

Electronic Supporting Information

Three Dimensional Porous Graphene-Like Carbon Cloth from Cotton for a Free-Standing Lithium-Ion Battery Anode

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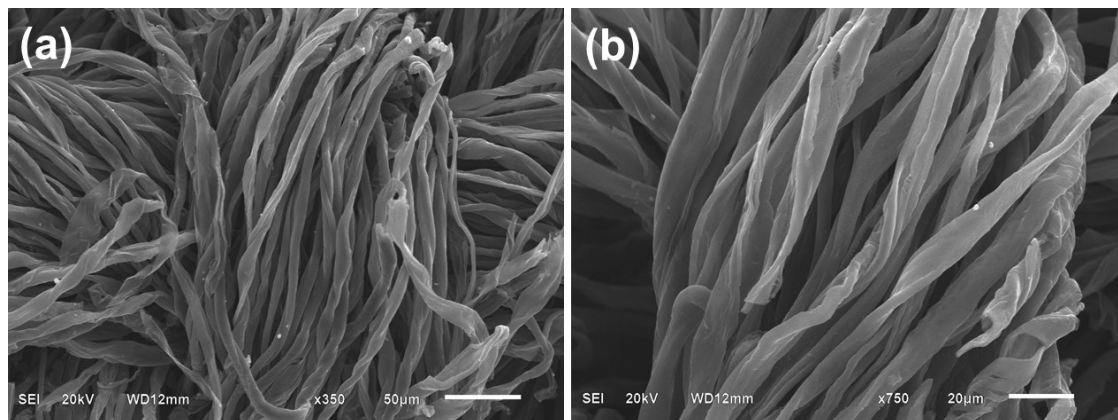


Figure S1. (a, b) FESEM images of the pristine porous carbon cloth.

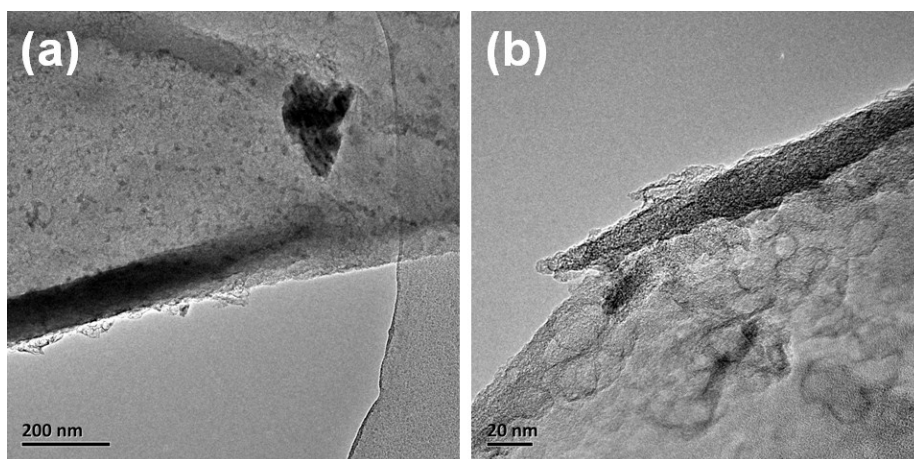


Figure S2. (a, b) TEM images of the pristine porous carbon cloth.

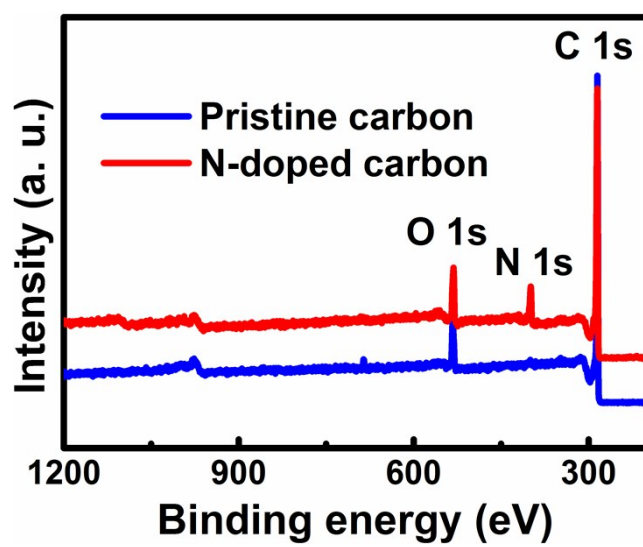


Figure S3. XPS spectra of the pristine and N-doped porous carbon cloth.

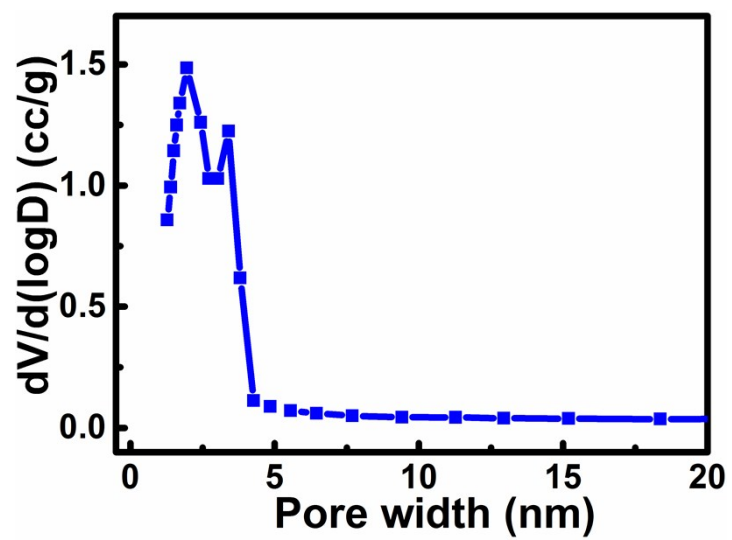


Figure S4. Pore size distributions of N-doped porous carbon cloth.

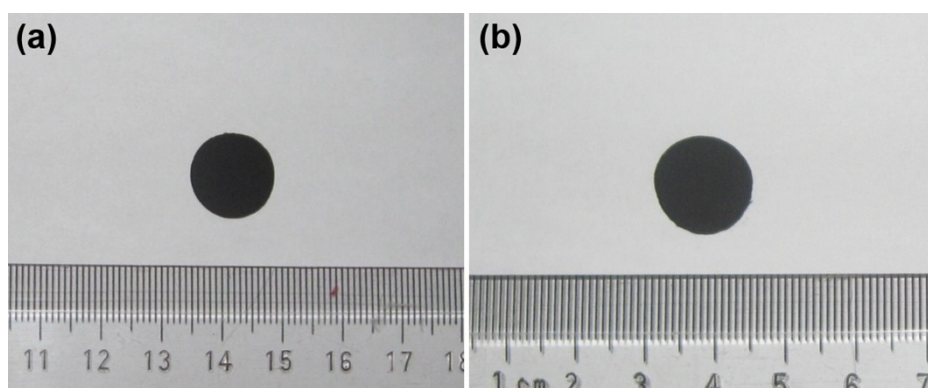


Figure S5. (a, b) Optical images of free-standing N-doped carbon cloth (a) before and (b) after 200 charge/discharge cycles.

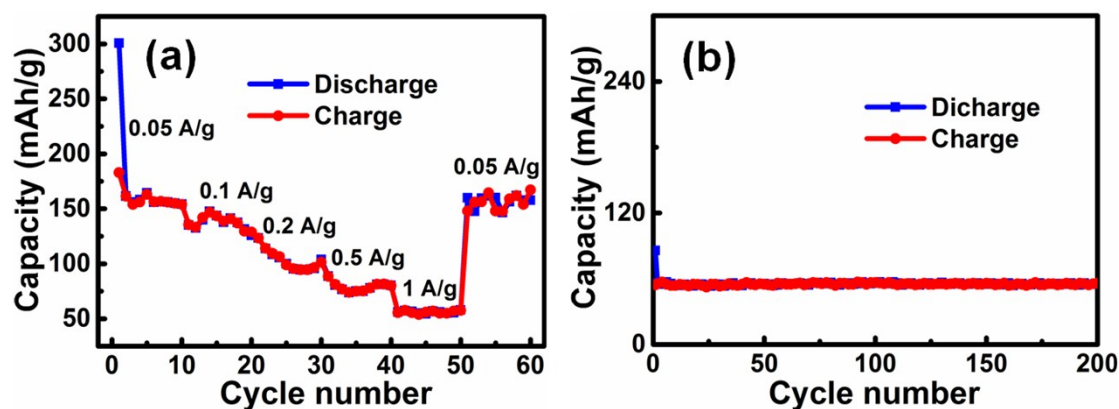


Figure S6. (a) Rate capabilities of commercial carbon cloth obtained over a wide range of high current densities, from 50 mA g^{-1} to 1.0 A g^{-1} . (b) Cycle performance of commercial carbon cloth obtained at a current density of 1.0 A g^{-1} .

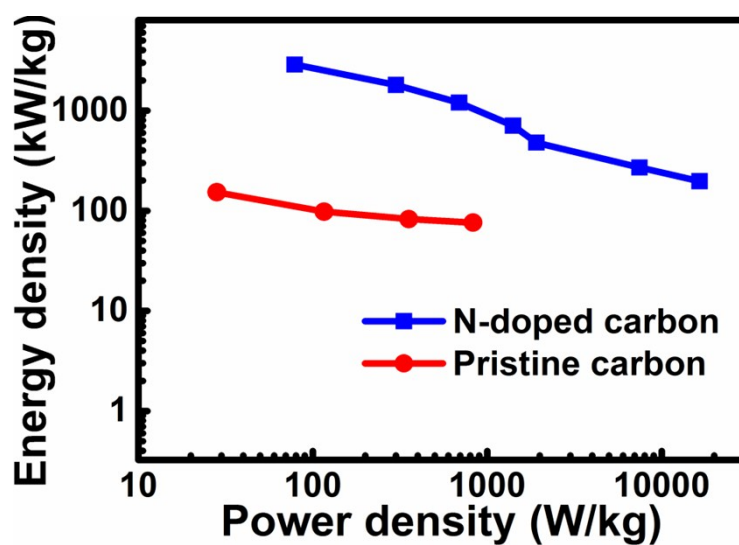


Figure S7. Ragone plots for pristine and N-doped porous carbon cloth based LIB cells.

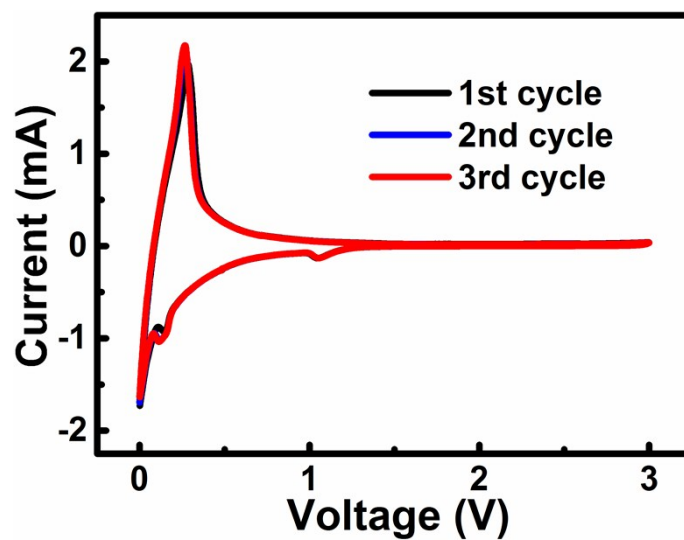


Figure S8. Cyclic voltammetry curves of the pristine porous carbon cloth.

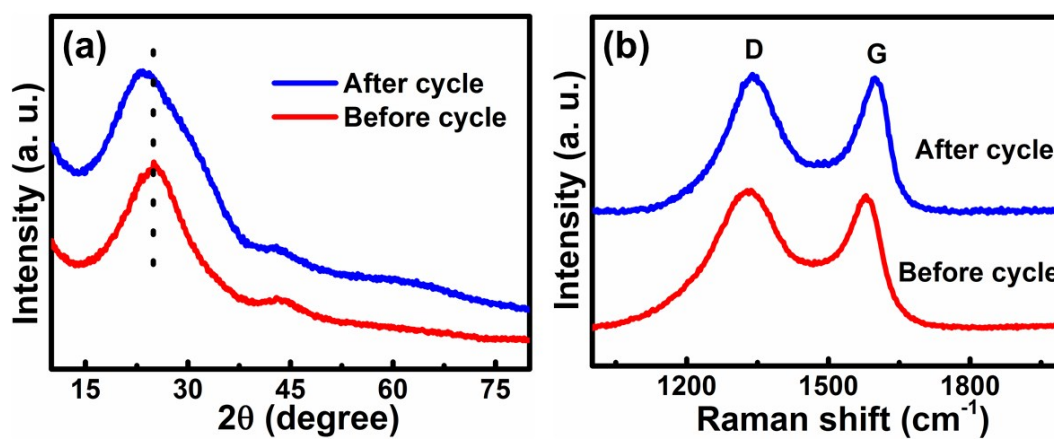


Figure S9. (a) XRD and (b) Raman spectra of the N-doped porous carbon cloth before and after 200 charge–discharge cycles.

Table S1. Electrolyte resistances and charge transfer resistances of the N-doped porous carbon cloth electrode estimated from EIS data.

N-doped carbon cloth	Electrolyte resistance (ohm)	Charge transfer resistance (ohm)
1st	3.1	149.7
200th	3.8	80.4