Supporting Information

Single-step grown boron doped nanocrystalline diamond-carbon nanograss hybrid as an efficient supercapacitor electrode

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Table S1 Parameters obtained from Lorentzian fitting of Raman spectrum.

Peaks	Centre (cm^{-1})	FWHM (cm^{-1})	Intensity
D	1352	80	9983.8
G	1582	45	15061.9
2D	2695.9	72	5160.1
D+G	2942	134	731.0

Table S2: Circuit parameters for equivalent circuit model obtained from EIS of HCNGs in 1 M Na_2SO_4 and 0.05 M $Fe(CN)_6^{3-/4-}$ containing 1 M Na_2SO_4 solution.

Electrolytes	R_s	R_{CT1}	Q_1	Q_2	R_{CT2}	Q_3	χ^2
Na_2SO_4	69 Ω	100 Ω	45.9 µMho α = 0.998	3.67 µMho α = 0.39	2 kΩ	278 µMho α = 0.79	0.01
Na_2SO_4+$Fe(CN)_6^{3-/4-}$	10 Ω	27.9 Ω	24.5 µMho α = 0.99	44.1 µMho α= 0.616	50 Ω	29.9 µMho α= 0.623	0.006

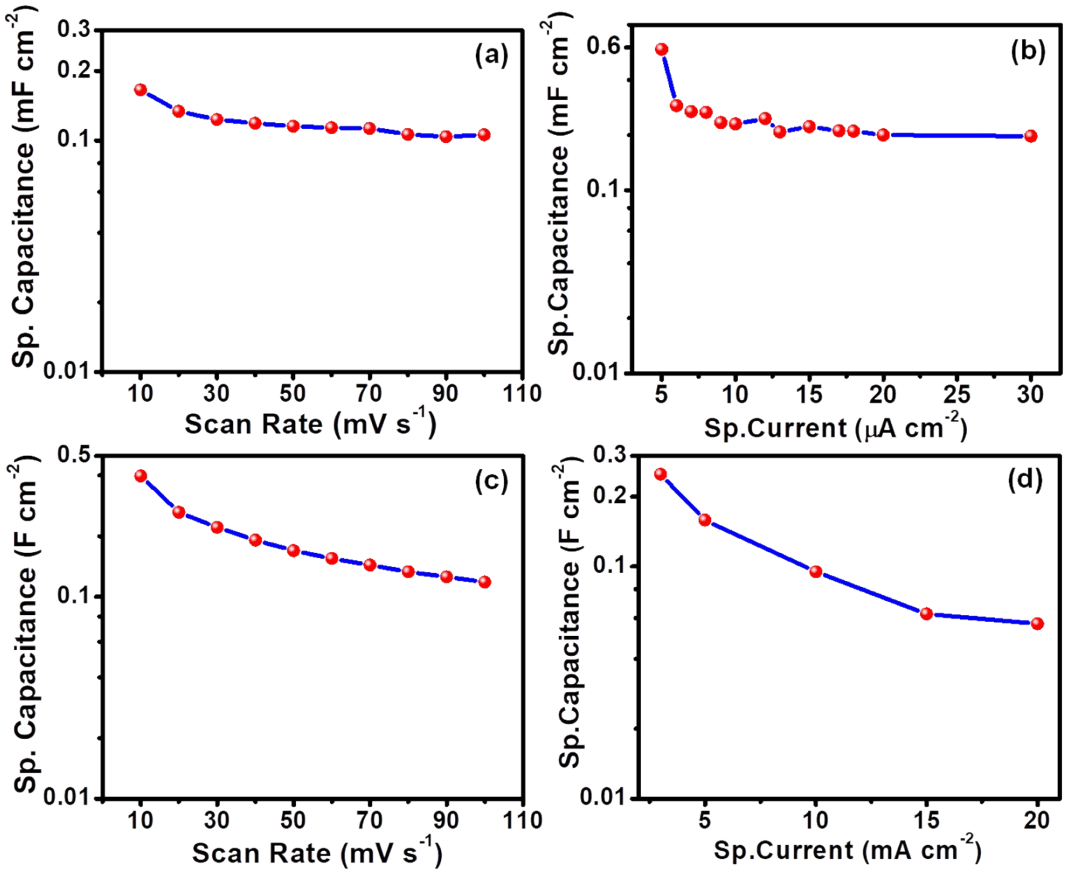

Figure S1. Variation of specific capacitance for HCNGs in 1M Na_2SO_4 (a) at different scan rates and (b) at different current densities. Variation of specific capacitance for HCNGs in redox species content 1 M Na_2SO_4 (c) at different scan rates and (d) at different current densities.

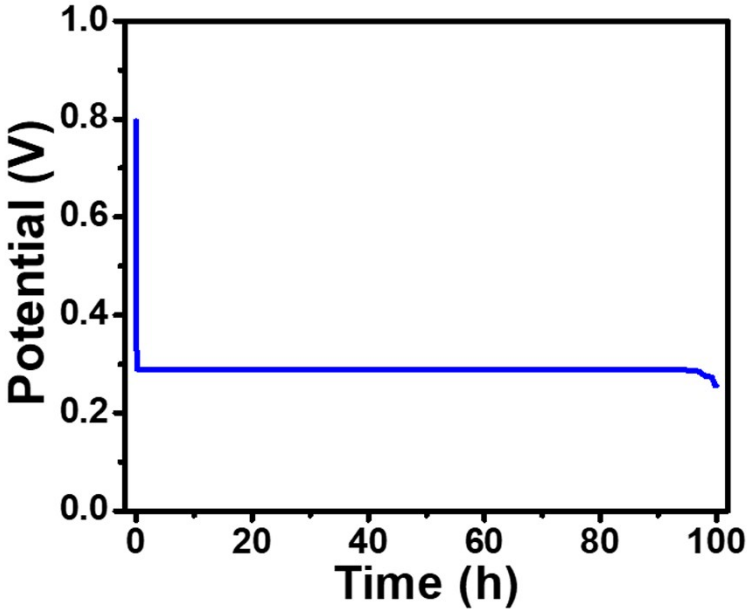

Figure S2. Self-discharge performance of HCNG electrode in redox species contained 1 M Na_2SO_4 for 100 hours.

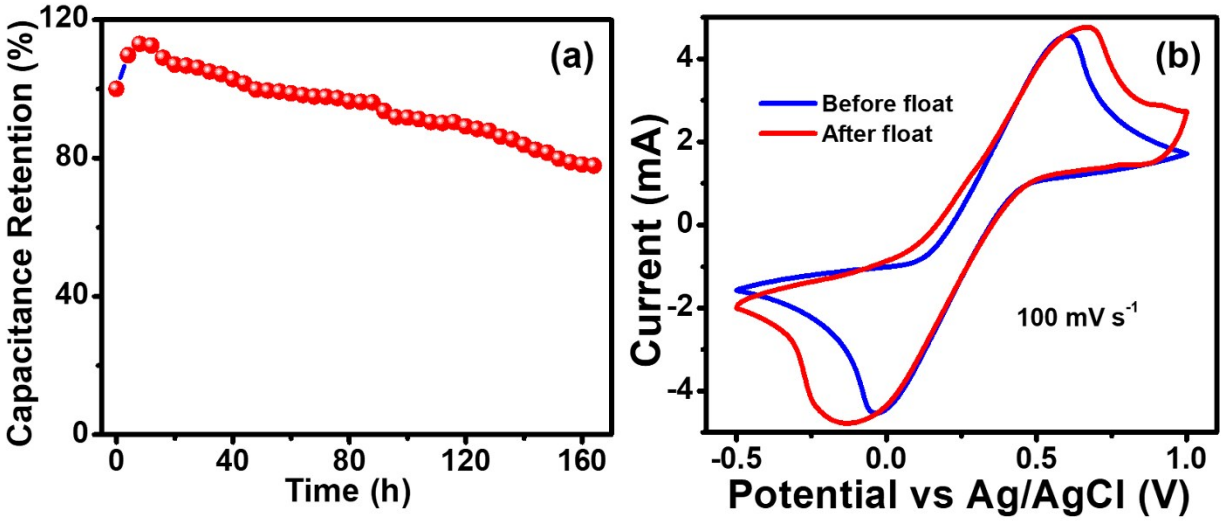

Figure S3. (a) Variation of capacitance retention of HCNG electrode during floating test carried out for 164 hours in 0.05 M $Fe(CN)_6^{-3/-4}$ contained 1 M Na_2SO_4 aqueous solution. (b) CV

response of the HCNG electrode before and after the floating test at 100 mV s^{-1} scan rate in redox active electrolyte.