Supporting Information

In-situ self-activation synthesis of binary-heteroatom co-doped 3D coralline-like microporous carbon nanosheets for high-efficient energy storage in flexible all-solid-state symmetrical supercapacitors

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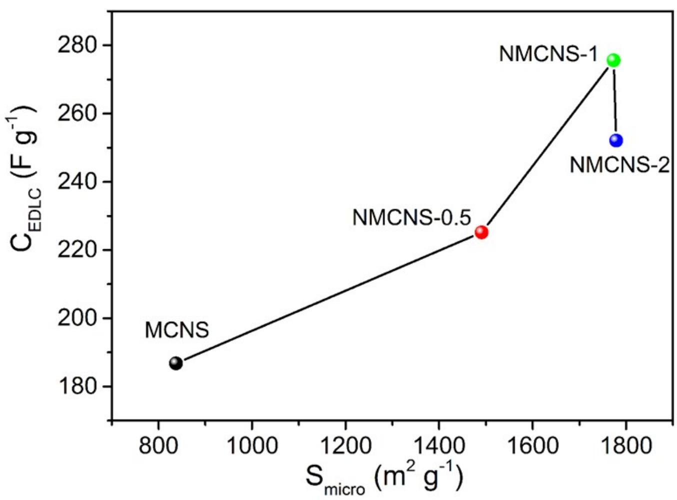

Fig. S1 The dependence of C_{EDLC} on microporosity

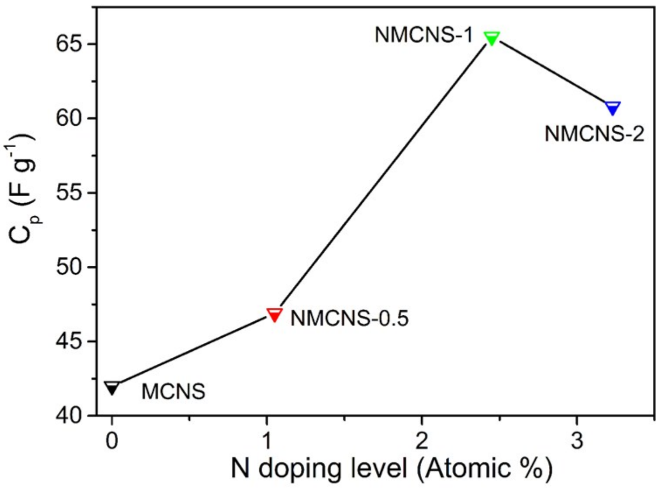

Fig. S2 The relationship between C_p and the doping level of N/O species

Table S1 XPS analysis of the MCNS and NMCNS samples

Sample	XPS analysis (atom%)		
	C	N	O
MCNS	69.79	—	30.21
NMCNS-0.5	75.52	1.05	23.43
NMCNS-1	81.74	2.46	15.80
NMCNS-2	87.92	3.32	8.86

Table S2 The comparison of electrochemical capacitive performance of NMCNS-1 with reported carbon-based electrode materials

Materials	Capacitance ($F\ g^{-1}$)	Current density	Electrolyte	Energy density ($Wh\ kg^{-1}$)	Power density ($W\ kg^{-1}$)	Electrolyte	Ref.
Sorghum stalk based porous carbons	216.5	0.5 A g^{-1}	2 M KOH	9.77	225.35	0.5 M Na_2SO_4	1
N,O co-doped highly porous carbon microflakes	278	1A g^{-1}	2 M H_2SO_4	9.5	500	2 M H_2SO_4	2
N-doped yolk–shell hollow mesoporous carbon	169	1 A g^{-1}	1 M H_2SO_4	7.6	—	1 M H_2SO_4	3
S, N co-doped porous carbon sheets	275	0.5 A g^{-1}	6 M KOH	7.8	250	6 M KOH	4
Porous graphitic biomass carbon	222	0.5A g^{-1}	KOH/PVA	6.68	100.2	KOH/PVA	5
torreya grandis shell-derived porous carbon	290.1	0.5 A g^{-1}	6 M KOH	13.5	360.1	0.5 M Na_2SO_4	6
Biomass-derived activated carbon materials	156	0.5 A g^{-1}	1 M H_2SO_4	7.8	150.2	1 M H_2SO_4	7
Oily sludge-derived hierarchical porous carbons	348.1	0.5 A g^{-1}	6 M KOH	7.22	100	KOH/PVA	8
Biomass-based N-doped porous carbon nanosheet	240.7	1 A g^{-1}	6 M KOH	10.2	351	KOH/PVA	9
N-self-doped carbon nanofiber aerogels	224	0.5 A g^{-1}	2 M H_2SO_4	5.7	125	KOH/PVA	10
NMCNS-1	356	0.5 A g^{-1}	6 M KOH	16.3	180.1	0.5 M Na_2SO_4	This work
				11.1	102.5	KOH/PVA	

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