

Supporting Information

Curvature Enhanced NH₂-MIL-53(Al) Electrode for Boosting Ion Diffusion and Capacitive Deionization Defluorination

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1. Supplementary Figures

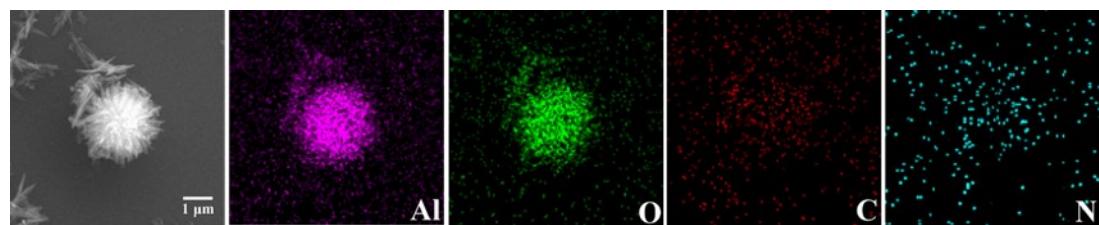


Figure S1. EDS mapping of NCMOF-3.

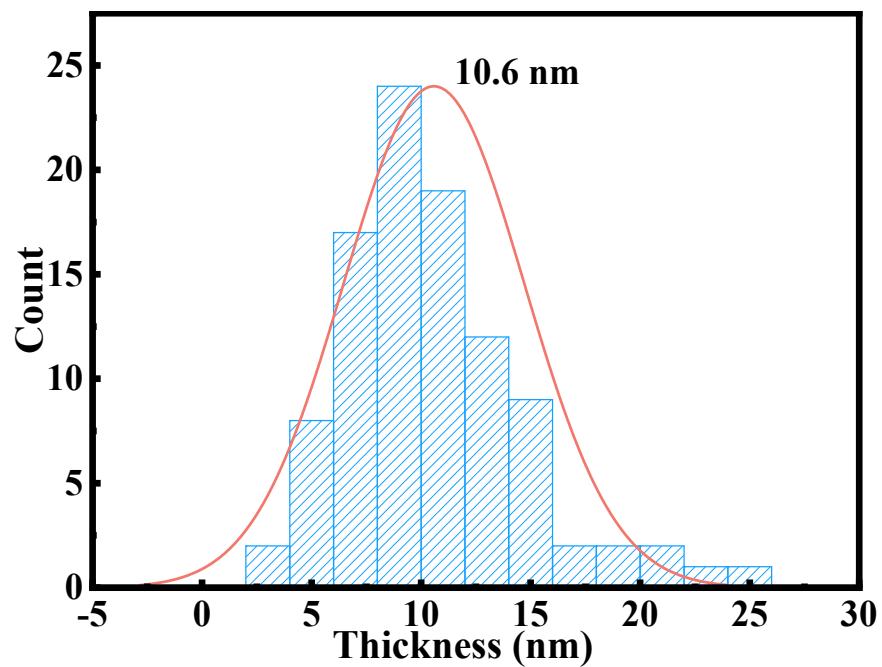


Figure S2. Thickness distribution of NCMOF-3 measured by SEM images.

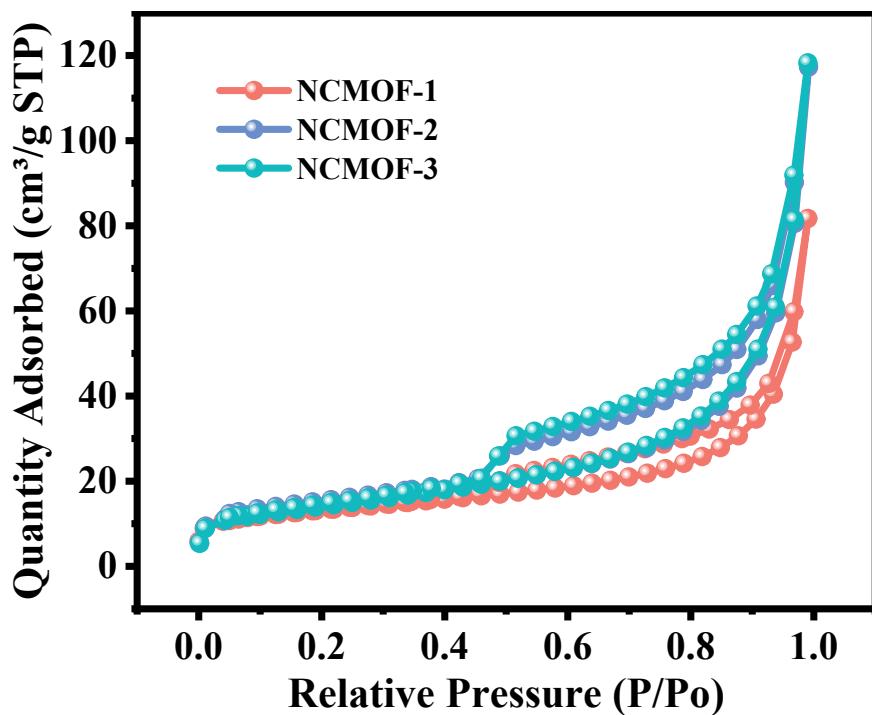


Figure S3. N_2 adsorption/desorption curves of NCMOF-1, NCMOF-2, and NCMOF-3.

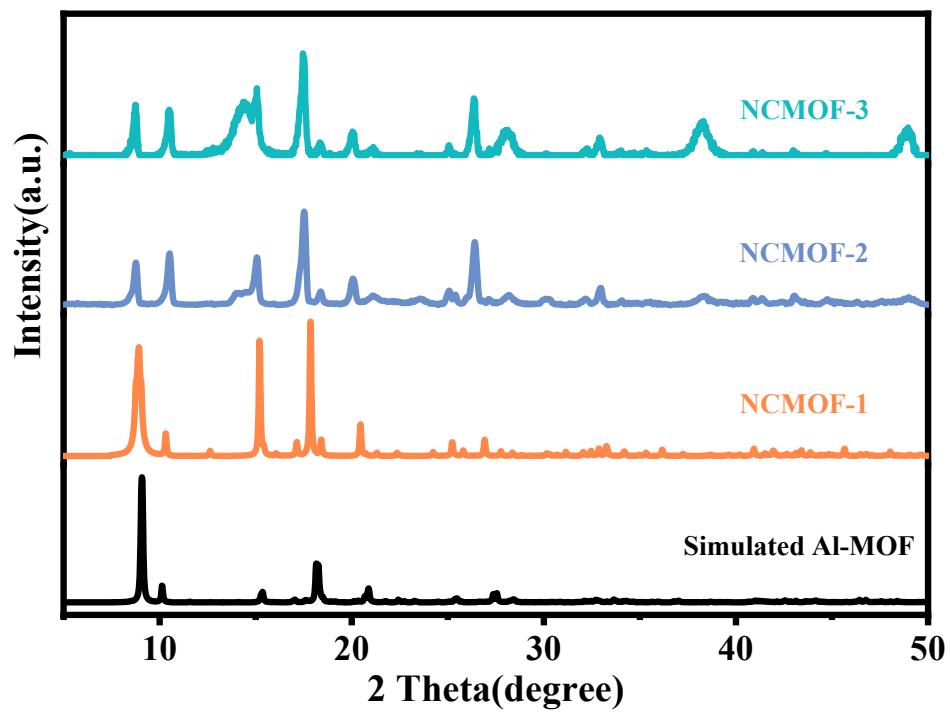


Figure S4. XRD of NCMOF-1, NCMOF-2 and NCMOF-3.

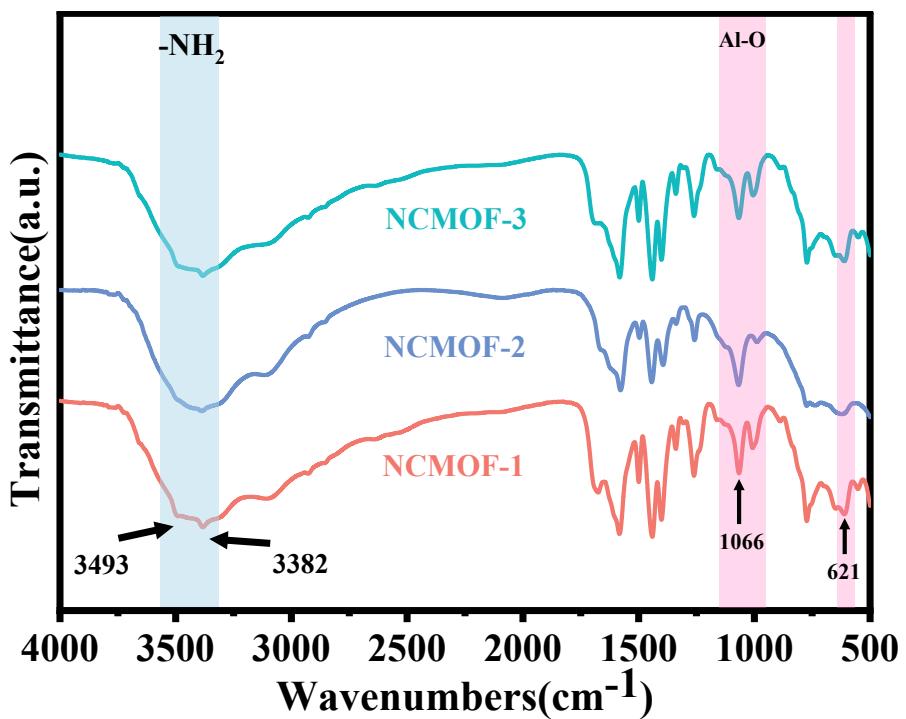


Figure S5. FTIR of NCMOF-1, NCMOF-2 and NCMOF-3.

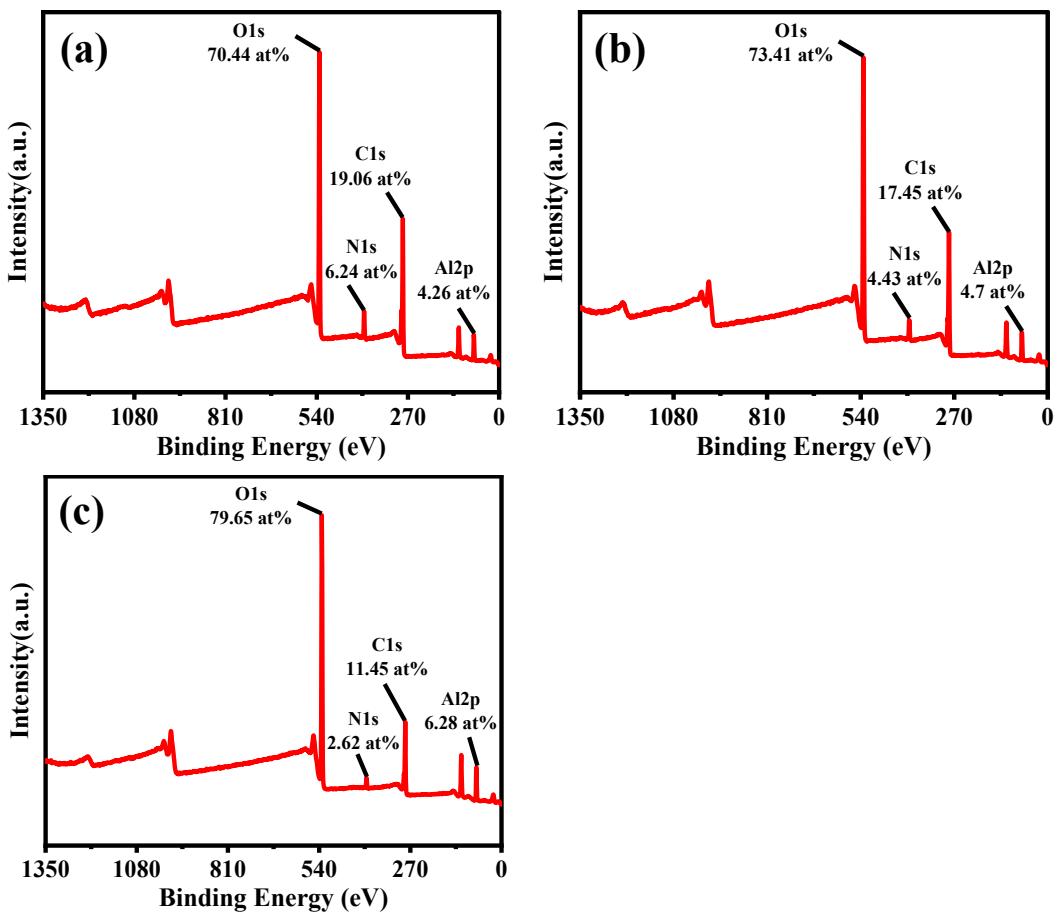


Figure S6. Survey XPS spectrum of (a) NCMOF-1, (b) NCMOF-2, and (c) NCMOF-3.

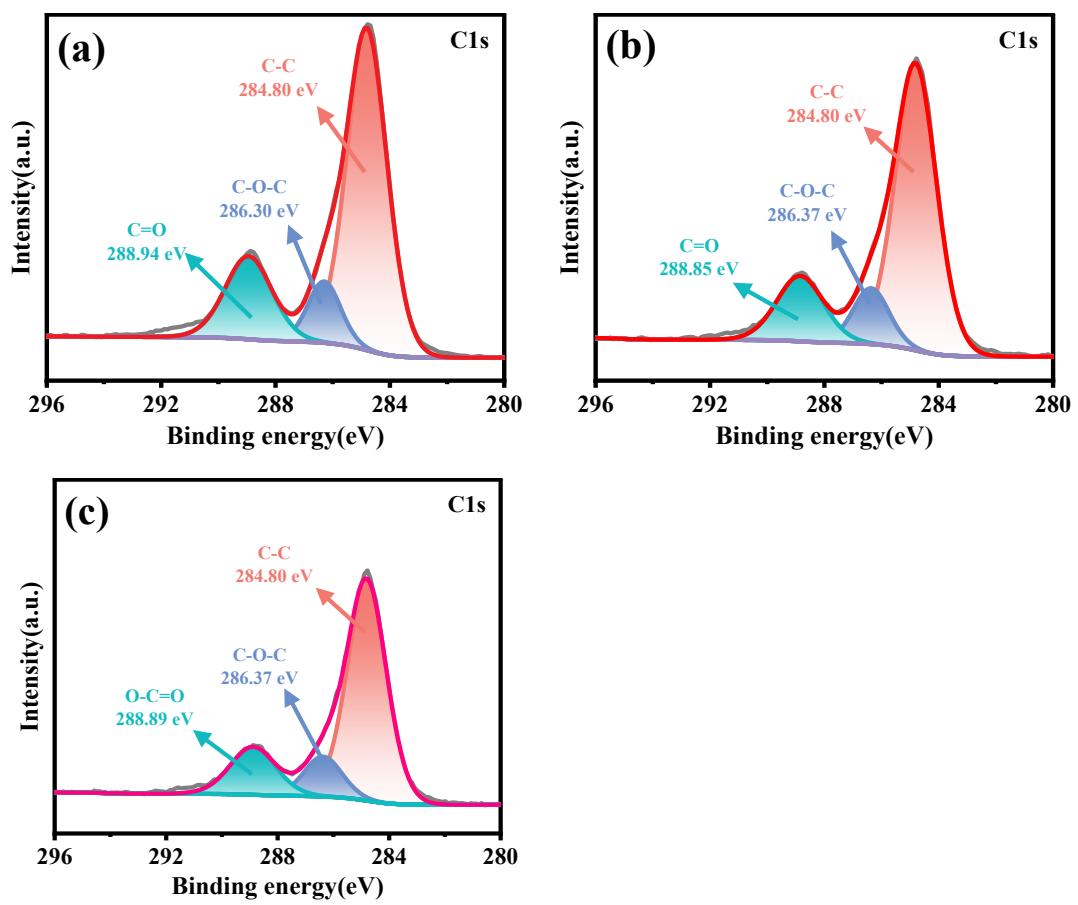


Figure S7. XPS spectra for C1s of (a) NCMOF-1, (b) NCMOF-2, and (c) NCMOF-3.

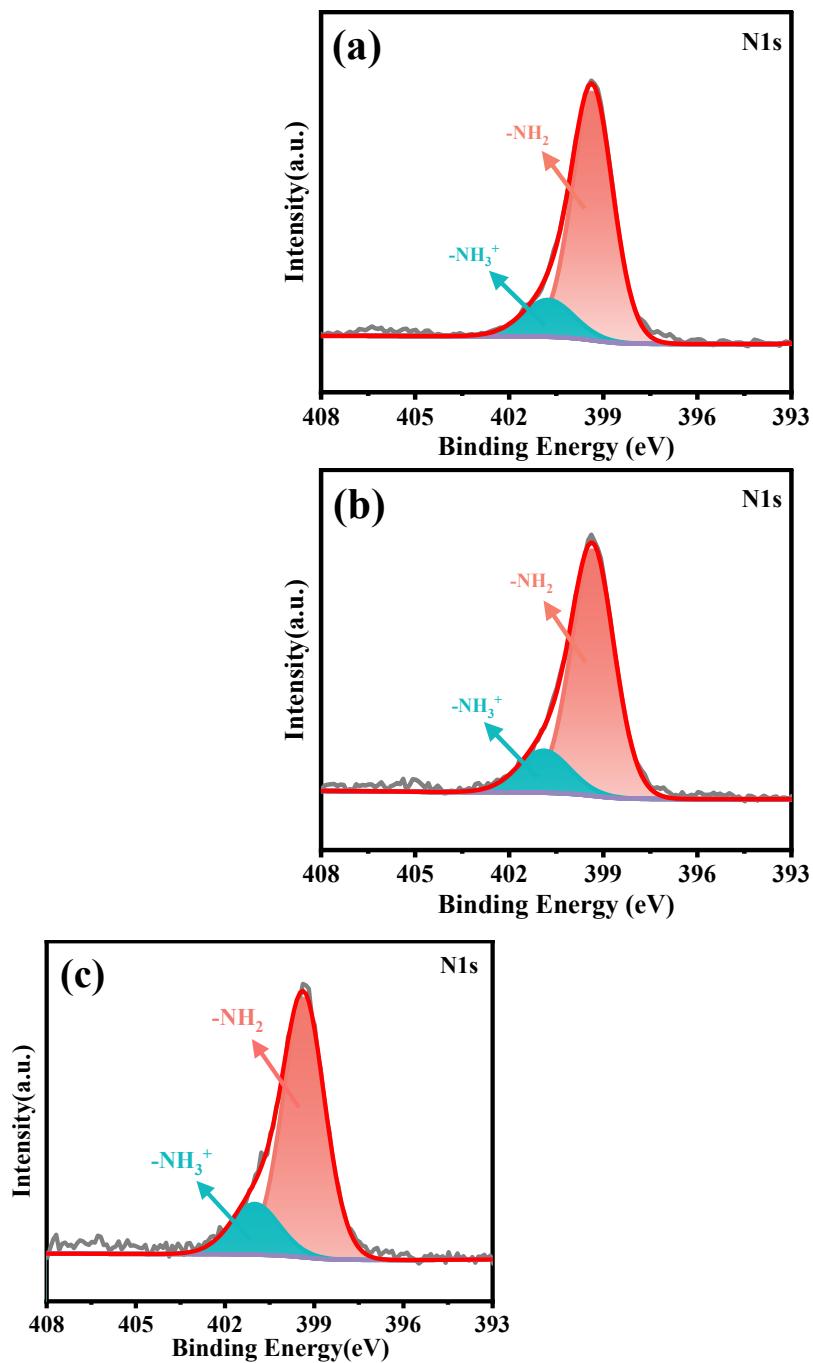


Figure S8. XPS spectra for N1s of (a) NCMOF-1, (b) NCMOF-2, and (c) NCMOF-3.

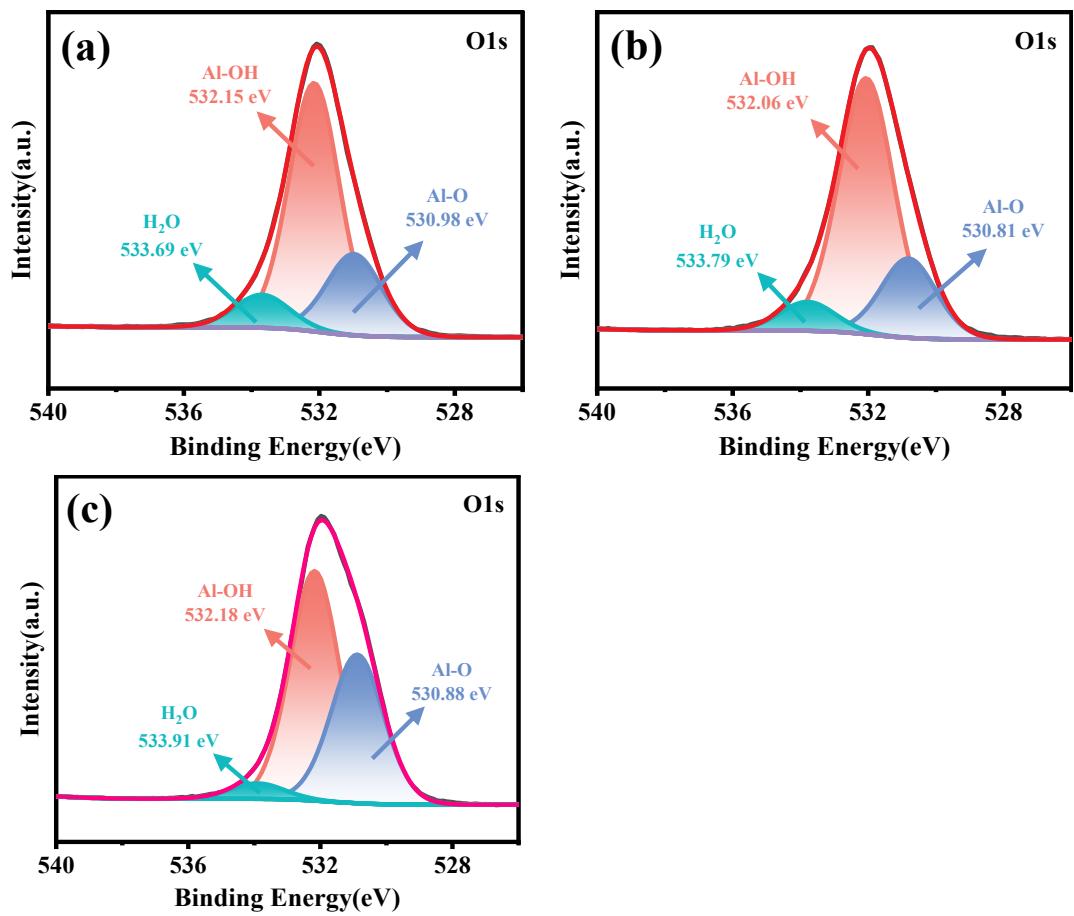


Figure S9. XPS spectra for O1s of (a) NCMOF-1, (b) NCMOF-2, and (c) NCMOF-3.

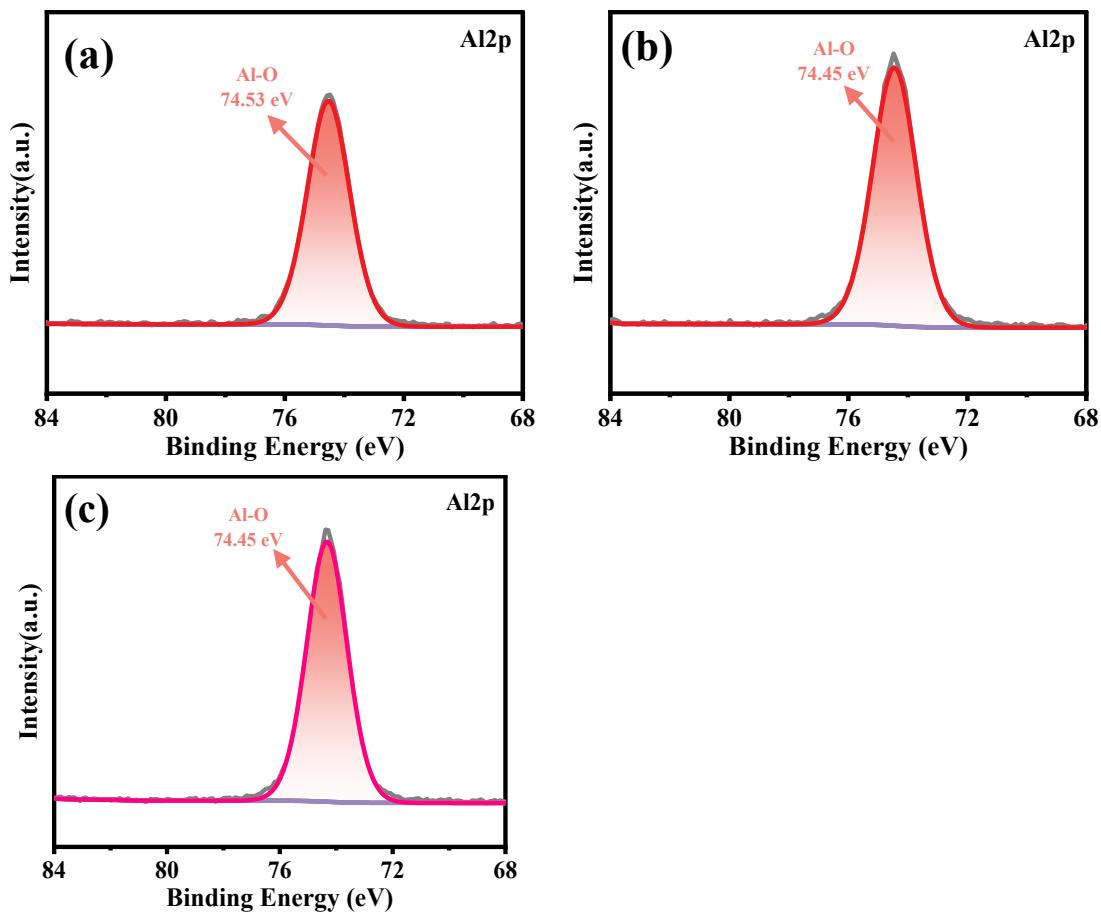


Figure S10. XPS spectra for Al2p of (a) NCMOF-1, (b) NCMOF-2, and (c) NCMOF-3.

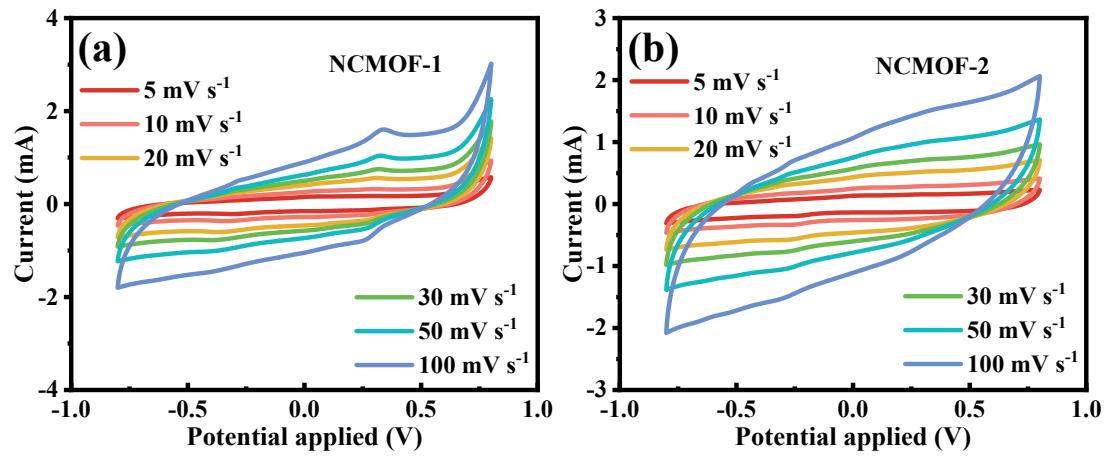


Figure S11. CV curves of (a) NCMOF-1, and (b) NCMOF-2, at scan rates from 5, 10, 20, 30, 50 to 100 mV s⁻¹.

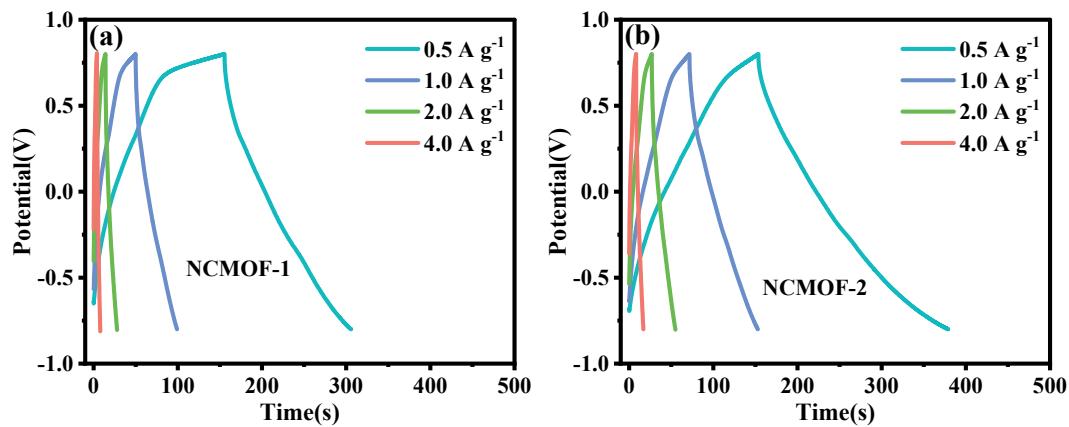


Figure S12. GVD curves of (a) NCMOF-0, and (b) NCMOF-1, at current densities from 0.5, 1.0, 2.0, to 4.0 A g^{-1} .

2. Supplementary Tables

Table S1. Specific surface area and Average pore diameter of NCMOF-1, NCMOF-2, and NCMOF-3.

Sample	Specific surface area	Average pore diameter
	S_{BET} ($m^2 g^{-1}$)	(nm)
NCMOF-1	46.0984 $m^2 g^{-1}$	5.1344 nm
NCMOF-2	51.3661 $m^2 g^{-1}$	6.7467 nm
NCMOF-3	49.1347 $m^2 g^{-1}$	7.4828 nm

Table S2. The values of the parameters in equation (4).

Parameters	A ₁	a ₁	A ₂	a ₂	A ₃	a ₃	b	R ²
Value	17.25	460.84	17.26	512.04	17.26	563.25	14.33	0.99894