

## Supporting Information

### Mechanism Studies of the Charge Contributions of Nitrogen-Doped Graphene Hydrogel Electrodes for Supercapacitors

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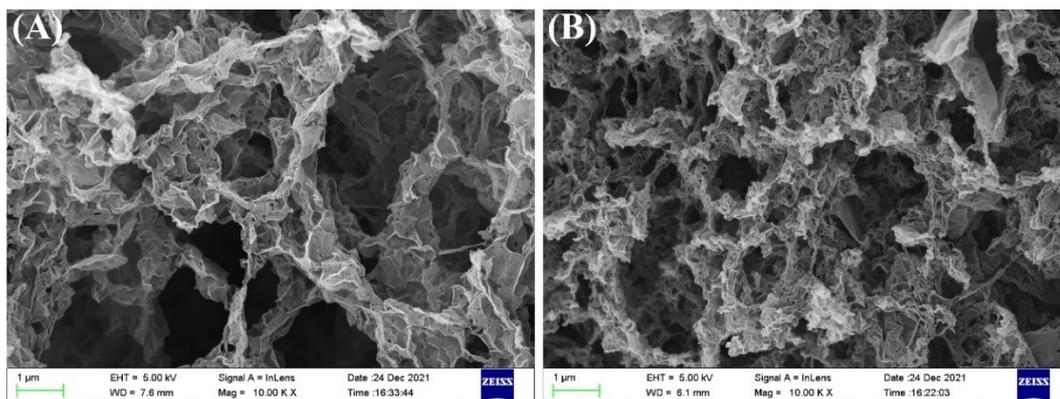


Figure S1 (A) The SEM image of rGO at a high magnification. (B) The SEM image of NDGH at a high magnification

Table S1 the percentages of micropore, mesopore and macropore in rGO and NDGH

	Micropores and mesopores percentage (%)	Macropores percentage (%)
rGO	42	58
NDGH	32	68

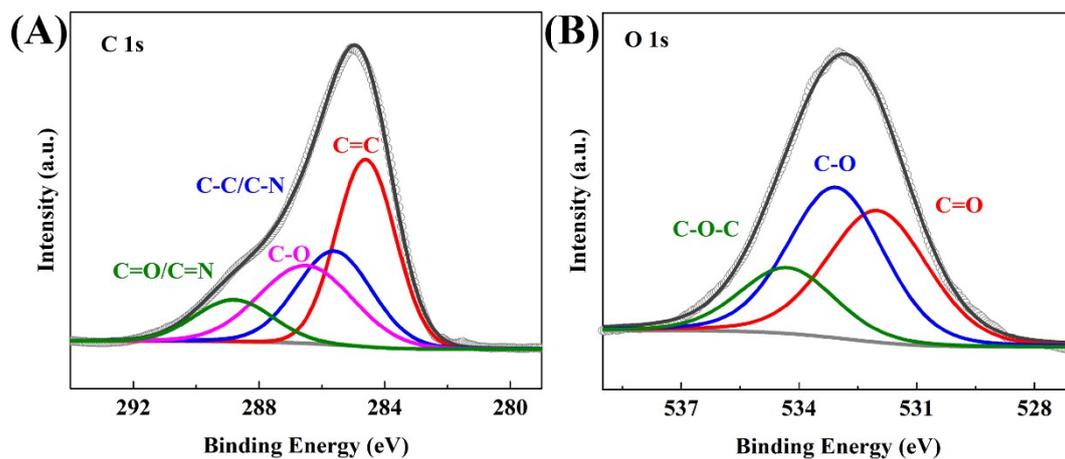


Figure S2 (A) C 1s spectrum of NDGH. (B) O 1s spectrum of NDGH.

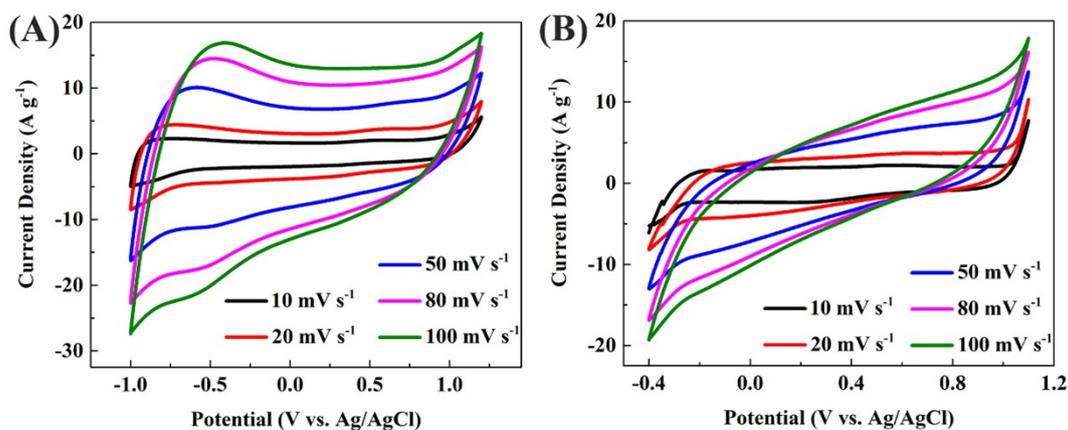


Figure S3 (A) CV curves at disparate scanning rates of NDGH in  $\text{Na}_2\text{SO}_4$ . (B) CV curves at disparate scanning rates of NDGH in  $\text{H}_2\text{SO}_4$ .

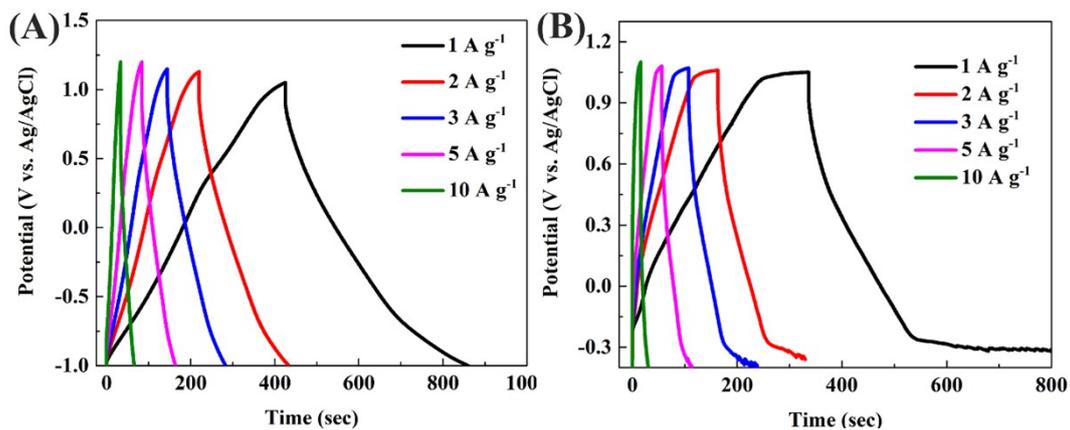


Figure S4 (A) GCD curves at disparate current densities of NDGH in  $\text{Na}_2\text{SO}_4$ . (B) GCD curves at disparate current densities of NDGH in  $\text{H}_2\text{SO}_4$ .

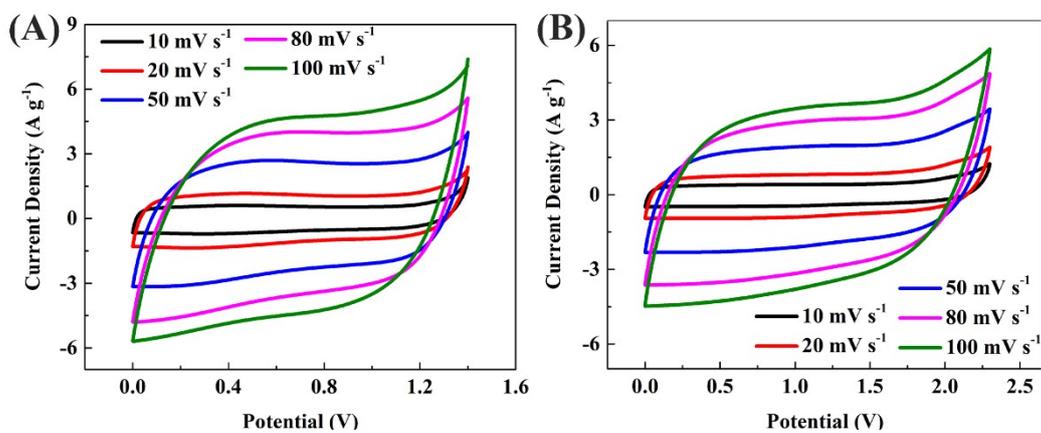


Figure S5 (A) CV curves of NDGH//NDGH- $\text{H}_2\text{SO}_4$  SSC at different scan rates. (B) CV curves of NDGH//NDGH- $\text{Na}_2\text{SO}_4$  SSC at different scan rates.

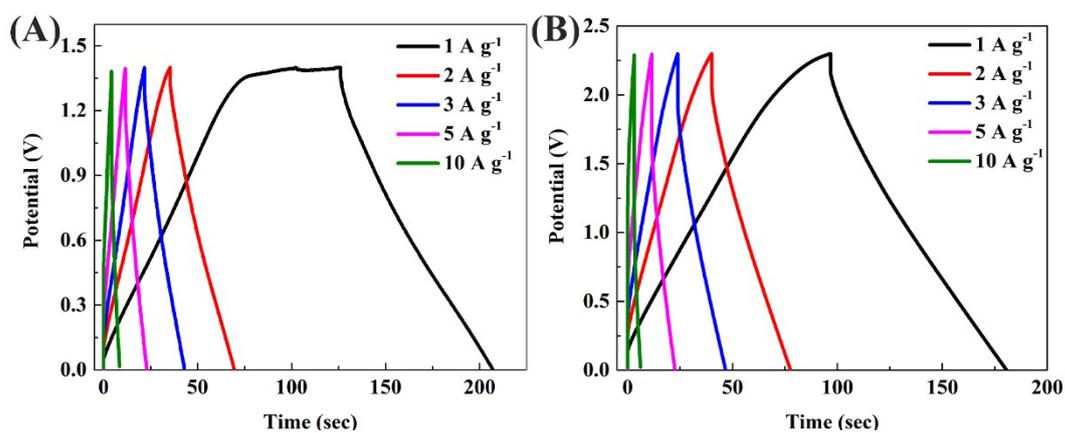


Figure S6 (A) GCD curves of NDGH//NDGH- $\text{H}_2\text{SO}_4$  SSC at disparate current densities. (B) GCD curves of NDGH//NDGH- $\text{Na}_2\text{SO}_4$  SSC at disparate current densities.