Asymmetric Supercapacitors with High Energy Densities

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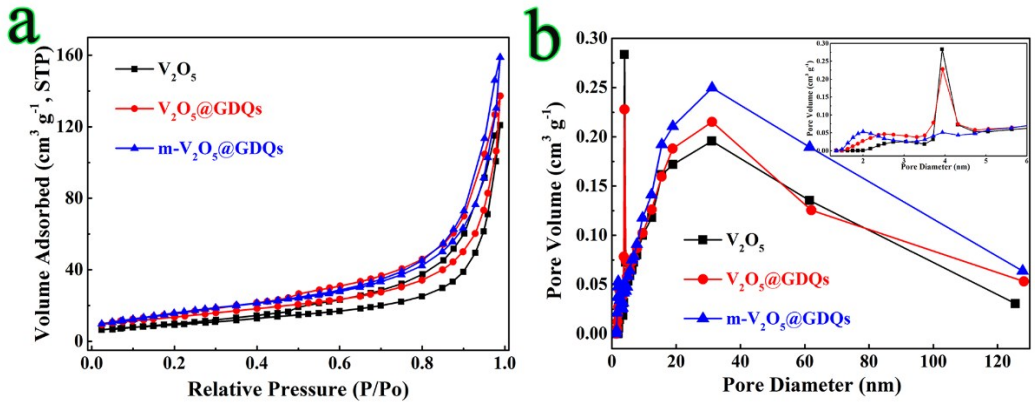

Fig. **S1** (a) Nitrogen adsorption–desorption isotherms and (b) pore size distribution curves of V_2O_5, V_2O_5@GQDs, and m-V_2O_5@GQDs

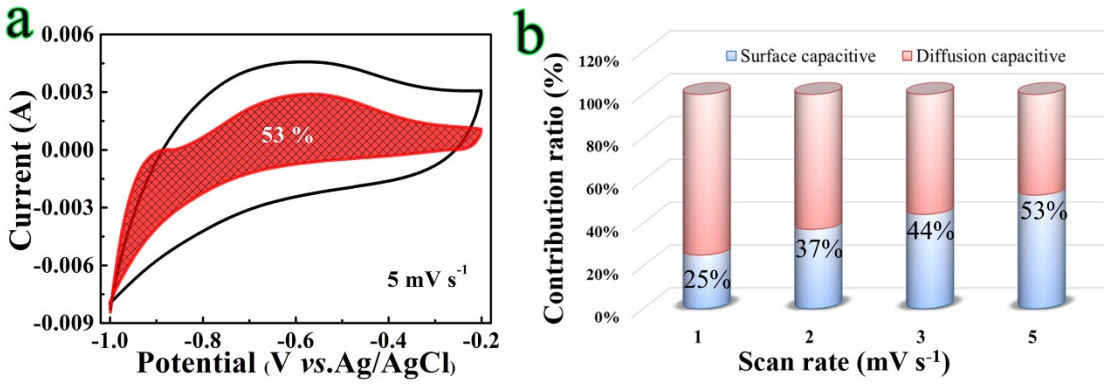

Fig. S2 (a) Separation of the capacitive (shaded region) and diffusion currents in the m-V_2O_5@GQDs at a scan rate of 5 mVs^{-1}.(b) Contribution ratio of the diffusion-controlled and capacitance-controlled charges at different scan rates.

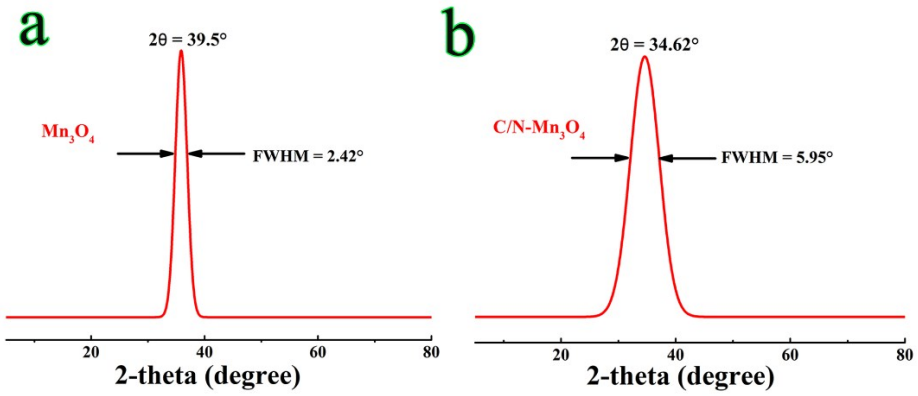

Fig. S3 The curves show full width at half maximum (FWHM) of (a) Mn_3O_4 and (b) C/N-Mn_3O_4.

Table S1. Comparison of the specific capacitance of other V_2O_5-based supercapacitor.

Preparation method	Potential window	Electrolyte	Current density	Specific capacitance	Ref.
m-V_2O_5@ GQDs	-1 to -0.2 V	1M Li_2SO_4	2 A g^{-1}	761 F g^{-1}	This
rGO/V_2O_5	-0.8 to 0.8 V -	1 M $LiClO_4$/PC	0.1 A g^{-1}	384 F g^{-1}	23
V_2O_5@PPy	0.4 to 0.5 V	1M Na_2SO_4	0.2 A g^{-1}	334 F g^{-1}	39
N-GA@V_2O_5 NWAs	-0.3 to 0.7 V	8 M LiCI	0.5 A g^{-1}	710 F g^{-1}	40
V_2O_5	-0.2 to 0.6 V	1M Na_2SO_4	2 mV s-1	256 F g^{-1}	41
N-CNFs/V_2O_5	-0.1 to 1 V	1M Na_2SO_4	0.5 A g-1	595.1 F g-1	42