Electronic Supplementary Material (ESI) for Sustainable Energy & Fuels.

Sustainable development of vanadium pentoxide@Carbon composites derived hibiscus sabdariffa family's for supercapacitor applications

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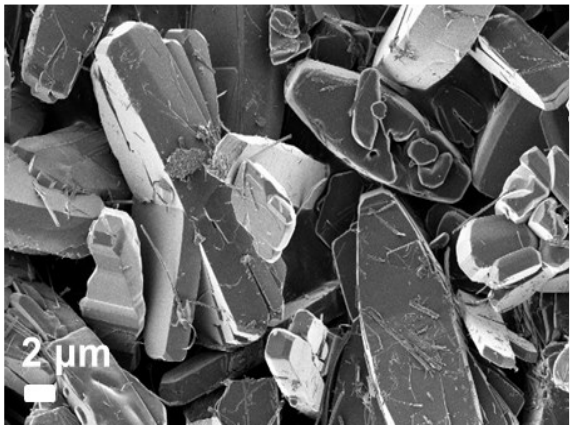

Figure S1: The SEM images of the V_2O_5-DI powder obtained with DI-Ionized water as a solvent

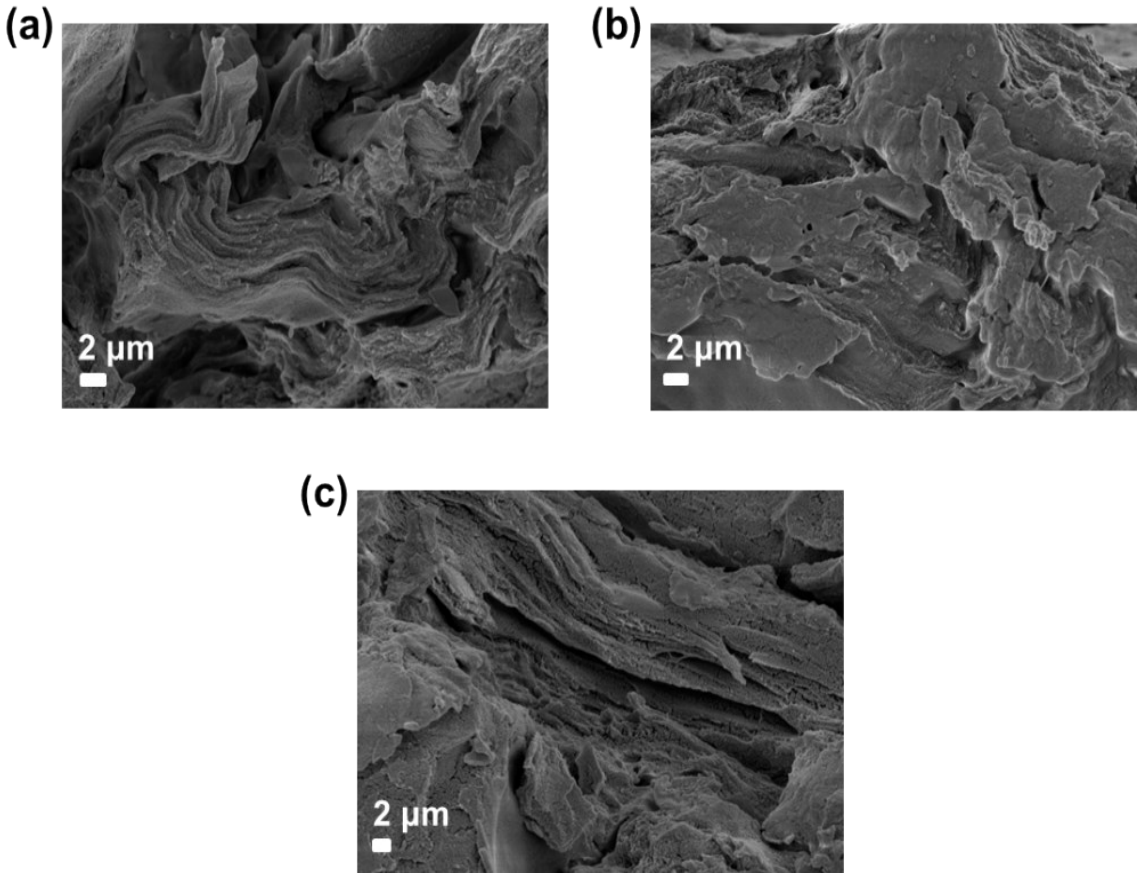

Figure S2: The SEM images of the as-prepared materials without H_2O_2 adding (a) V_2O_5@C-WHS, (b) V_2O_5@C-Red$_1$HS and (c) V_2O_5@C-Red$_2$HS nanostructures

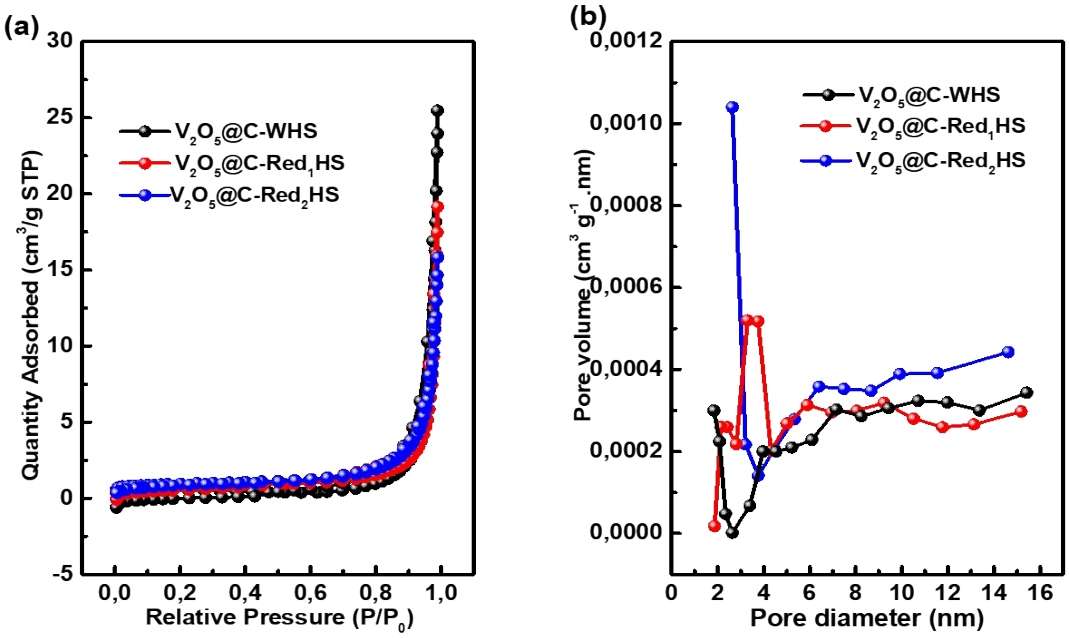

Figure S3: (a) N_2 absorption/desorption isotherms and (b) pore size distribution of V_2O_5@C-WHS, V_2O_5@C-R_1HS and V_2O_5@C-R_2HS composites

Table S1: chemical composition of all the V_2O_5@C composites

Materials	V at%	O at%	C at%
V_2O_5@C-WHS	30.90	54.11	14.28
V_2O_5@C-R_1HS	31.61	52.50	15.89
V_2O_5@C-R_2HS	31.66	50.90	17.44

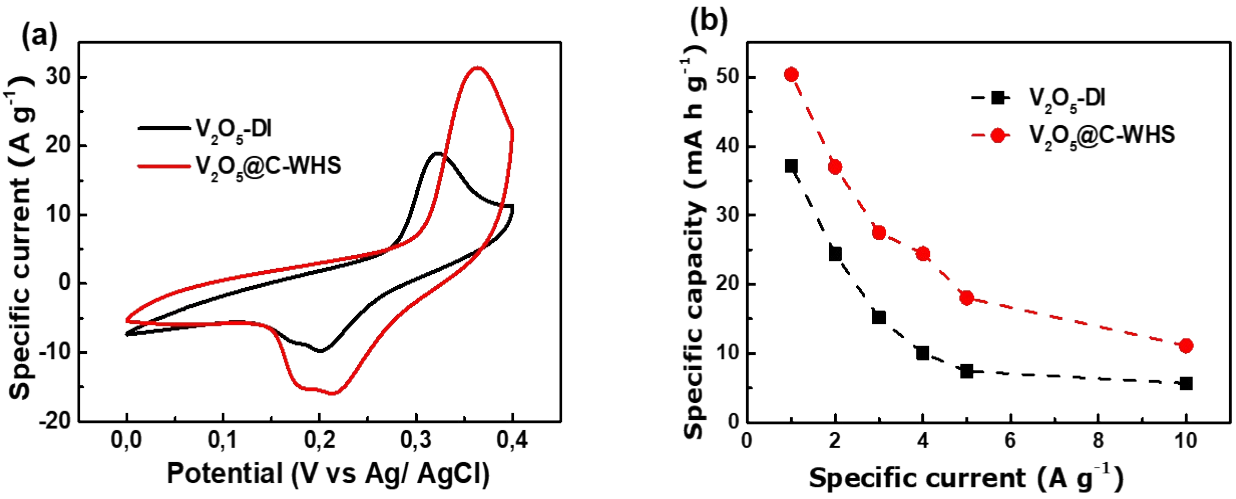

Figure S4: (a) CV plots at 50 mV/s and (a) specific capacities curves at different specific currents of the V_2O_5-DI and V_2O_5@C-WHS electrodes.

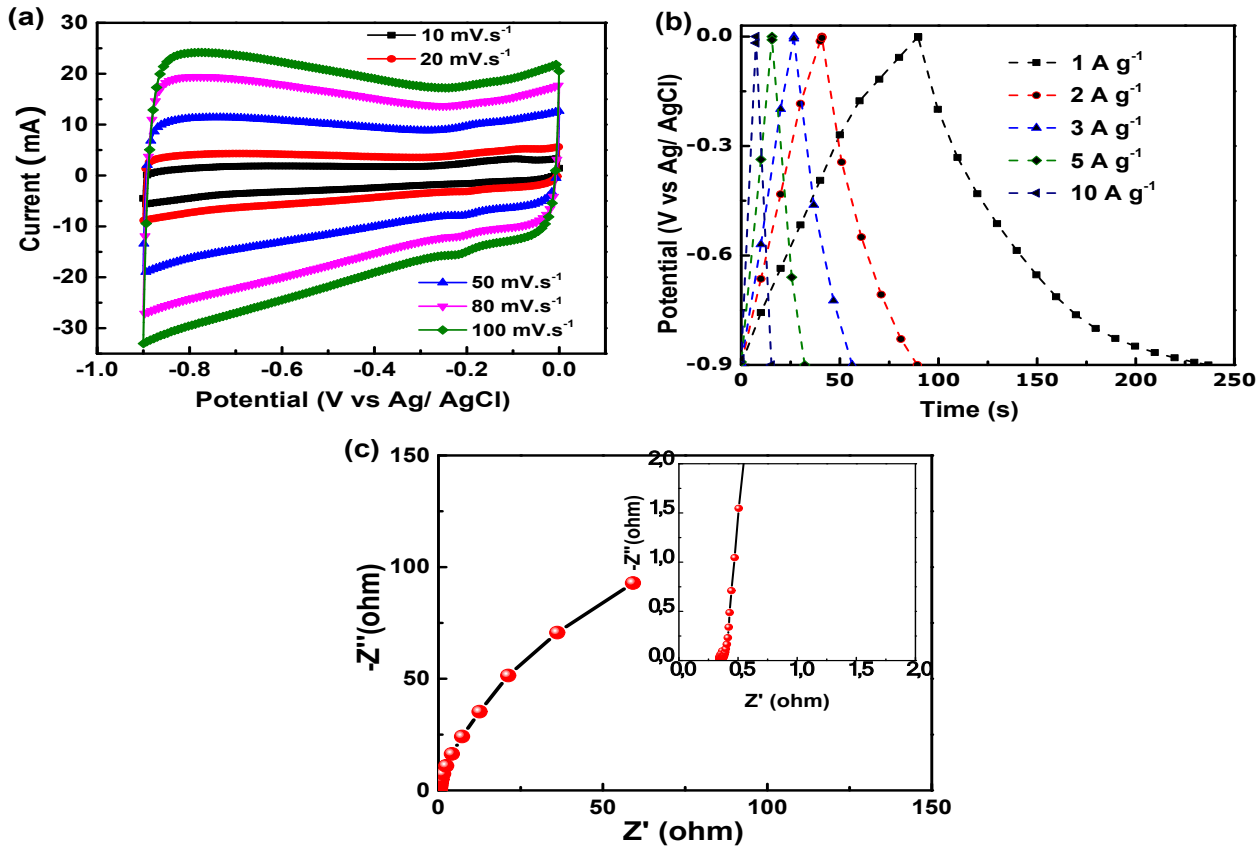

Figure S5: (a) CV curves at different scan rates, (b) GCD profiles at various specific current and (c) Nyquist plot (the inset showed the magnified plot) of the activated carbon electrode.