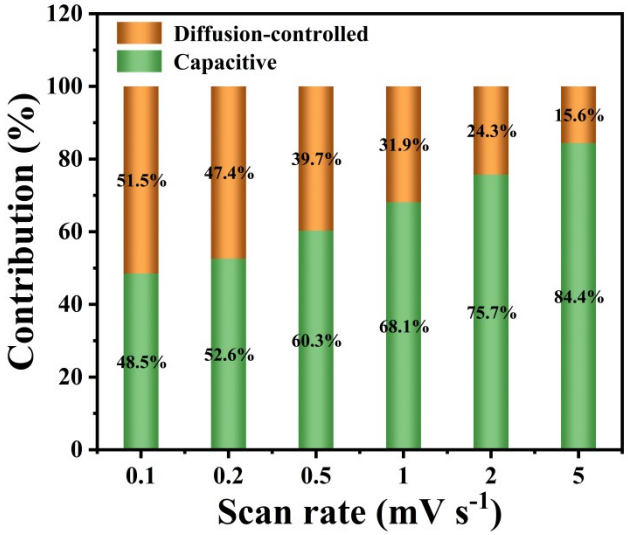

Fig. S9 Contribution ratios of capacictive-controlled and diffusion-controlled for Zn//V_2O_5 battery at different scan rates.

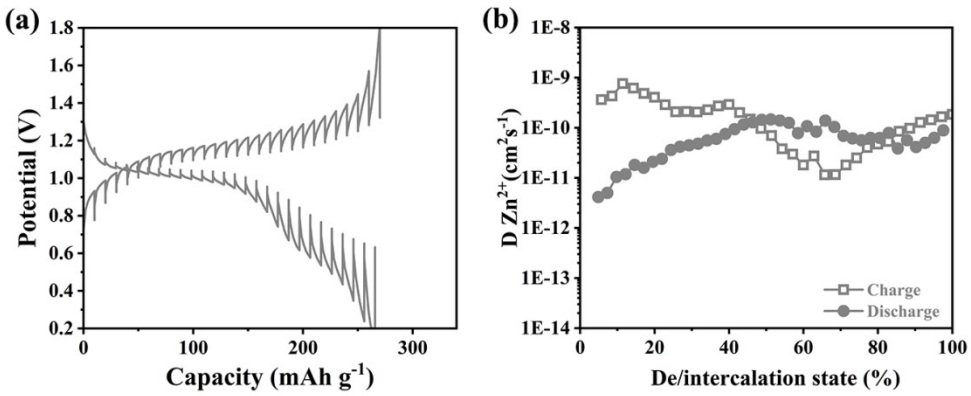

Fig. S10 (a) The charge/discharge GITT curves of the Zn//V_2O_5 battery at the current density of 0.5 A g^{-1}. (b) The Zn^{2+} coefficient.