

Supporting Information

Ultrahigh volumetric performance of free-standing compact N-doped holey graphene/PANI slice for supercapacitors

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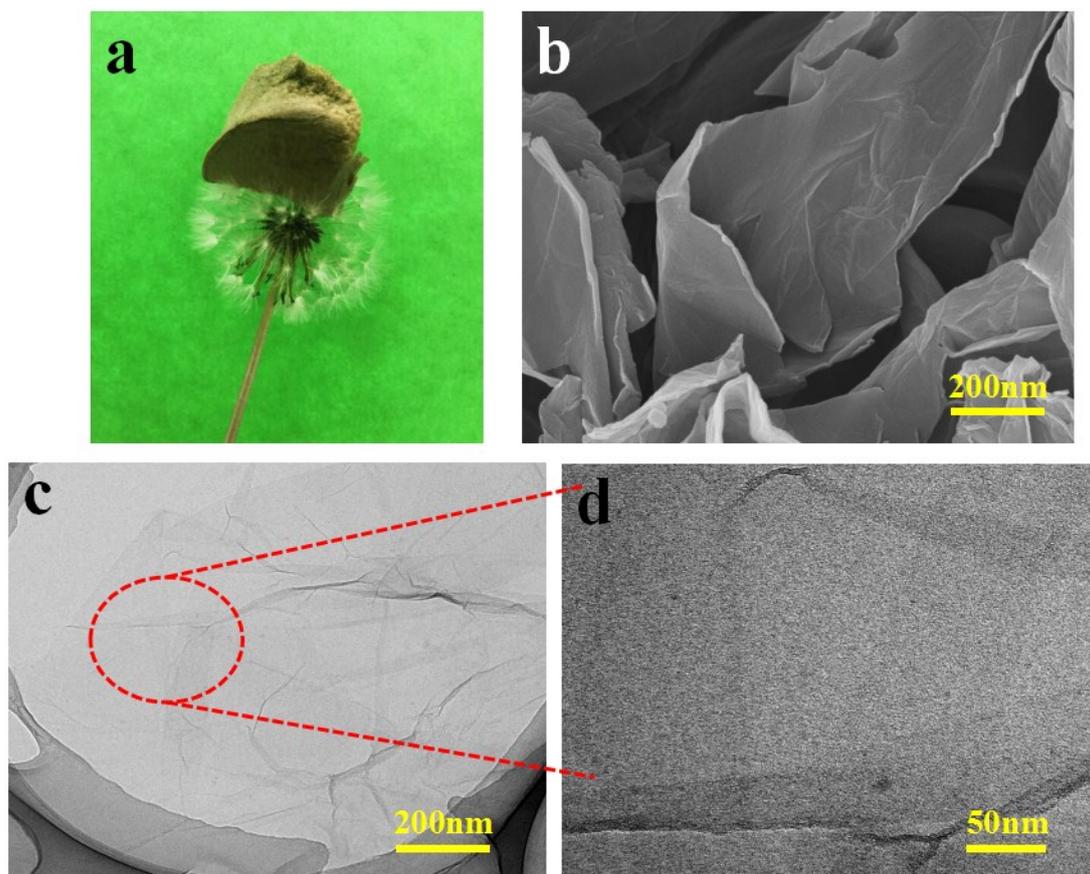


Fig. S1 (a) Digital photograph of GO. (b) SEM image of GO. (c, d) TEM images of GO.

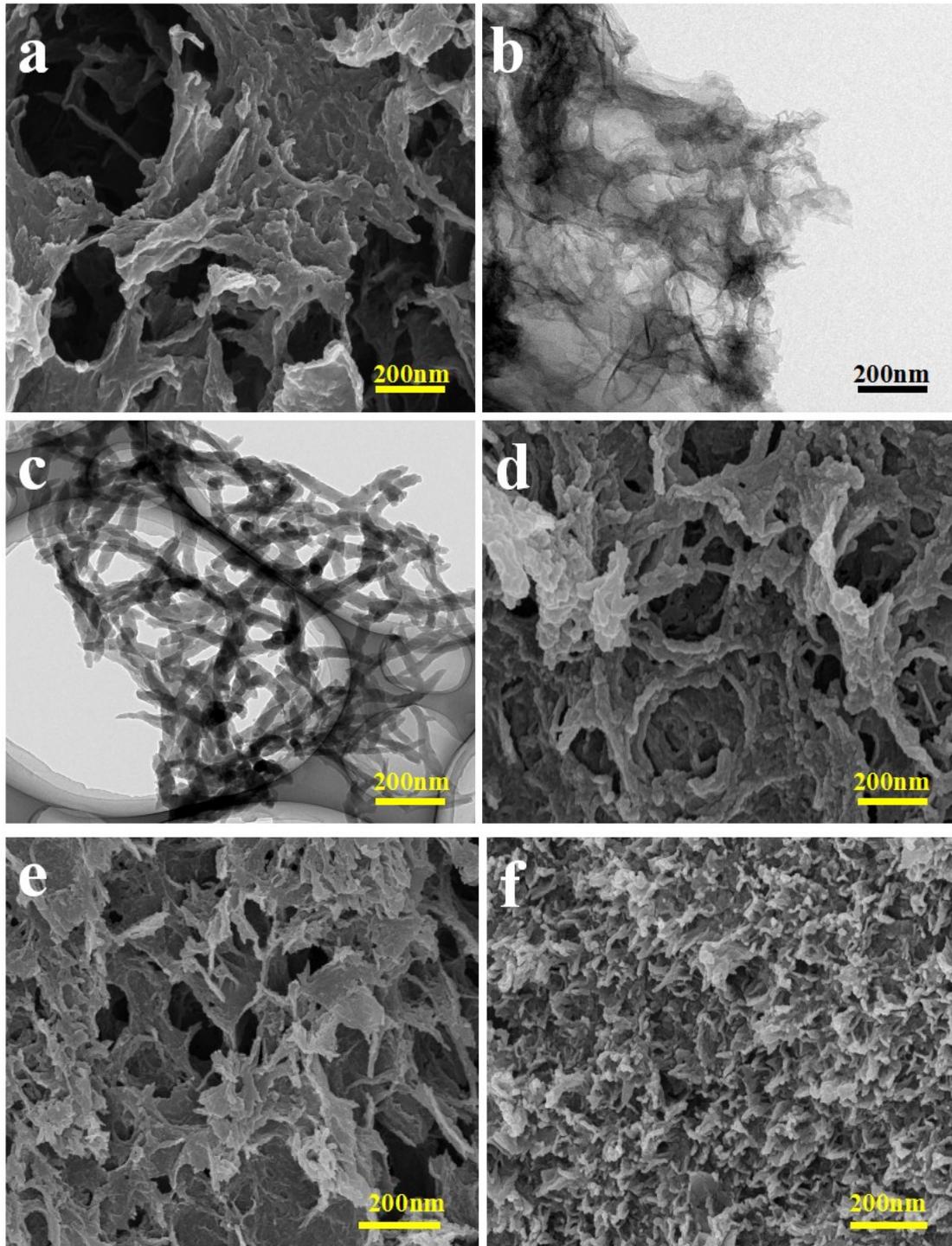


Fig. S2 (a) SEM image of HG-PANI₃₀₀. (b) TEM image of HG-PANI₃₀₀. (c) TEM image of PANI.

SEM images of (d) NHG-PANI₂₀₀, (e) NHG-PANI₅₀₀ and (f) NHG-PANI₇₀₀, respectively.

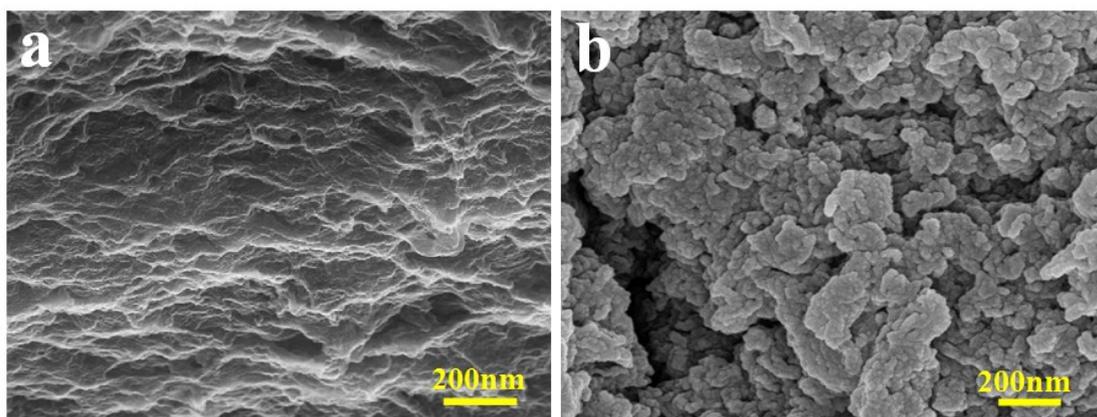


Fig. S3 SEM images of (a) HHG-PANI₃₀₀ and (b) HNHG-PANI₇₀₀.

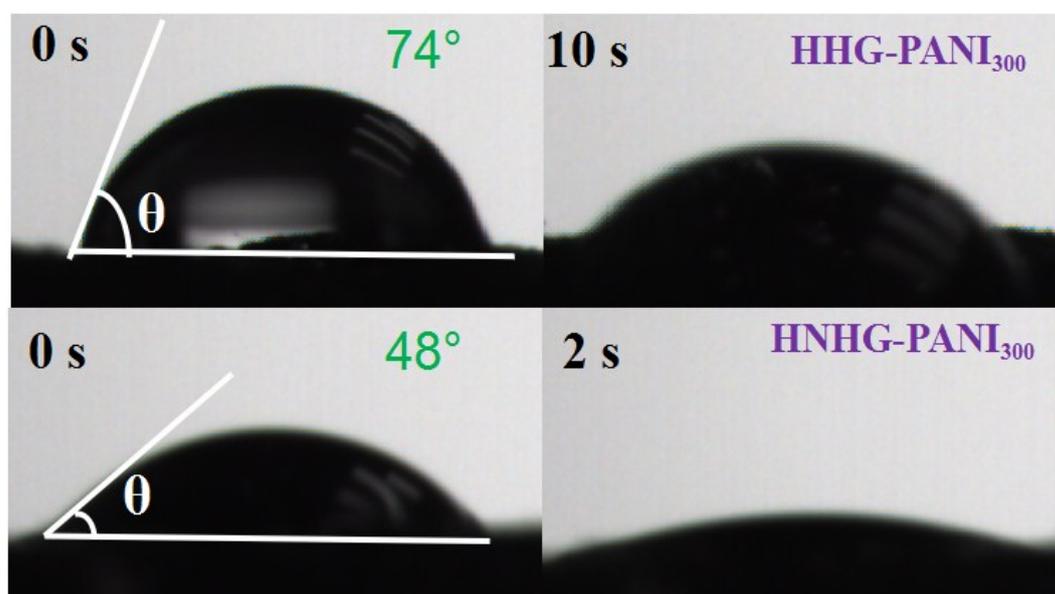


Fig. S4 Dynamic water contact-angle measurement for HHG-PANI₃₀₀ and HNHG-PANI₃₀₀, respectively.

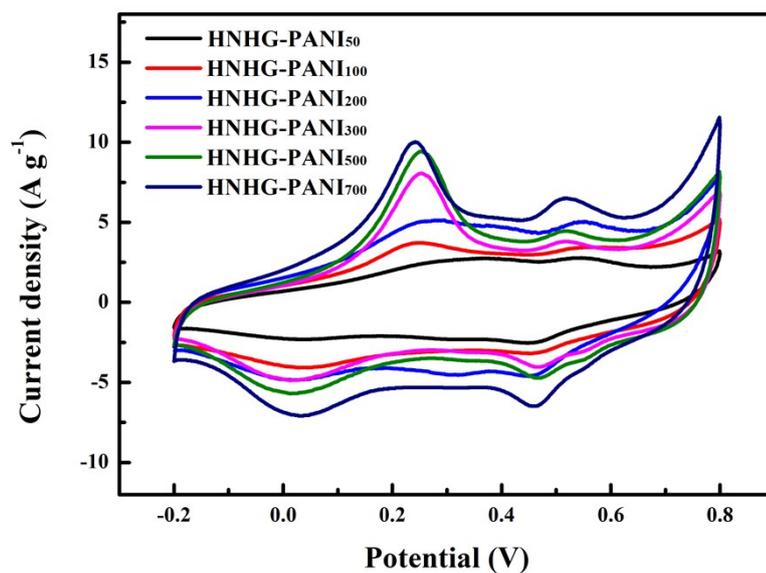


Fig. S5 CV curves of HNHG-PANI₅₀, HNHG-PANI₁₀₀, HNHG-PANI₂₀₀, HNHG-PANI₃₀₀, HNHG-PANI₅₀₀ and HNHG-PANI₇₀₀ at a scan rate of 5 mV s⁻¹.

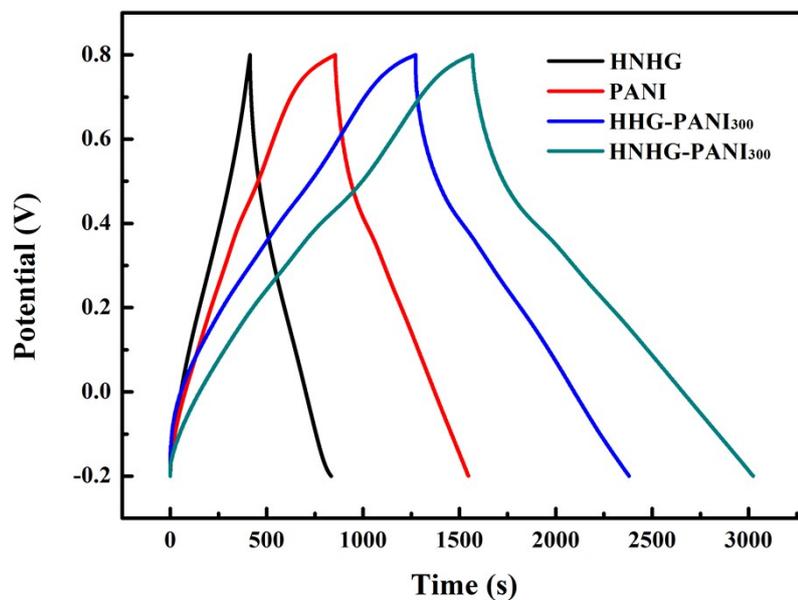


Fig. S6 Constant current charge-discharge curves of HNHG, PANI, HHG-PANI₃₀₀ and HNHG-PANI₃₀₀ at 0.5 A g⁻¹.

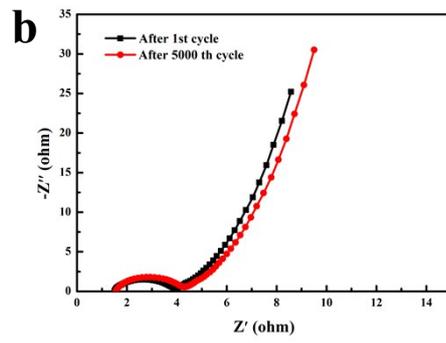
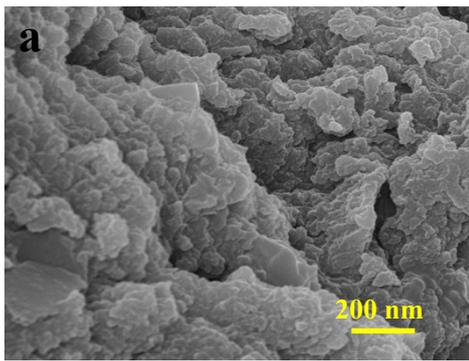


Fig. S7 (a) SEM image and (b) Nyquist plots of HNHG-PANI₃₀₀ after 5000 cycles.