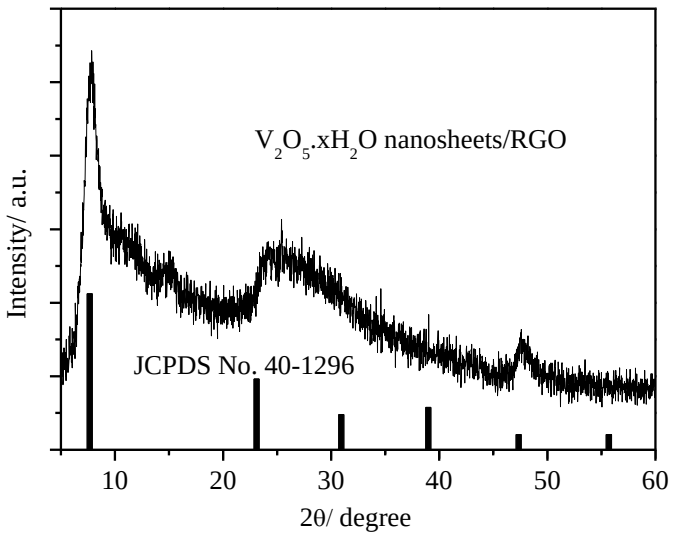

Fig. S1 XRD pattern of the as-prepared $V_2O_5.xH_2O$ nanosheets/RGO nanocomposite before annealing

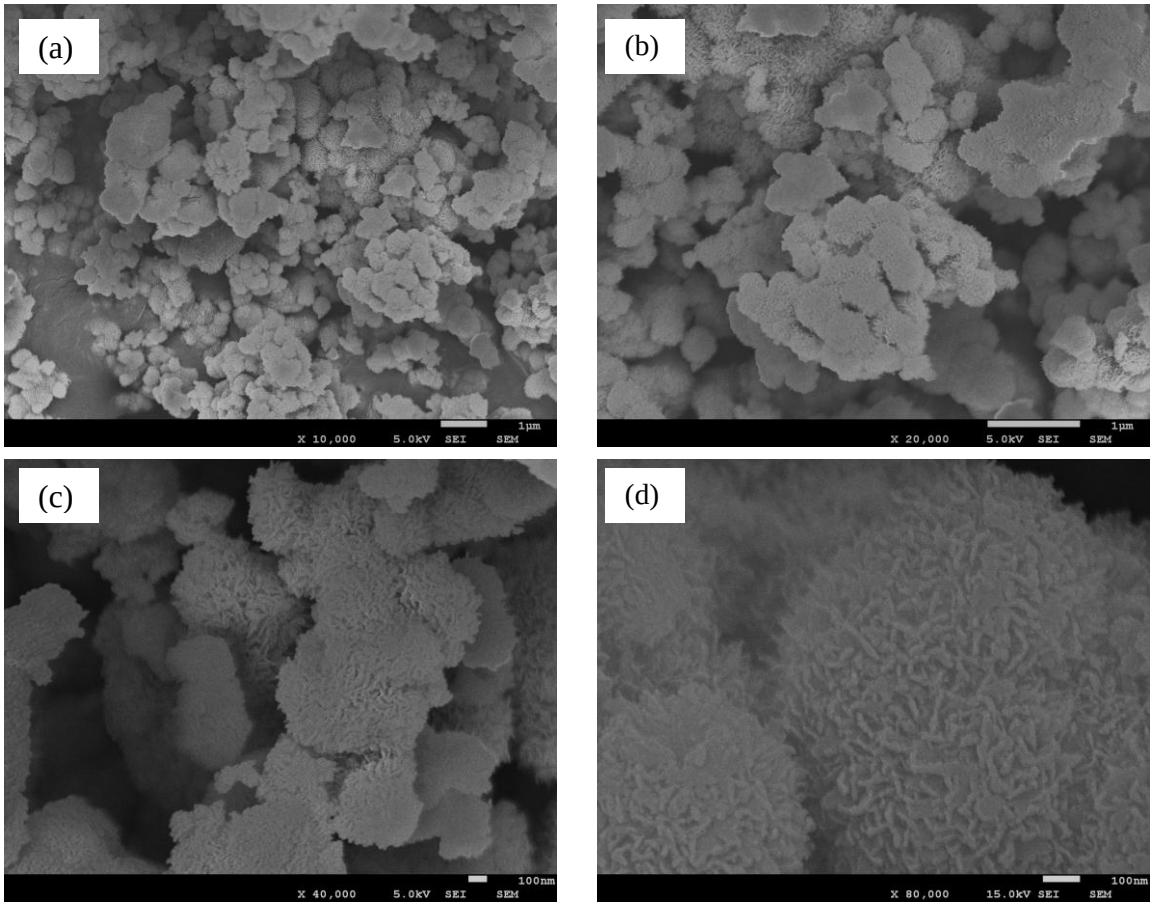

Fig. S2 SEM images of V_2O_5 microspheres at different magnifications

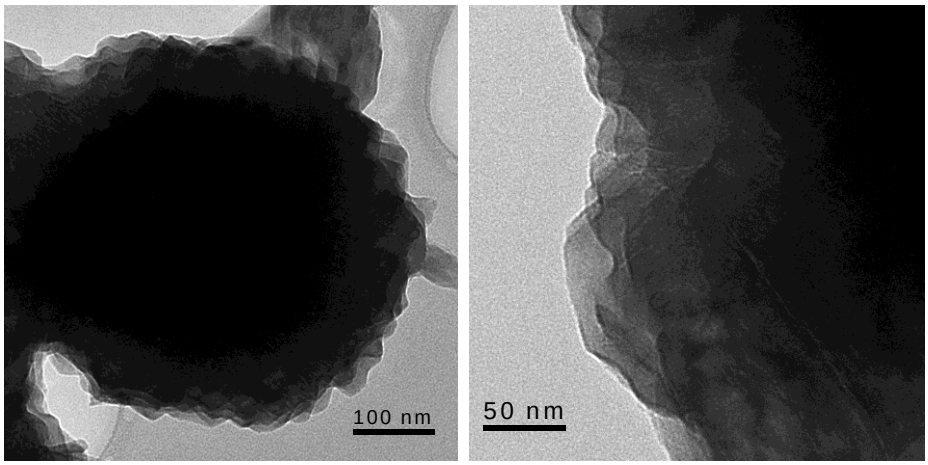

Fig. S3 TEM images of V_2O_5 microspheres at different magnifications

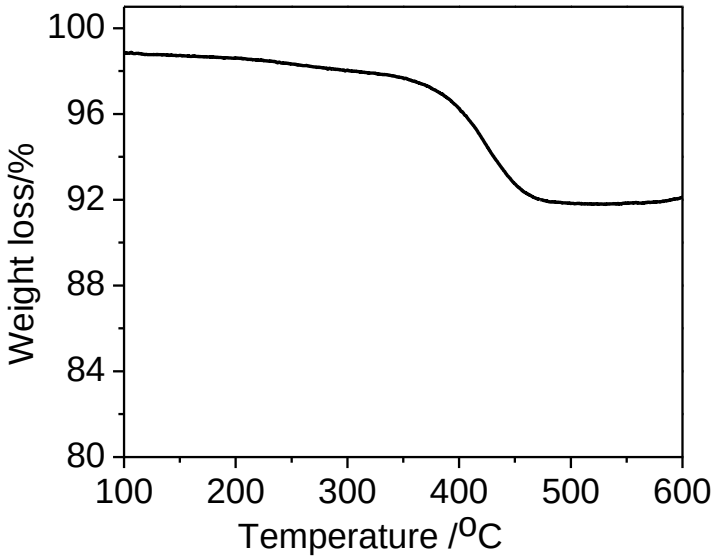

Fig. S4 Thermogravimetric analysis of V_2O_5 nanosheets/RGO nanocomposite

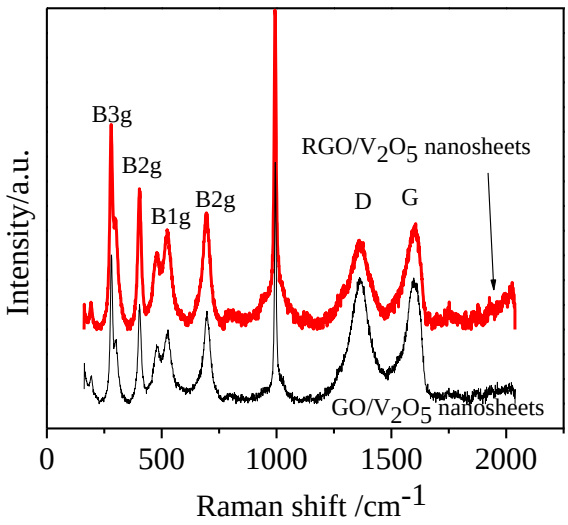

Fig. S5 Raman spectra of V_2O_5 nanosheets/RGO nanocomposite (red) and V_2O_5 nanosheets/GO nanocomposite (black)

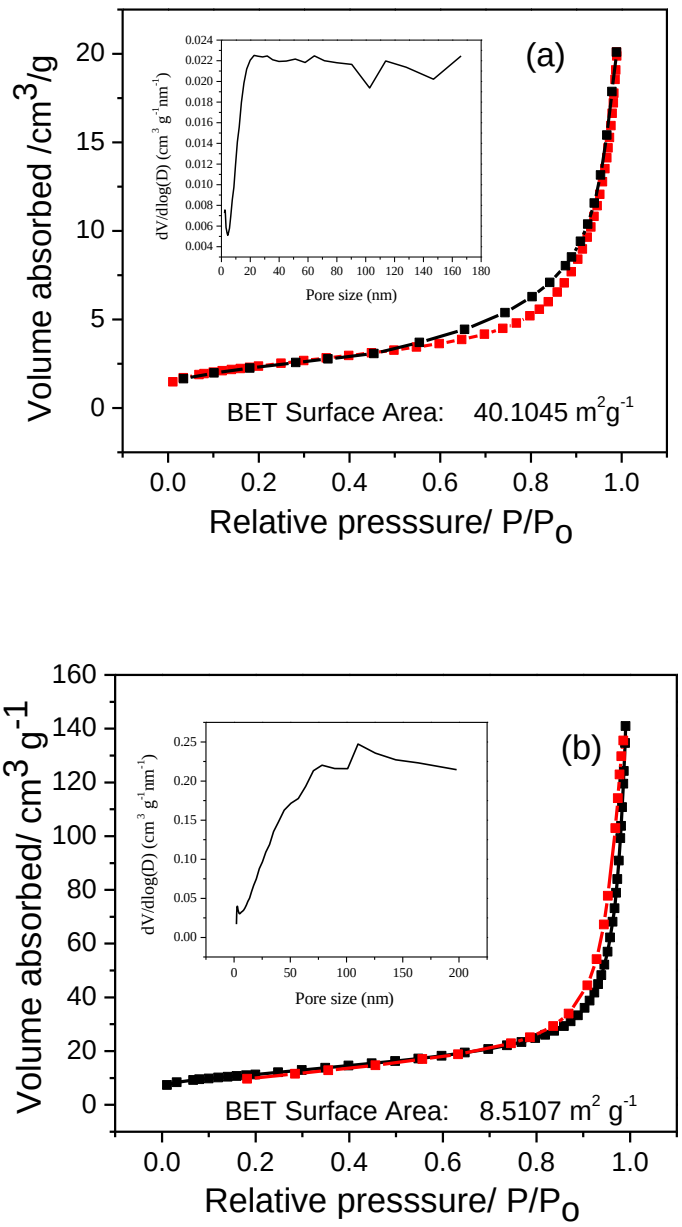

Fig. S6 Nitrogen adsorption and desorption isotherm (the insets show the pore size distribution) of V_2O_5 nanosheets/RGO nanocomposite (a) and pure V_2O_5 microsphere (b)

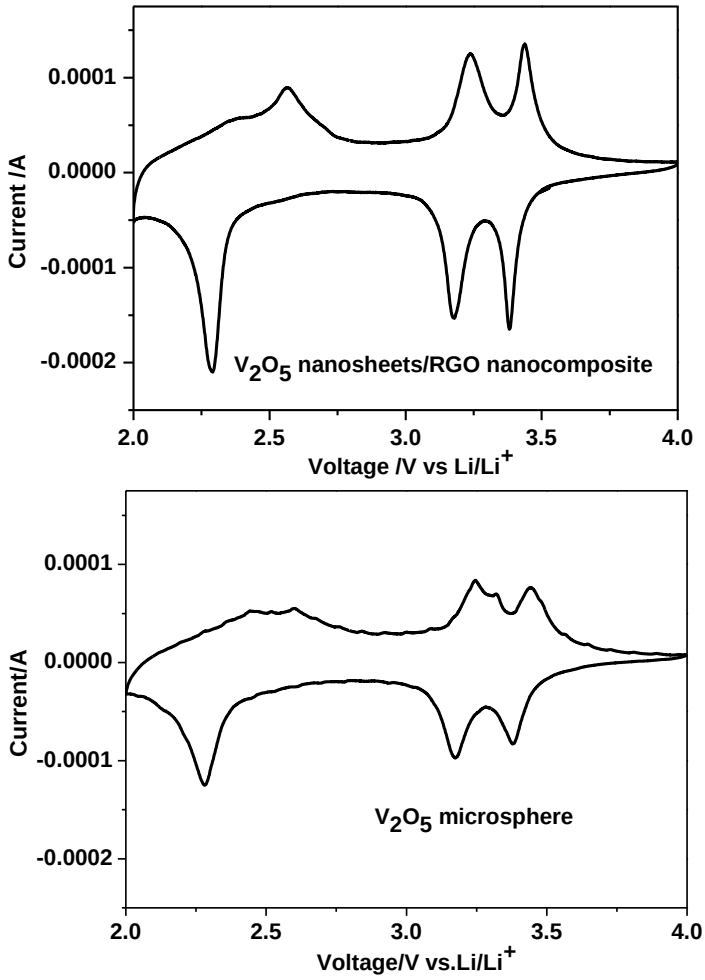

Fig. S7 Cyclic voltammograms of V_2O_5 nanosheets/RGO nanocomposite and V_2O_5 microsphere electrode at a scan rate of 0.1 mV s^{-1}

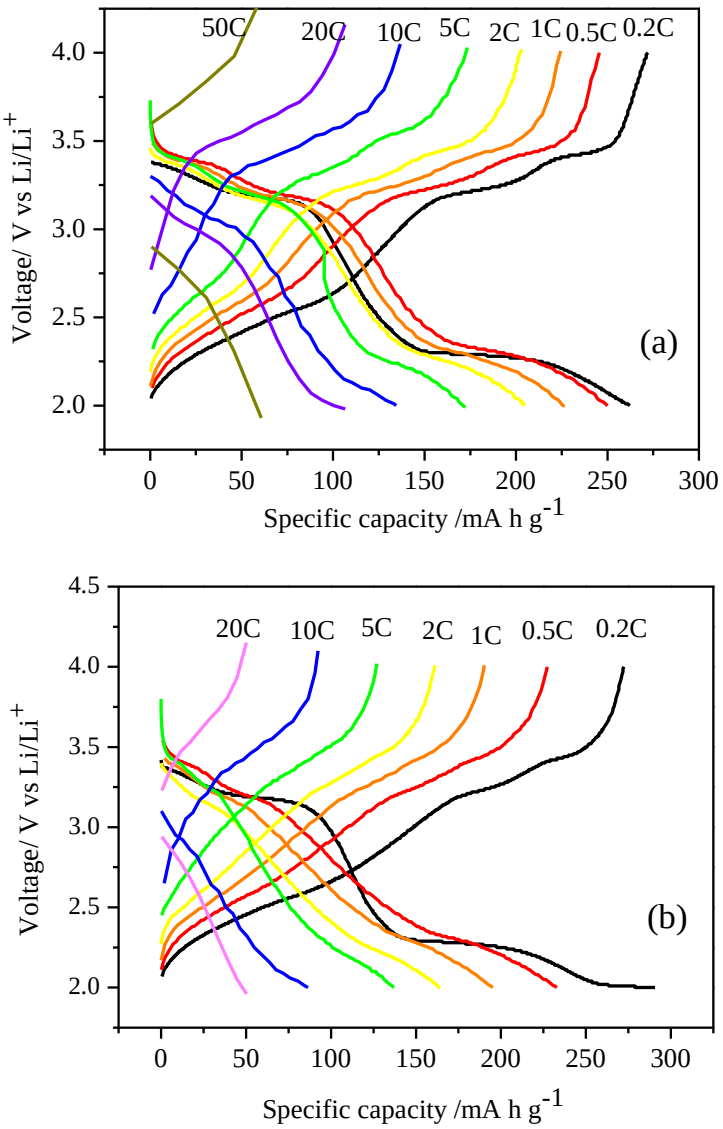

Fig.S8 Charge/discharge profiles of V_2O_5 nanosheets/RGO nanocomposite electrode (a) and V_2O_5 microsphere electrode (b) at different current rates.

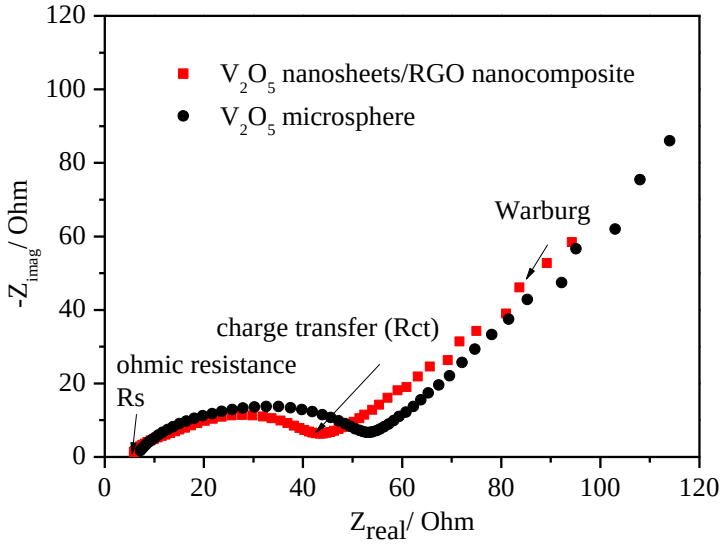

Fig. S9 Nyquist plots of the V_2O_5 nanosheets/RGO nanocomposite electrode and V_2O_5 microsphere electrodes after 5 charge/discharge cycles.