Electronic Supplementary Information

Size-controllable synthesis of monodispersed nitrogen-doped carbon nanospheres from polydopamine for high-rate supercapacitors

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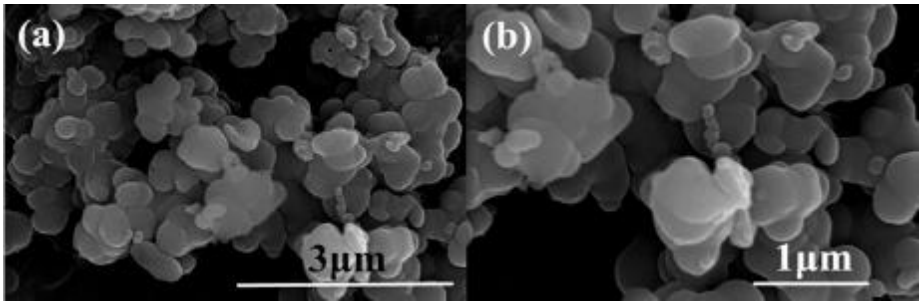

Fig. S1 SEM images of PDA obtained in the absence of F127.

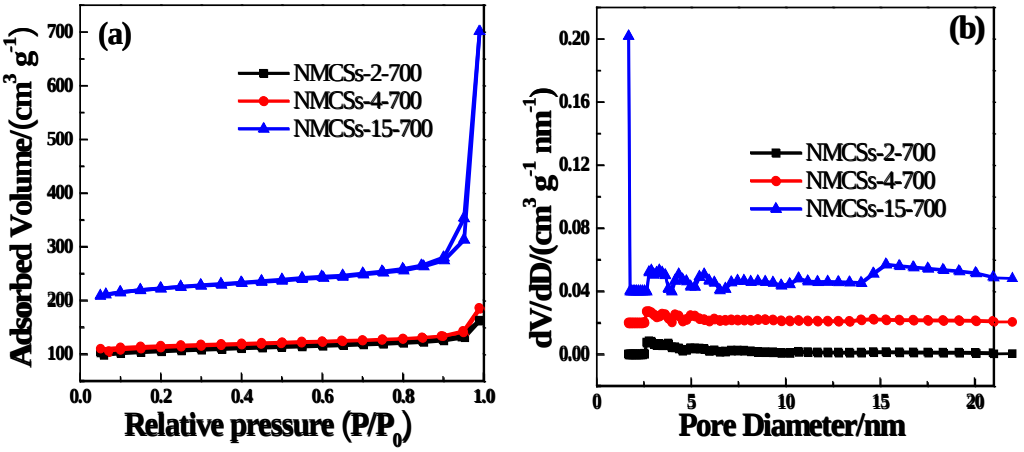

Fig. S2 (a) N_2 adsorption-desorption isotherms and (b) the corresponding pore size distribution curves of NMCSs-*x*-700. The *d*V/*d*D value was shifted by 0.02 and 0.04 cm^3 g^{-1} nm^{-1} for NMCSs-4-700 and NMCSs-15-700, respectively.

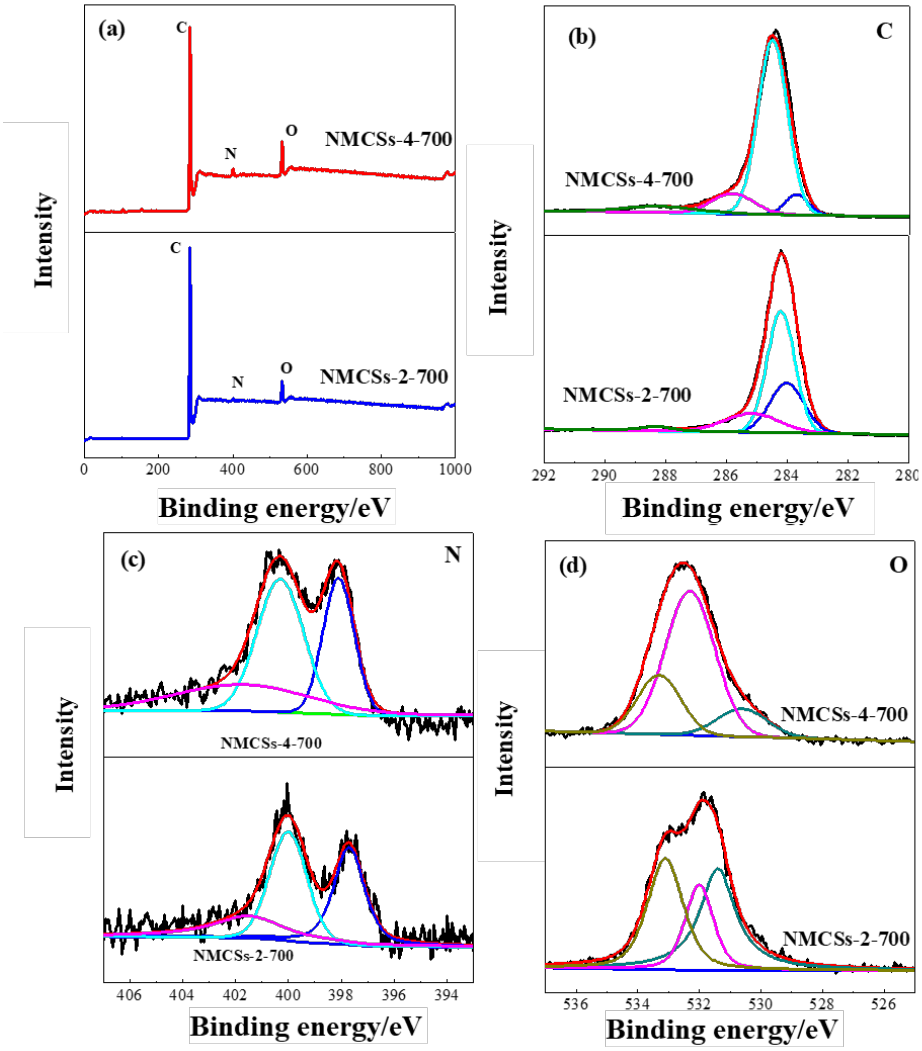

Fig. S3 XPS spectra of the NMCSs-2-700 and NMCSs-4-700. (a) survey spectrum; (b) C1s, (c) N1s, (d) O1s

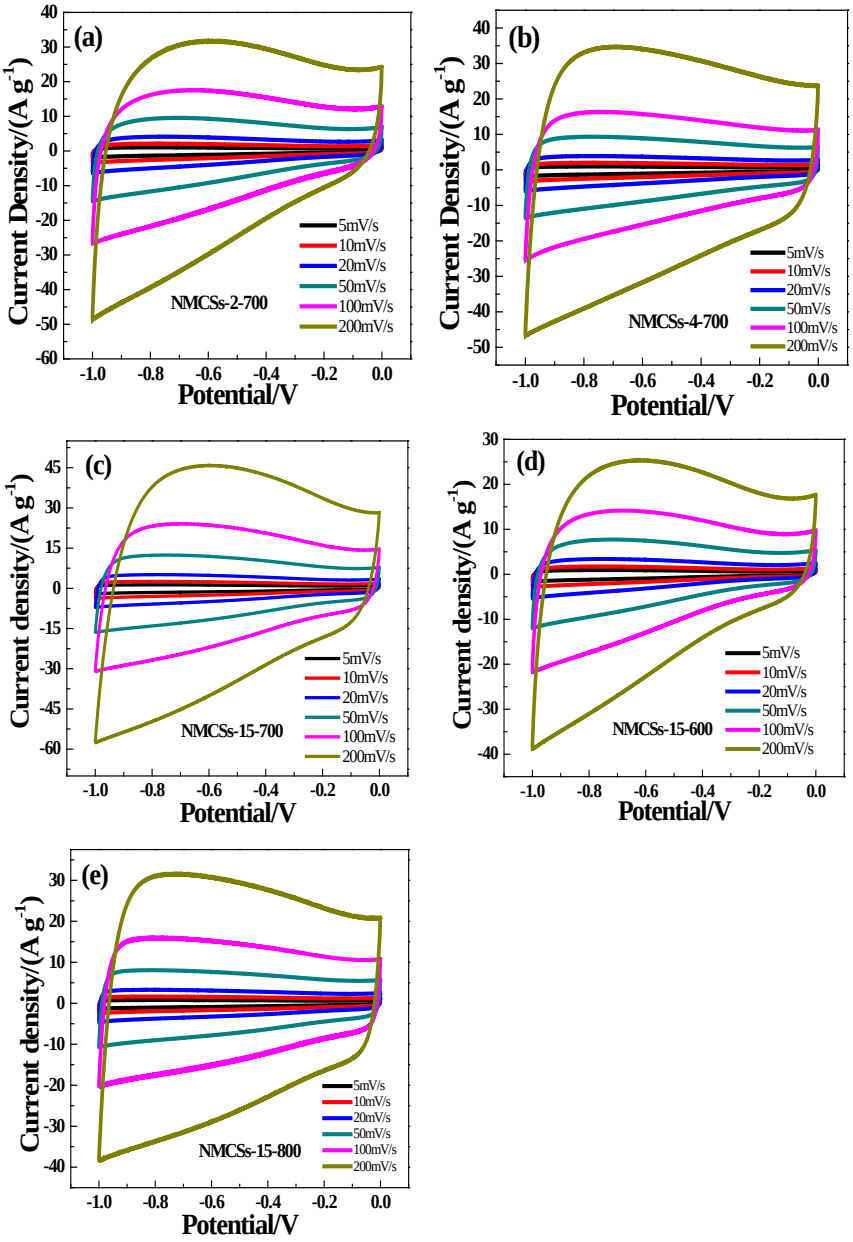

Fig. S4 CV curves of sample NMCSs-*x*-*y* at different scan rates (5-200 mV s^{-1}) in 6 M KOH solution. (a) NMCSs-2-700, (b) NMCSs-4-700, (c) NMCSs-15-700, (d) NMCSs-15-600 and (e) NMCSs-15-800.

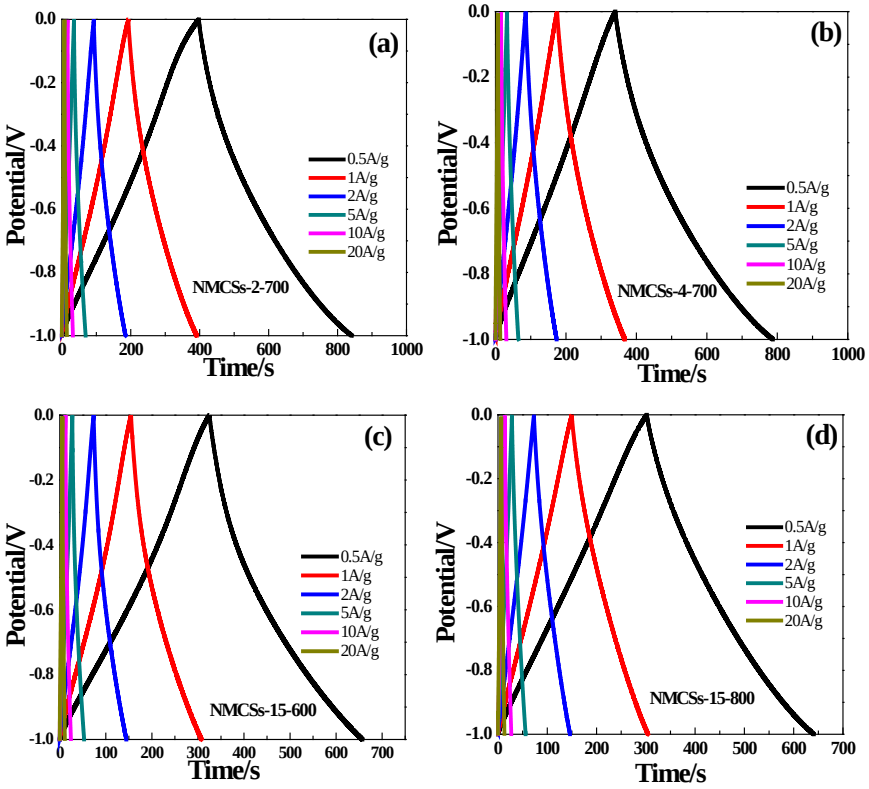

Fig. S5 Galvanostatic charge-discharge curves of the NMCSs-*x*-*y*. (a) NMCSs-2-700, (b) NMCSs-4-700, (c) NMCSs-15-600 and (d) NMCSs-15-800 at different current densities.

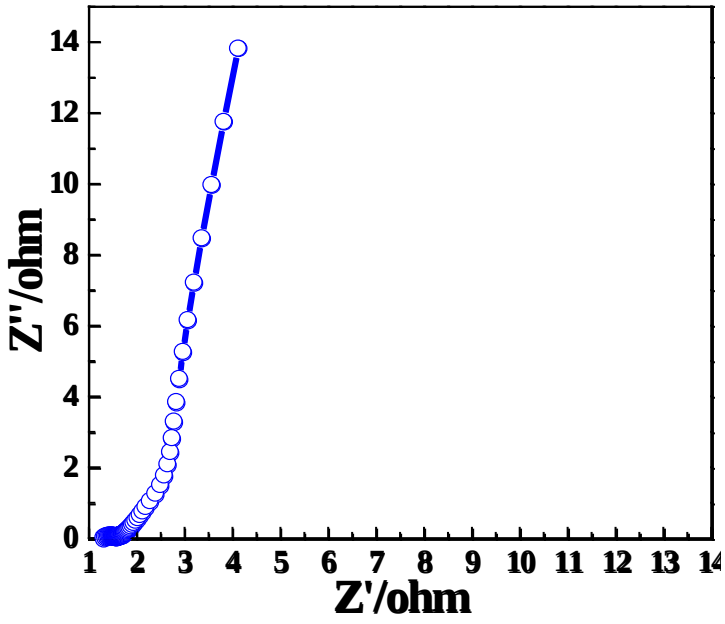

Fig. S6 EIS of symmetric supercapacitor devices.

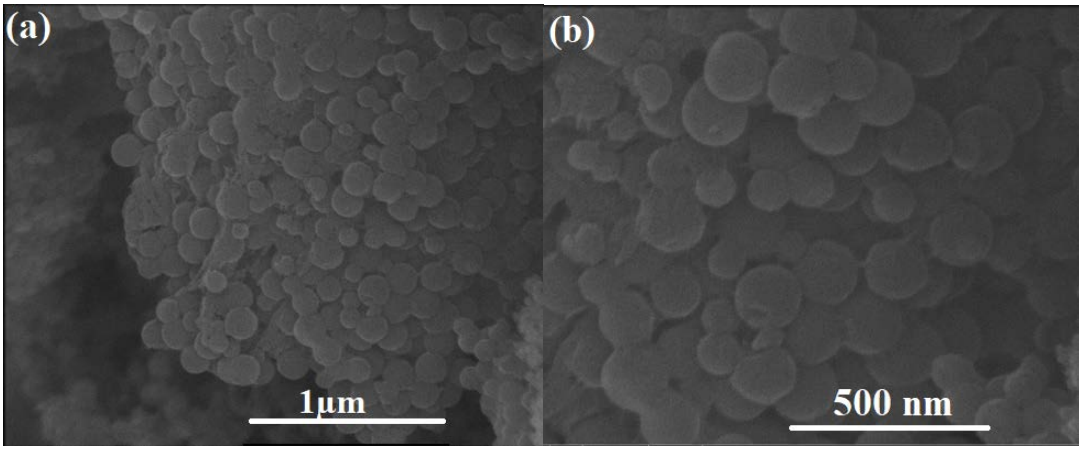

Figure S7 SEM images of NMCMs-15-700 after 5000 cycles.

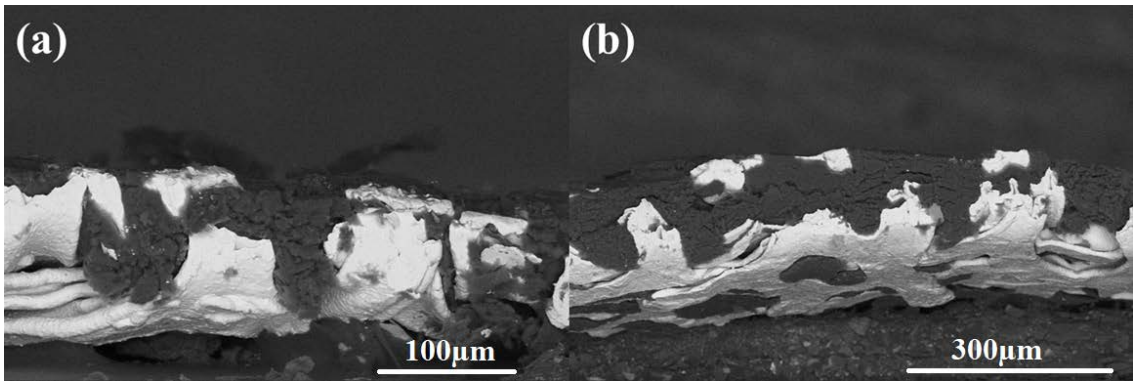

Figure S8 Cross-sectional view of working electrode from SEM (the white area is Ni foam and the gray area is carbon materials).