Electronic Supplementary Material (ESI) for Nanoscale.

Ultrathin 2D nitrogen-doped carbon nanosheets for high performance supercapacitors: insight into the effects of graphene oxides

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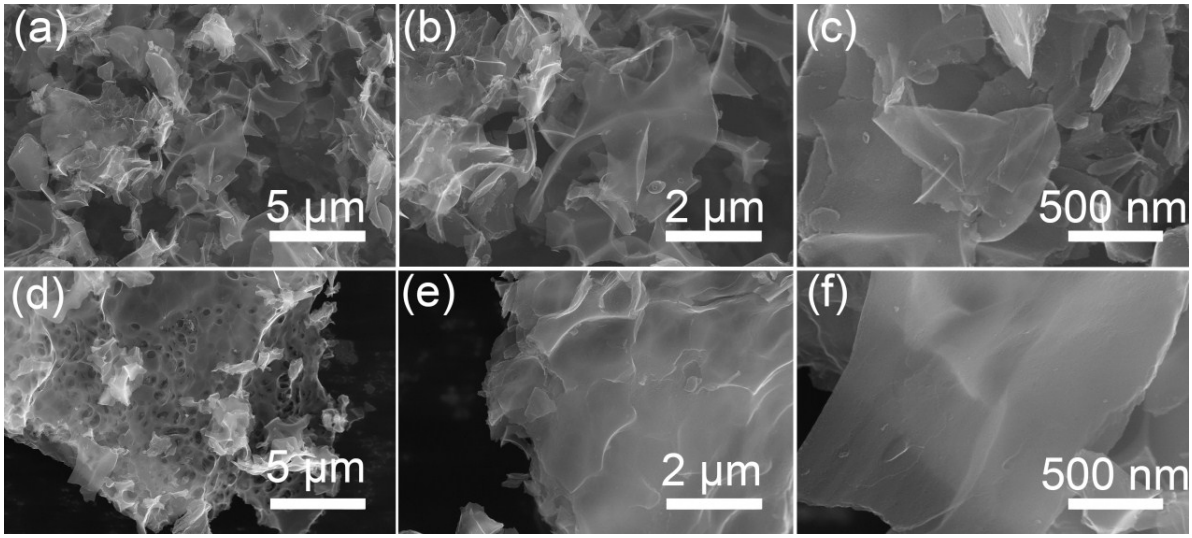

Figure S1. SEM images of the as-made (a-c) NCNS-1 and (d-f) NCNS-5.

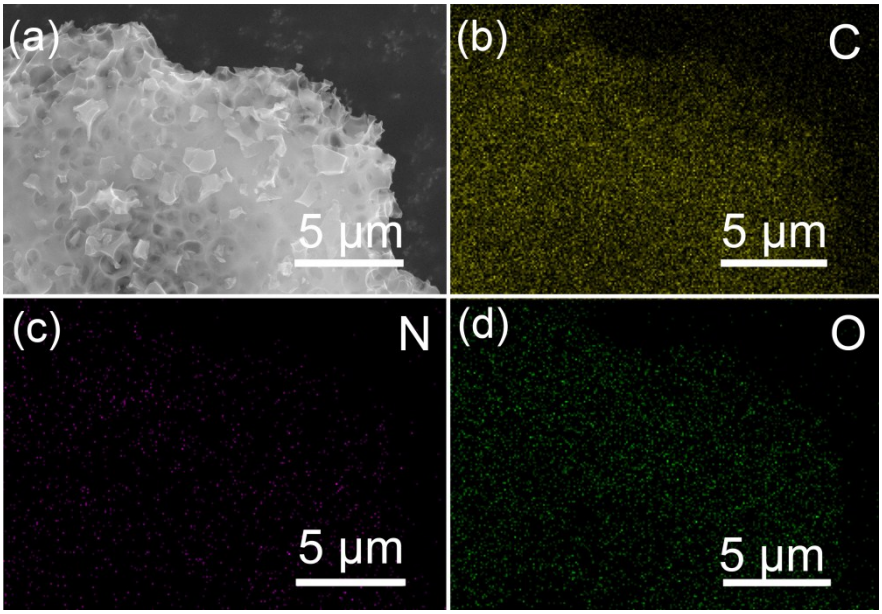

Figure S2. SEM image of the (a) NCNS-3 and (b-d) the corresponding elemental mapping images of C, O, N from the image.

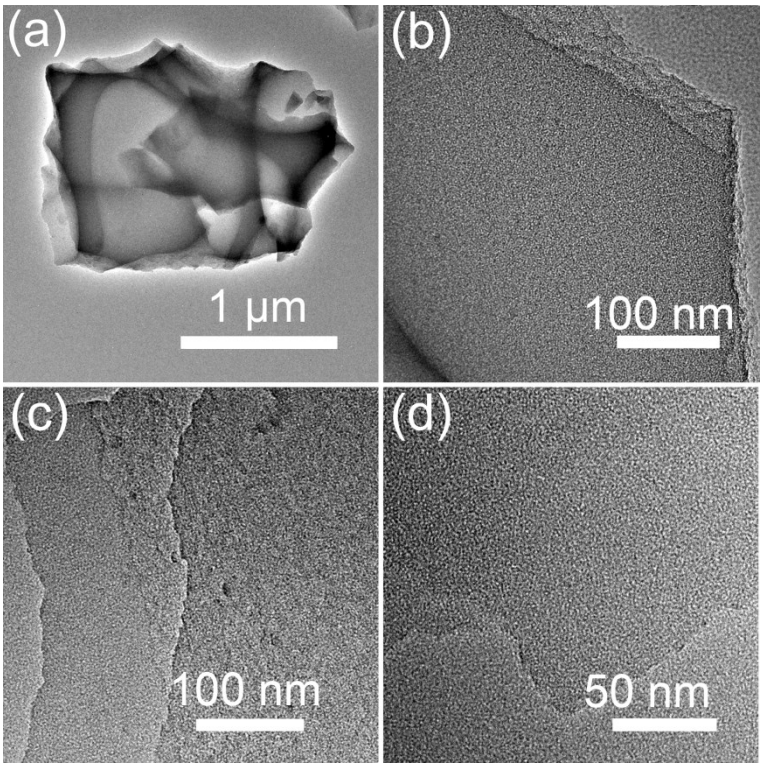

Figure S3. TEM images of (a) NC and (b-d) the as-made NCNS-3 under different magnifications.

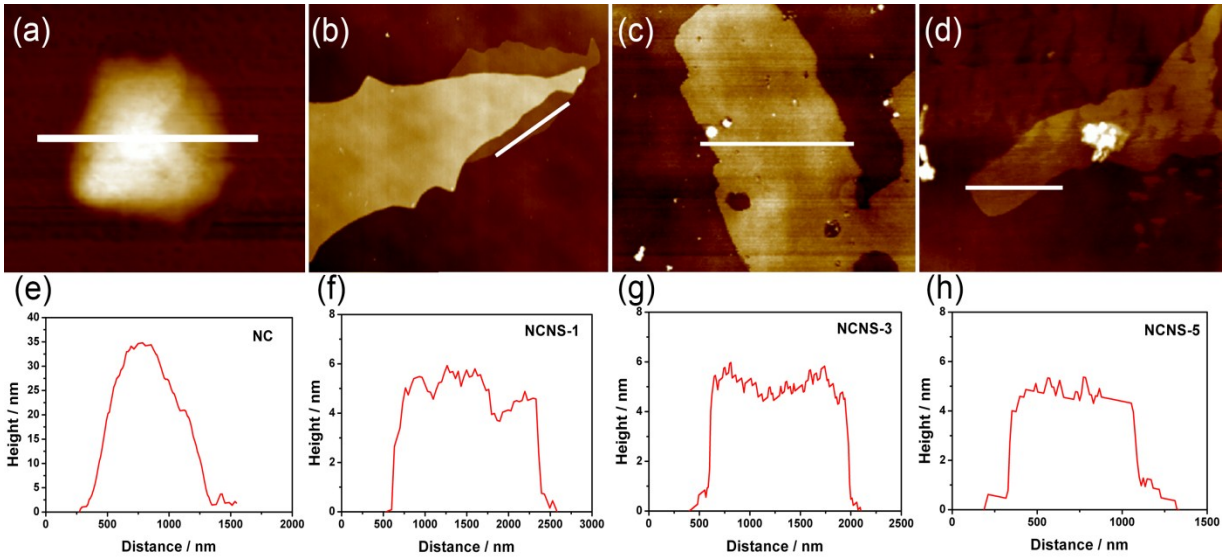

Figure S4. AFM images and corresponding height images of NCNSs: (a, e) NC; (b, f) NCNS-1; (c, g) NCNS-3; (d, h) NCNS-5.

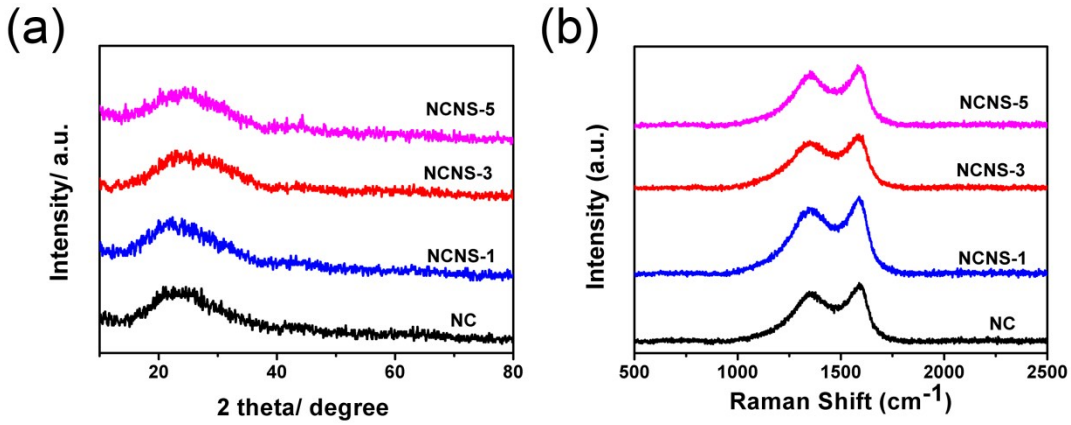

Figure S5. (a) XRD patterns and (b) Raman spectra of the as-made NC and NCNSs samples.

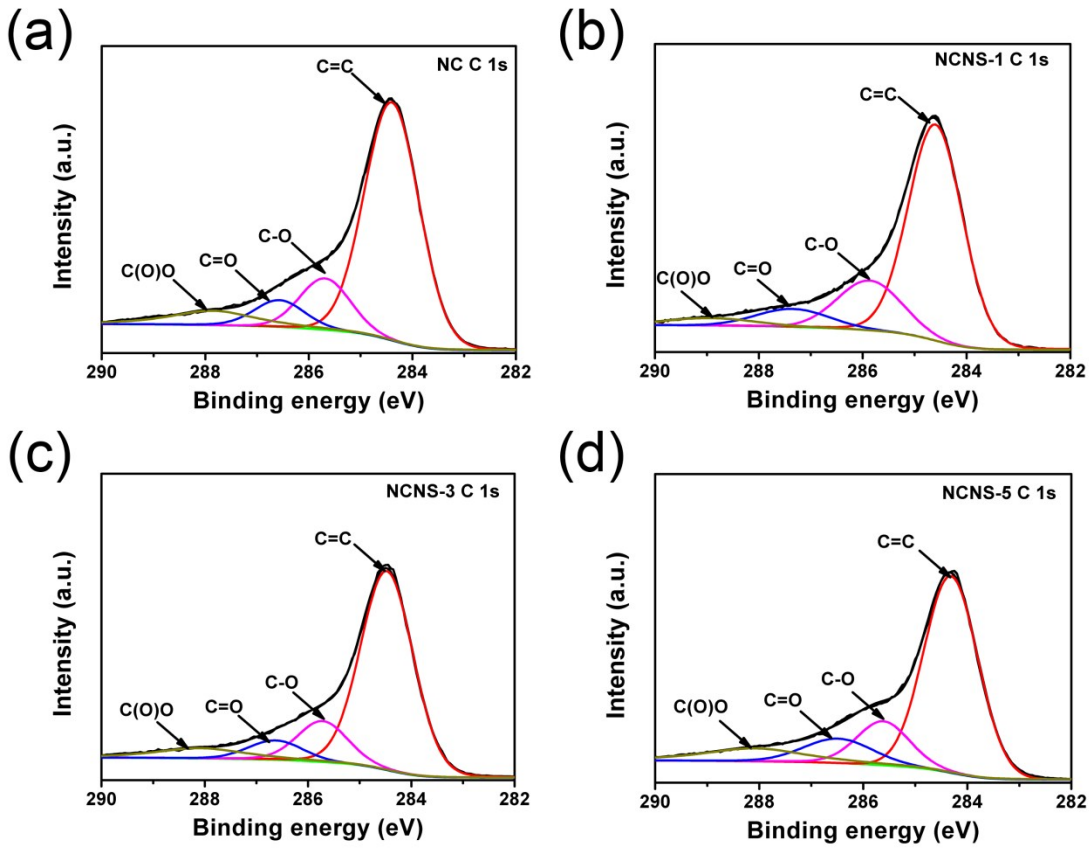

Figure S6. High-resolution XPS C1s spectra of the (a) NC; (b) NCNS-1; (c) NCNS-3; (d) NCNS-5.

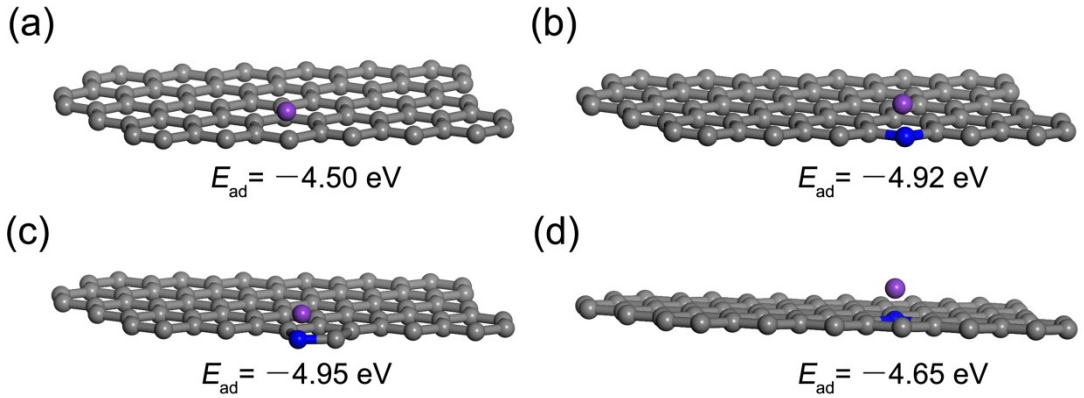

Figure S7. Optimized K^+-bound structures and binding energies on different N-doped carbon configurations: (a) pure carbon, (b) pyridinic-N, (c) pyrrolic-N, (d) graphitic-N.

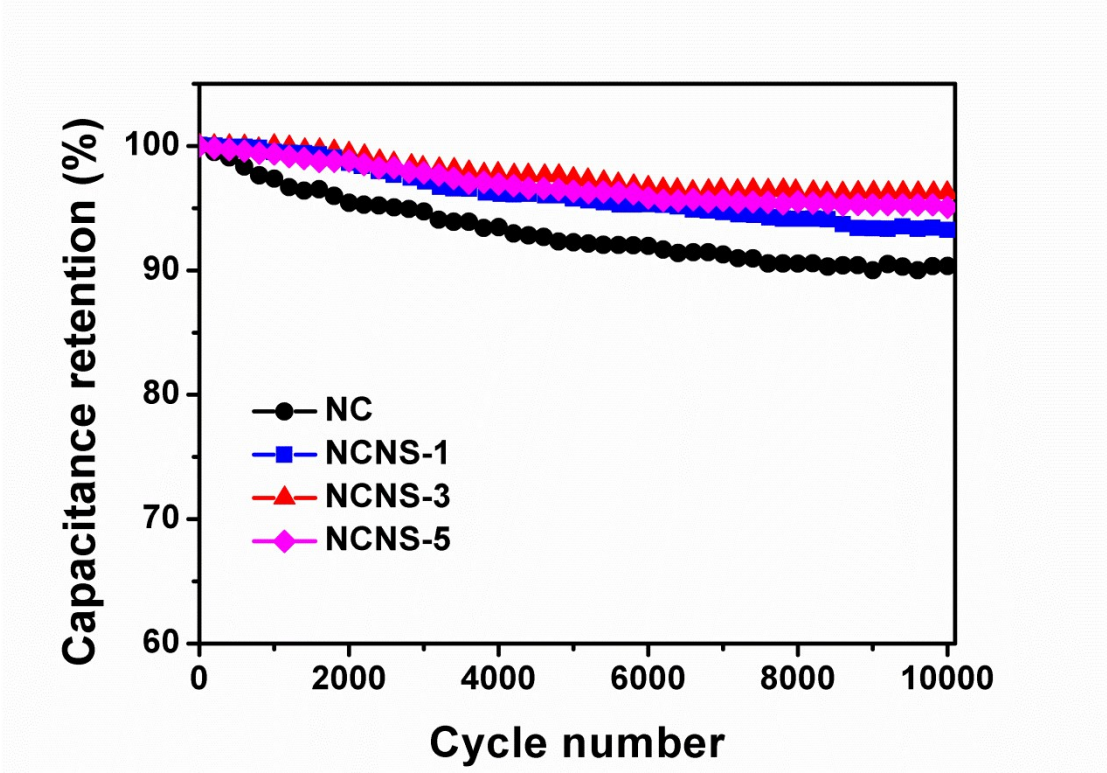

Figure S8. Capacitance retentions of NC and NCNSs measured at 10 A g^{-1}

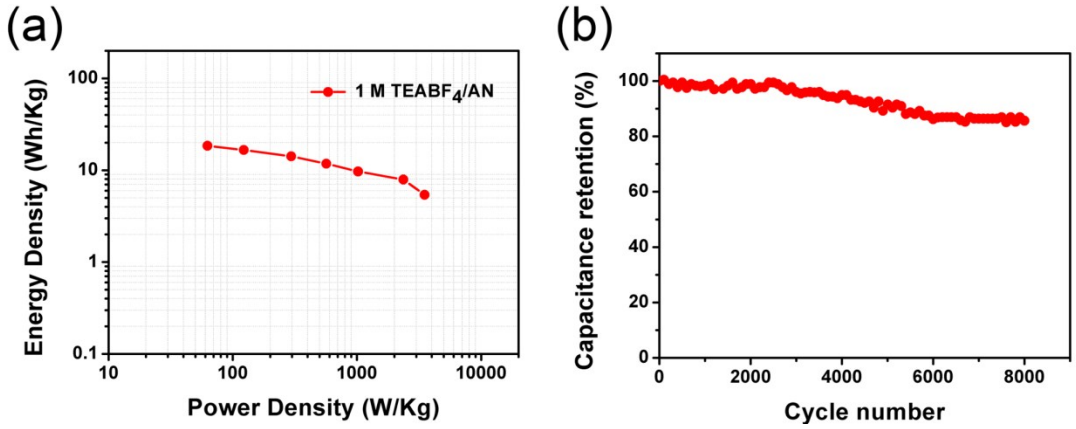

Figure S9. (a) Ragone plots of NCNS-3 measured in 1M $TEABF_4$/AN electrolyte in the two-electrode cell. (b) Capacitance retention of NCNS-3 measured at 4 A g^{-1} in 1M $TEABF_4$/AN electrolyte in the two-electrode cell.