Supplementary Materials

Triethanolamine assisted synthesis of bimetallic nickel cobalt nitride/nitrogen-doped carbon hollow nanoflowers for supercapacitor

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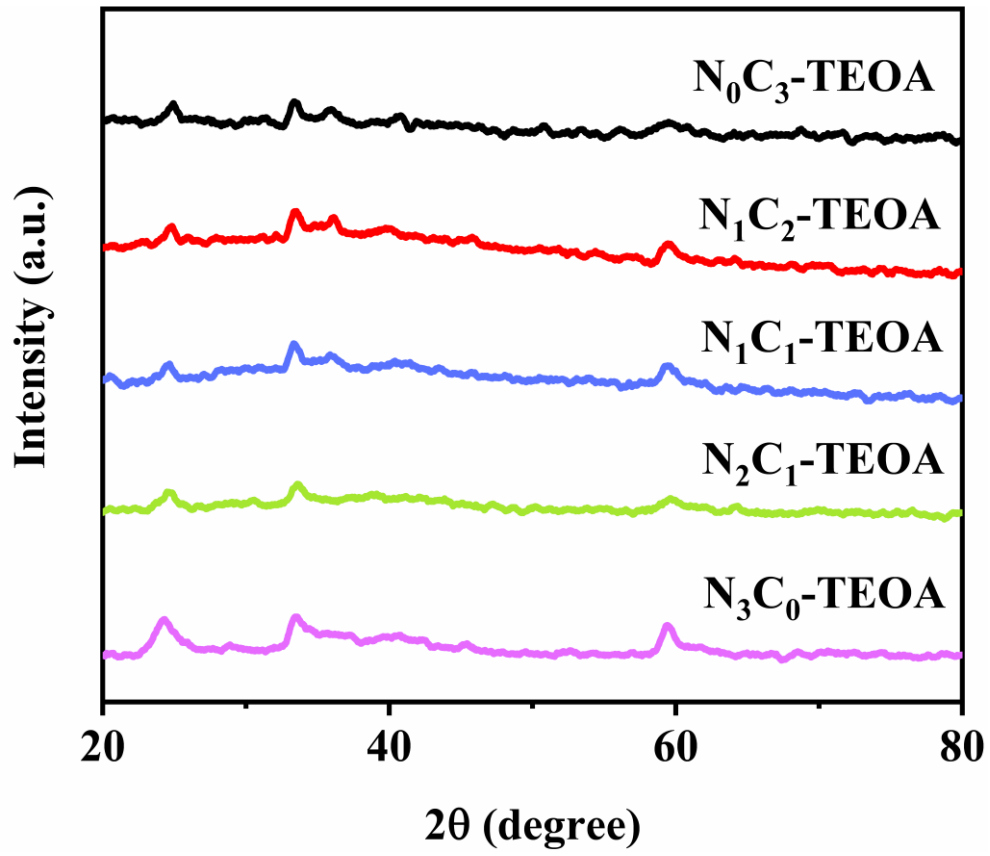

Figure S1. XRD patterns of N_0C_3-TEOA, N_1C_2-TEOA, N_1C_1-TEOA, N_2C_1-TEOA, N_3C_0-TEOA.

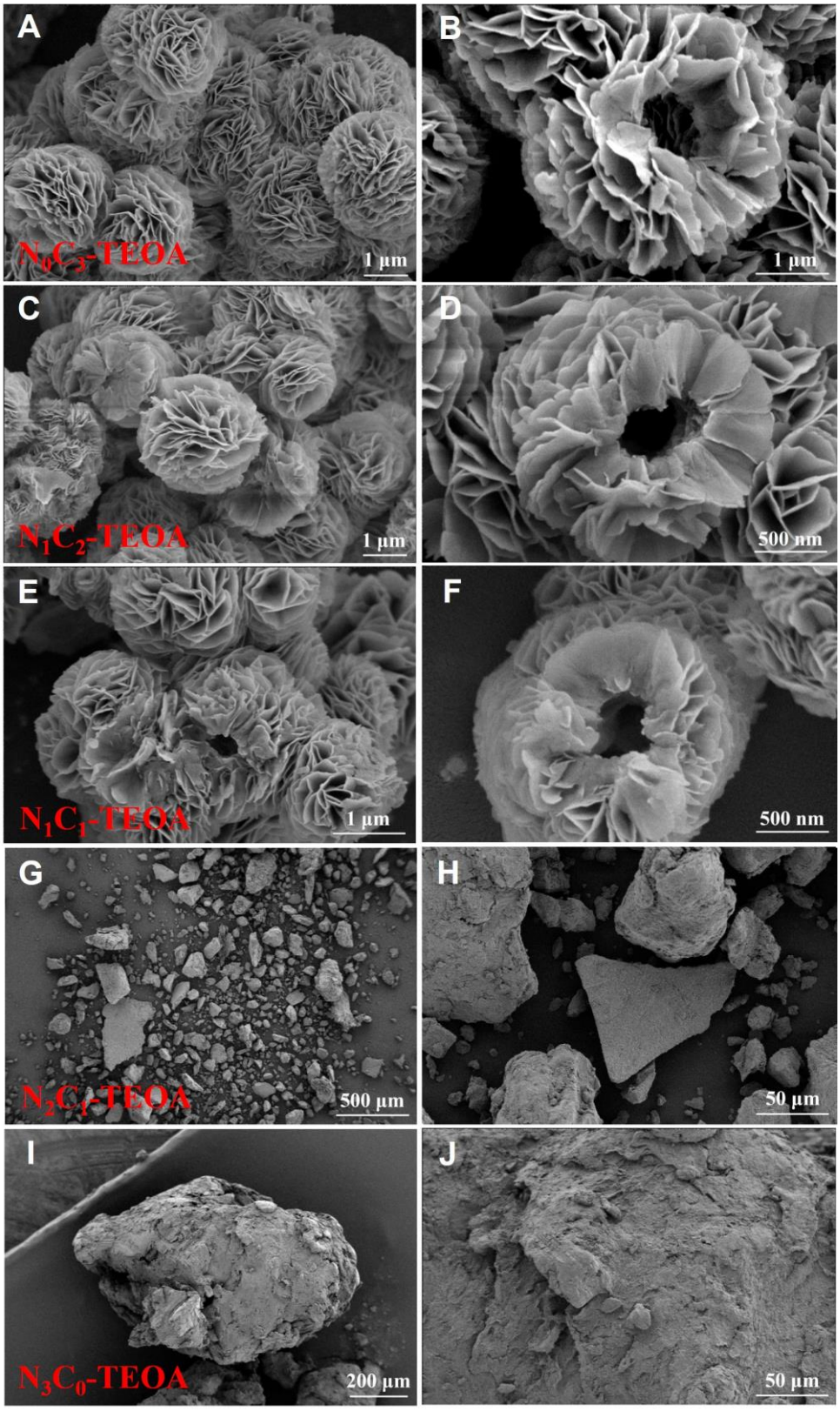

Figure S2. SEM images of (A, B) N_0C_3-TEOA, (C, D) N_1C_2-TEOA, (E, F) N_1C_1-TEOA, (G, H) N_2C_1-TEOA, (I, J) N_3C_0-TEOA.

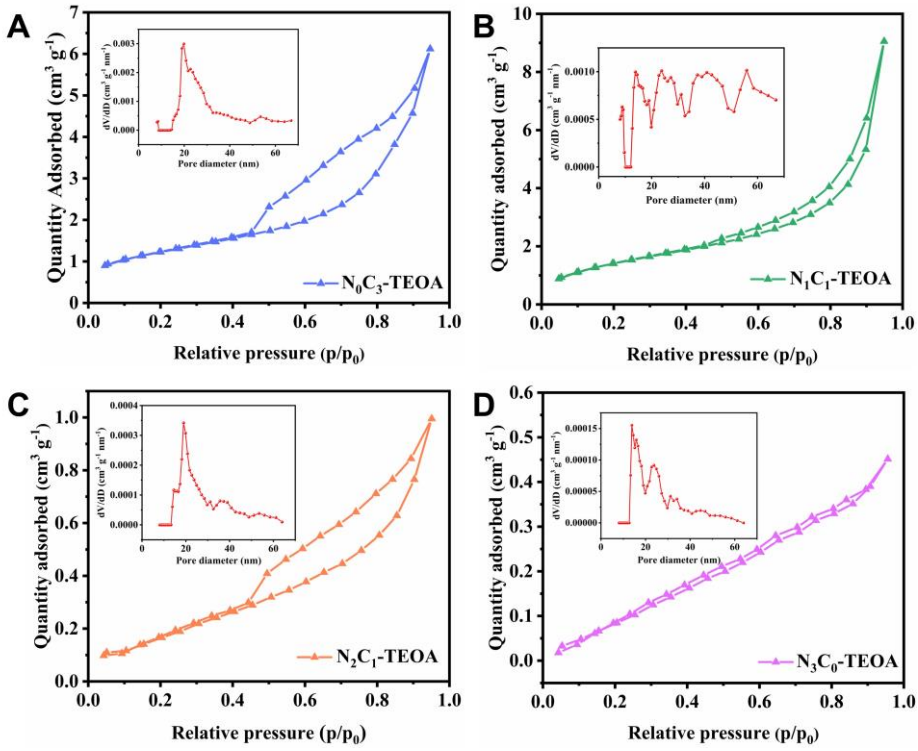

Figure S3. N_2 adsorption-desorption isotherms of (A) N_0C_3-TEOA, (B) N_1C_1-TEOA, (C) N_2C_1-TEOA, (D) N_3C_0-TEOA (Inset: Corresponding pore diameter distribution patterns).

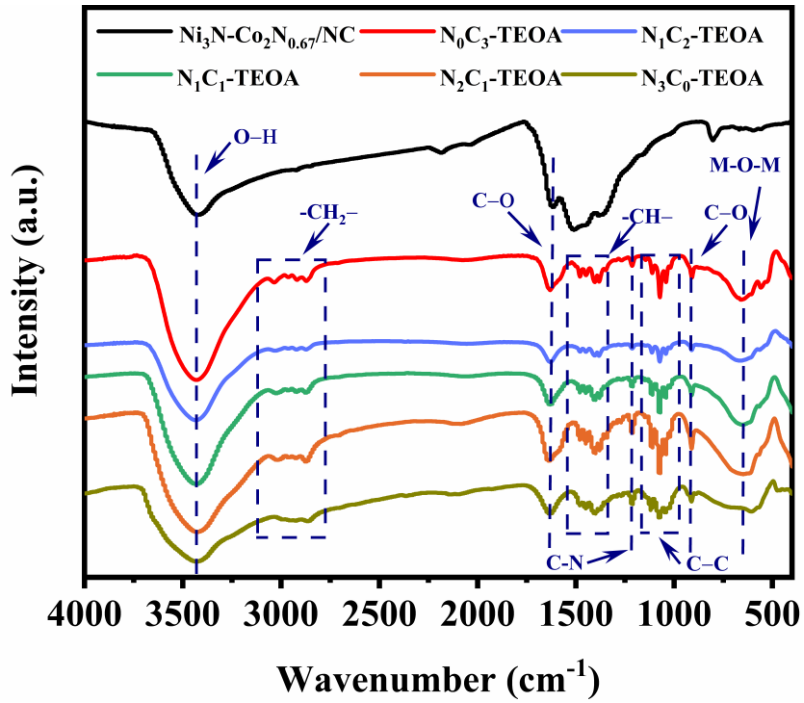

Figure S4. FTIR spectrum of Ni_3N-$Co_2N_{0.67}$/NC, N_0C_3-TEOA, N_1C_2-TEOA, N_1C_1-TEOA, N_2C_1-TEOA and N_3C_0-TEOA.

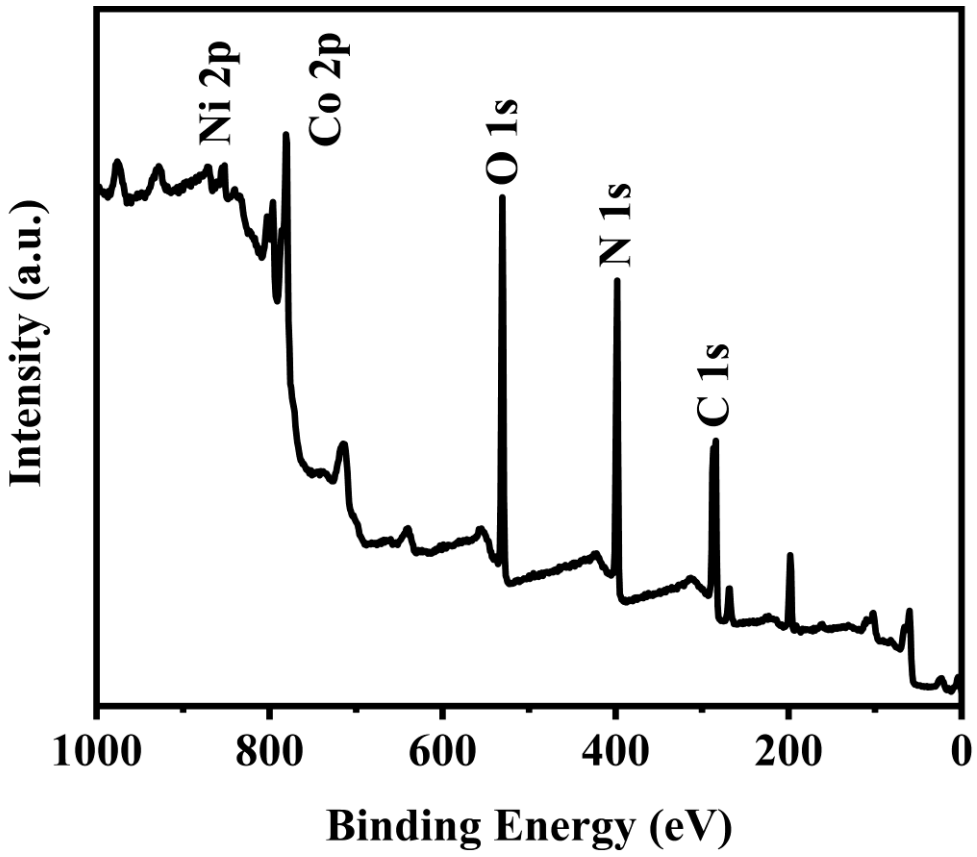

Figure S5. XPS full spectrum of Ni_3N-$Co_2N_{0.67}$/NC.

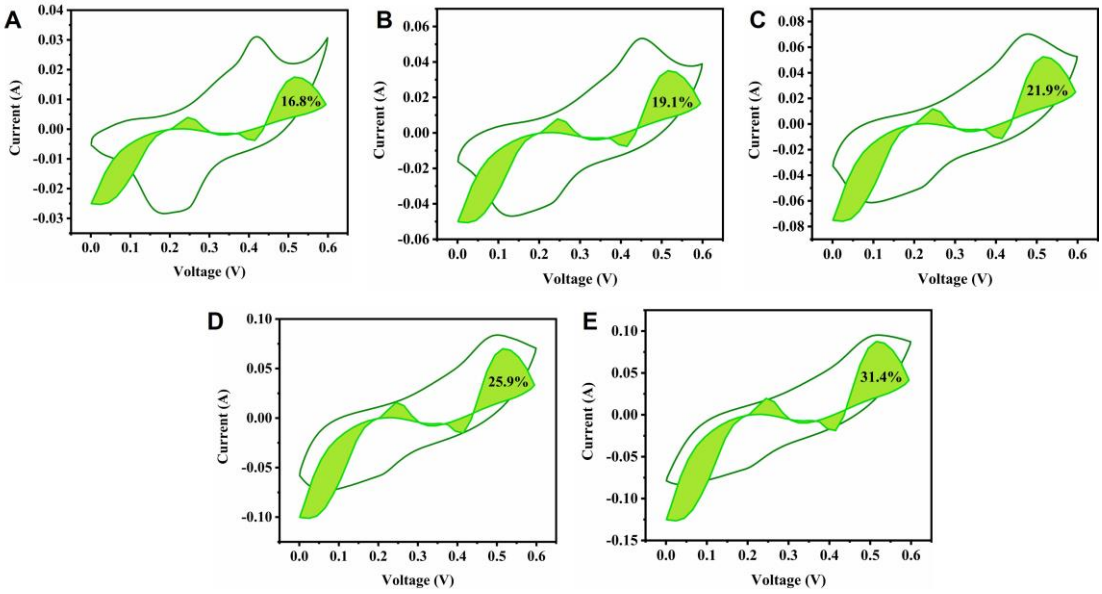

Figure S6. Capacitive- and diffusive-controlled contributions of the Ni_3N-$Co_2N_{0.67}$/NC electrode by CV curves at (A) 10 mv s^{-1}, (B) 20 mV s^{-1}, (C) 30 mV s^{-1} (D) 40 mV s^{-1}, (E) 50 mV s^{-1}.

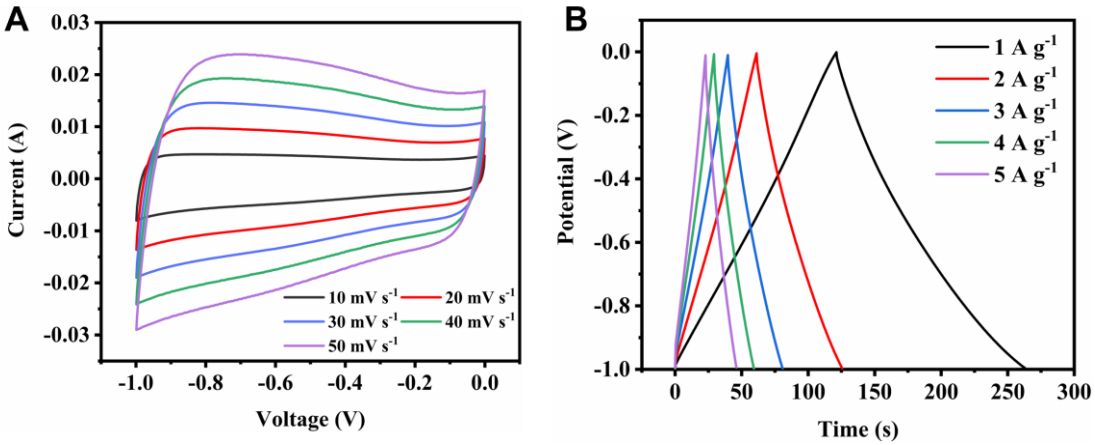

Figure S7. (A) CV curves of active carbon at different sweep rates. (B) GCD profiles of active carbon at different current densities.

Table S1. Comparison of specific capacitance of Ni_3N-$Co_2N_{0.67}$/NC with other similar materials reported earlier.

Materials	Electrolyte	Potential window (V)	Current Density	Specific capacitance (F g^{-1})	Refs.
Ni_3N-$Co_2N_{0.67}$/NC	1 M KOH	0.5	1 A g^{-1}	1582	This work
Ni-Co-N/GP	3 M KOH	0.5	4 A g^{-1}	960	[1]
Ni-CoN@NC	1 M KOH	0.6	1 A g^{-1}	993	[2]
Ni-doped Co-Co_2N	1 M KOH	0.5	2 mA/cm^2	181	[3]
B-Co_4N-20/NF	3M KOH	0.5	1 A g^{-1}	489	[4]
Co_4N@LOC/CC	1 M KOH	0.45	1 mA/cm^2	613.4	[5]
Co_3N	6 M KOH	0.43	0.5 A g^{-1}	112.3	[6]
Co_3O_4@Ni-Co LDH	2 M KOH	0.55	0.5 A g^{-1}	1318	[7]
NCH/EMCTs-36	6 M KOH	0.4	0.5 A g^{-1}	801	[8]
$Co(OH)_2$/Ni	2 M KOH	0.4	1 A g^{-1}	1310	[9]
Ni-Co LDH	1 M KOH	0.5	1 A g^{-1}	1530	[10]
Ni/Co-MOF/rGO	1 M KOH	0.4	1 A g^{-1}	1162	[11]
3D Ni–Co LDH/NiNw	6 M KOH	0.55	0.125 A g^{-1}	466.6	[12]

References

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