

Supplementary Information

Plasma tailor reactive nitrogen species in MOF derived carbon materials for hybrid sodium-air battery

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Table S1. The ratio of pyridinic-N to pyrrolic-N, total-N to total-Co, the relative contents of Co-N_x sites, Co-Co bonds, for MOF-NCNTs, MOF-NCNTs-N₂-2, MOF-NCNTs-N₂-4, and MOF-NCNTs-N₂-8.

Sample	pyridinic-N/ pyrrolic-N	total-N/total-Co	Co-N _x sites	Co-Co bonds
MOF-NCNTs	0.93	2.92	50.07%	30.51%
MOF-NCNTs-N ₂ -2	0.97	3.02	53.60%	32.59%
MOF-NCNTs-N ₂ -4	1.11	3.16	52.71%	35.77%
MOF-NCNTs-N ₂ -8	0.86	2.99	53.12%	31.26%

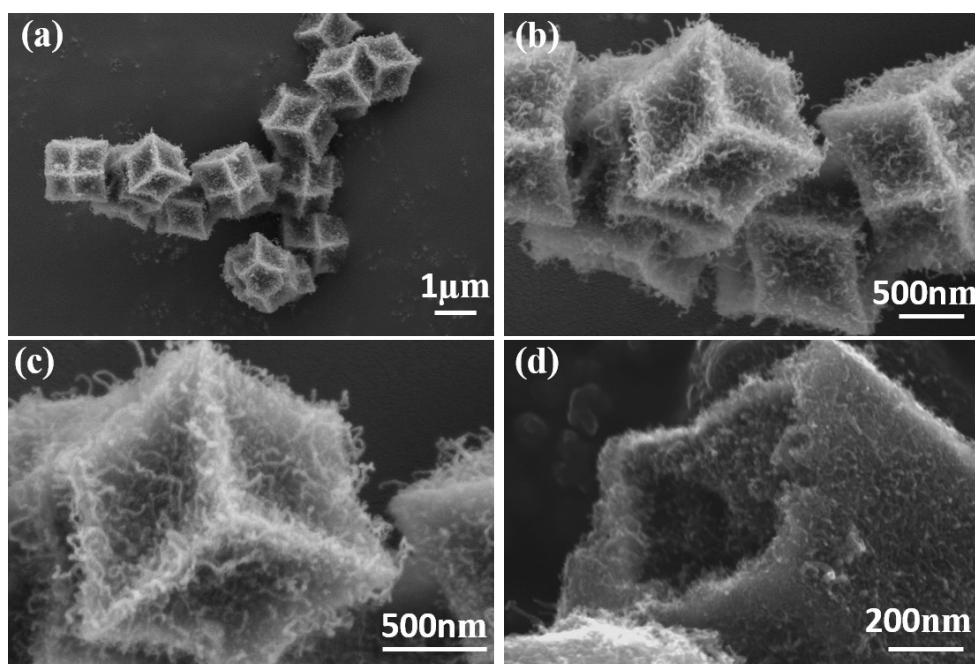


Figure S1. FESEM images of MOF-NCNTs.

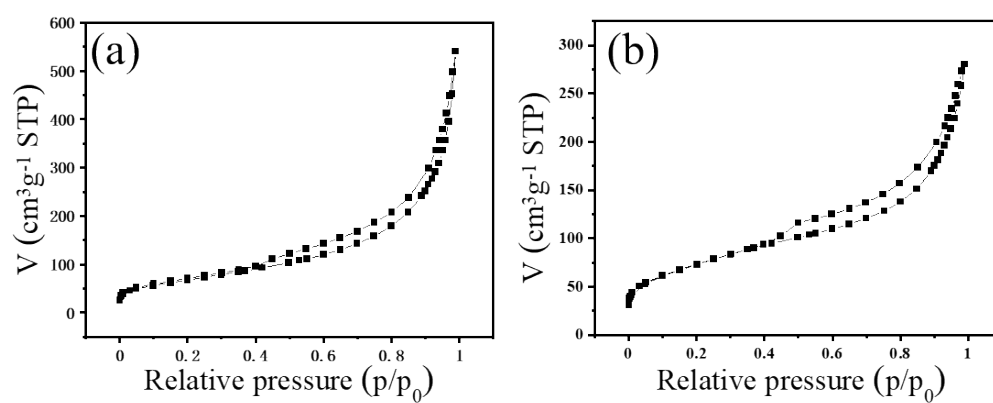


Figure S2. N_2 adsorption-desorption isotherms of (a) MOF-NCNTs; (b) MOF-NCNTs- N_2 -4.

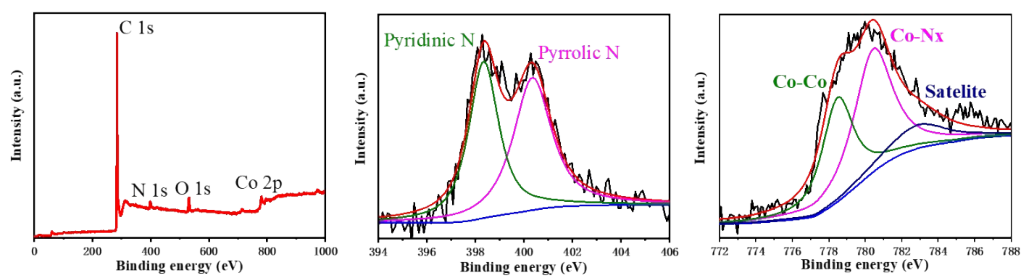


Figure S3. (a)XPS survey spectra and high-resolution spectra of MOF-NCNTs; (b)N 1s; (c)Co

2p_{3/2}.

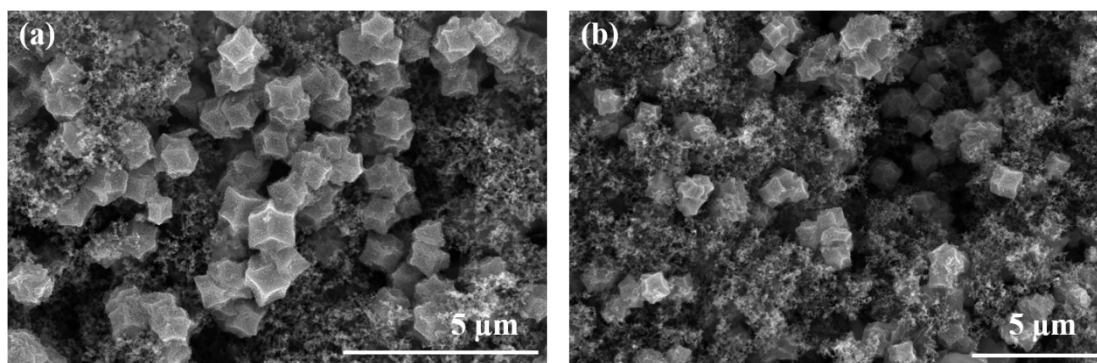


Figure S4. FESEM images of MOF-NCNTs-N₂-4 (a) Before cycle, (b) After 150 cycles.