Supporting Information

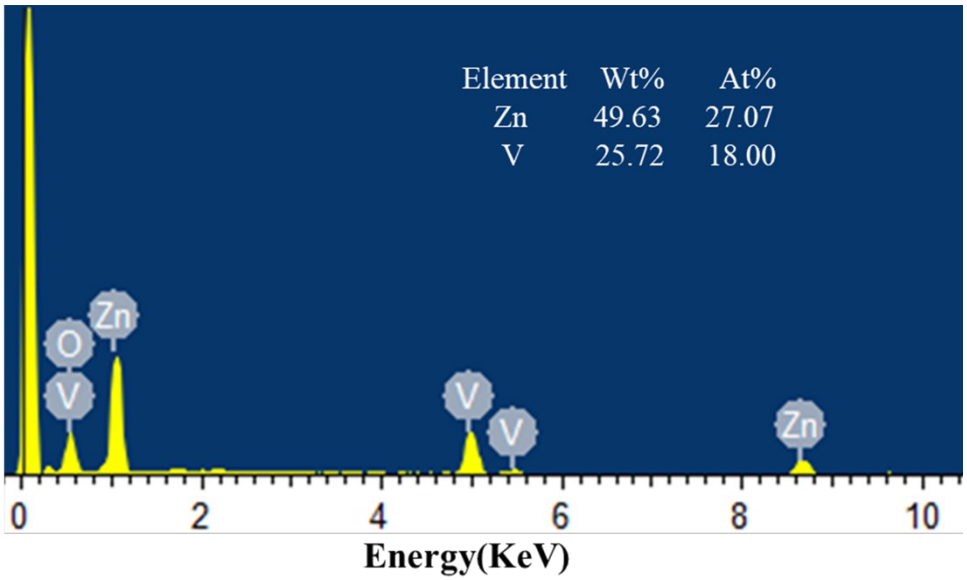

Fig S1. EDS anslysis of 2D $Zn_3(VO_4)_2$ porous networks

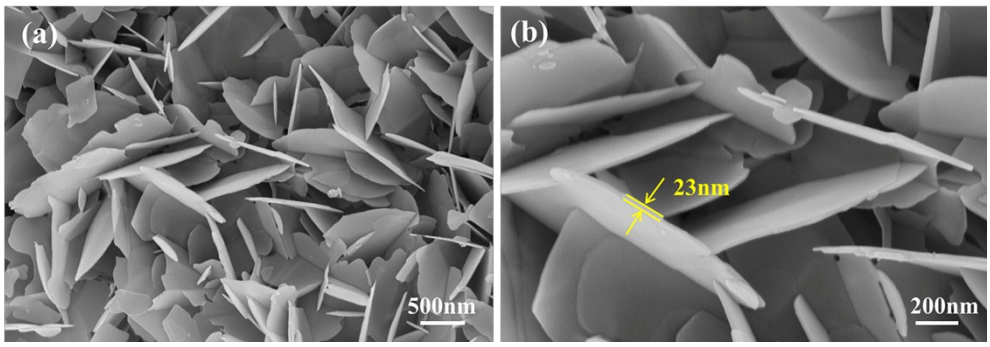

Fig S2. SEM images of $Zn_3V_2O_7(OH)_2{\cdot}2H_2O$ precursor.

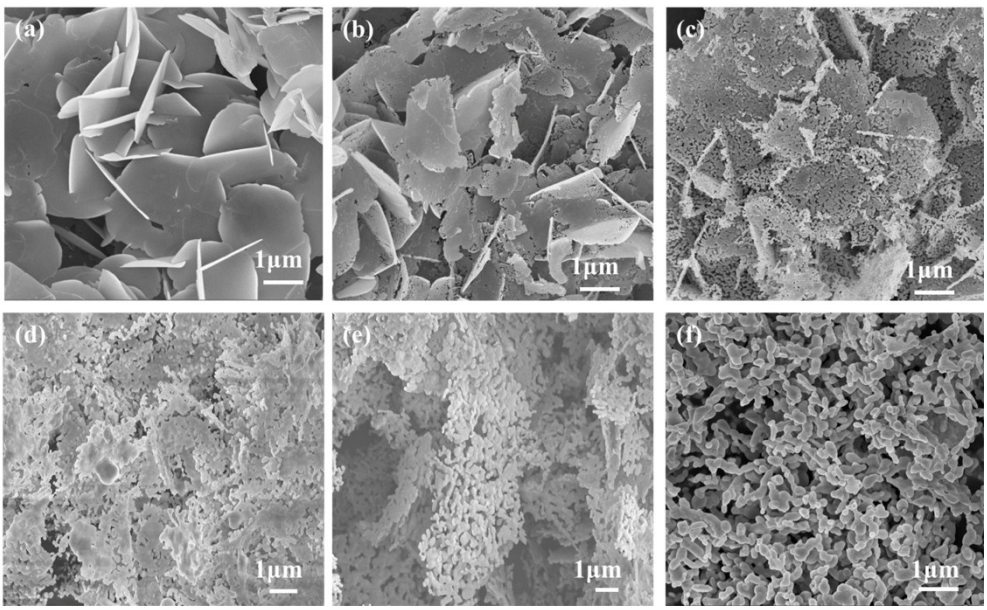

Fig S3. SEM pictures of the $Zn_3(VO_4)_2$ samples calcined at different temperatures: (a) 200 °C, (b) 300 °C, (c) 450 °C, (d) 500 °C, (e) 550 °C and (f) 600 °C.

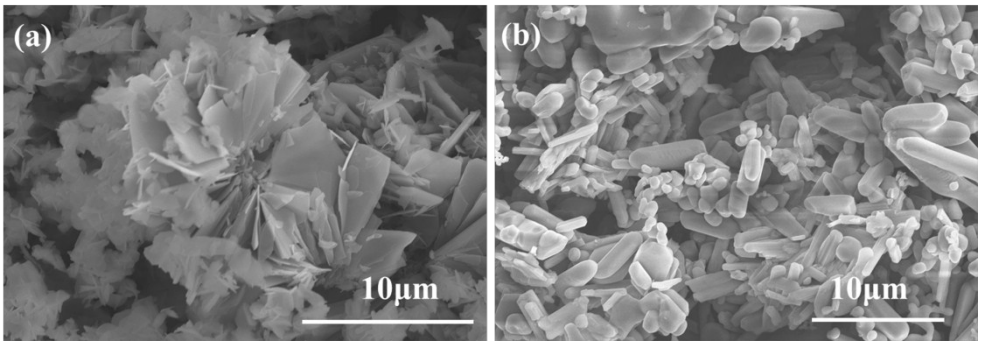

Fig S4. SEM pictures of the $Zn_3(VO_4)_2$ samples without ammonium hydroxide before (a) and after (b) calcinations.

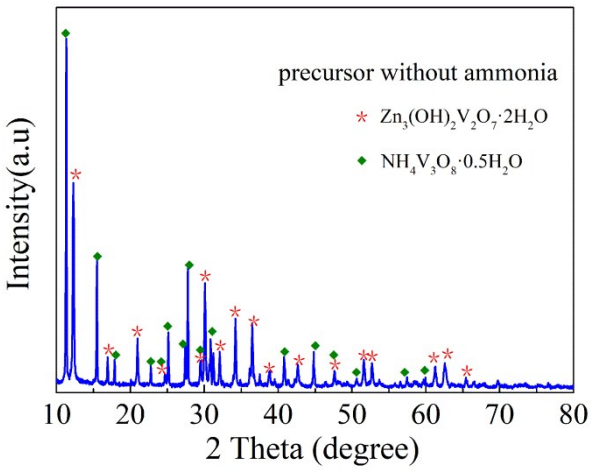

Fig S5. XRD pattern of the precursor without ammonium hydroxide.

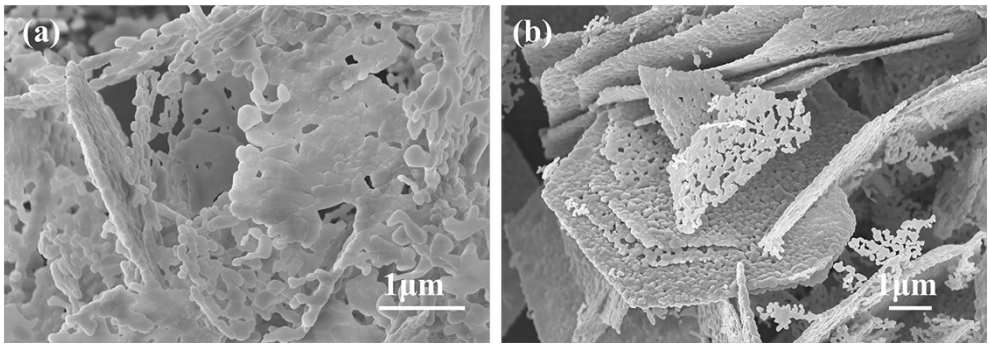

Fig S6. SEM pictures of the $Zn_3(VO_4)_2$ samples with different amount of ammonium hydroxide: (a)1.5 mL and (b) 2.5 mL.

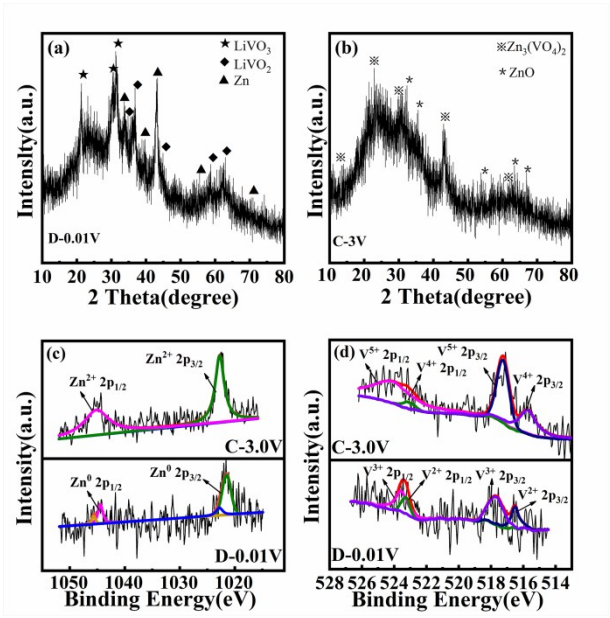

Fig S7. XRD patterns of $Zn_3(VO_4)_2$ electrode discharged to 0.01 V (a) and charged to 3.0 V (b) after 5 cycles. XPS profiles for (c) Zn 2p lines at 0.01 V (bottom, discharge) and at 3.0 V (top, charge) and (d) V 2p at 0.01 V (bottom, discharge) and at 3.0 V (top, charge) for $Zn_3(VO_4)_2$ electrode.

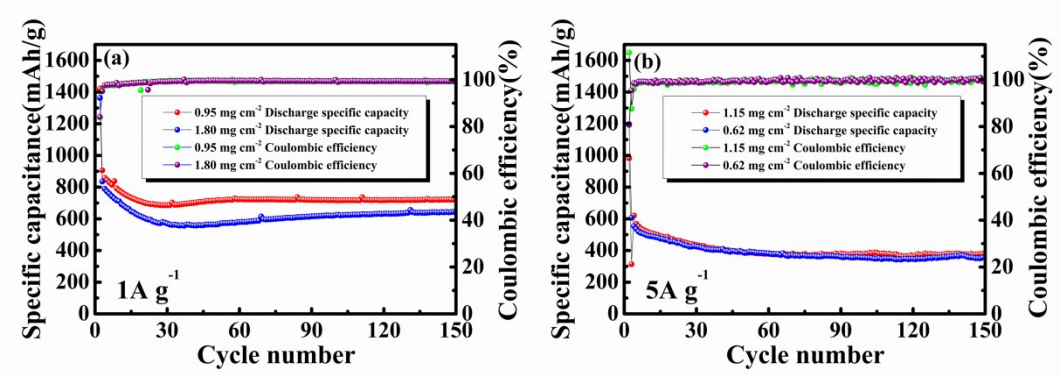

Fig S8. The cycling performance of the $Zn_3(VO_4)_2$ porous nanosheets with different loadings at the current density of 1.0 A g^{-1} (a) and 5.0 A g^{-1} (b).

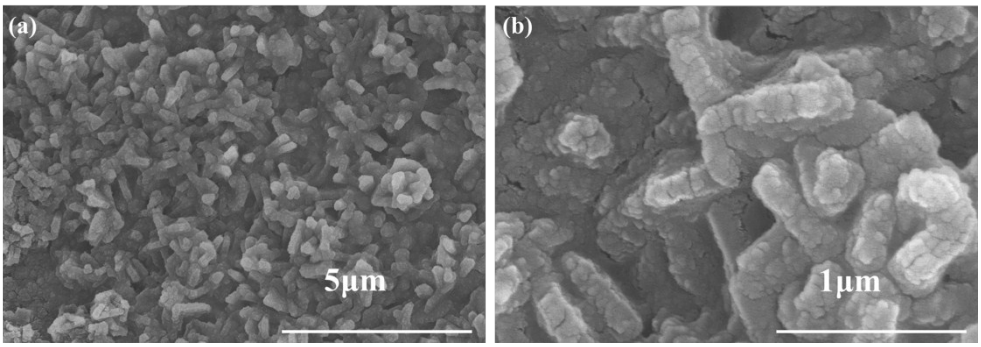

Fig S9. SEM images of $Zn_3(VO_4)_2$ anode material at the current density of 1.0 A g^{-1} after 500 cycles.

Table S1

Impedance parameters calculated from an equivalent circuit model.

Cycle number	$R_e(\Omega)$	$R_{SEI}(\Omega)$	$R_{ct}(\Omega)$
0	2.4	15.7	125.6
1	2.4	15.0	115.0
50	3.3	5.7	71.6
100	4.3	4.0	82.2