

Electronic Supplementary Information

Carbonization/Oxidation-Mediated Synthesis of MOF-Derived Hollow Nanocages of ZnO and N-doped Carbon Interwoven by Carbon Nanotubes for High Performance Lithium-Ion Battery Anodes

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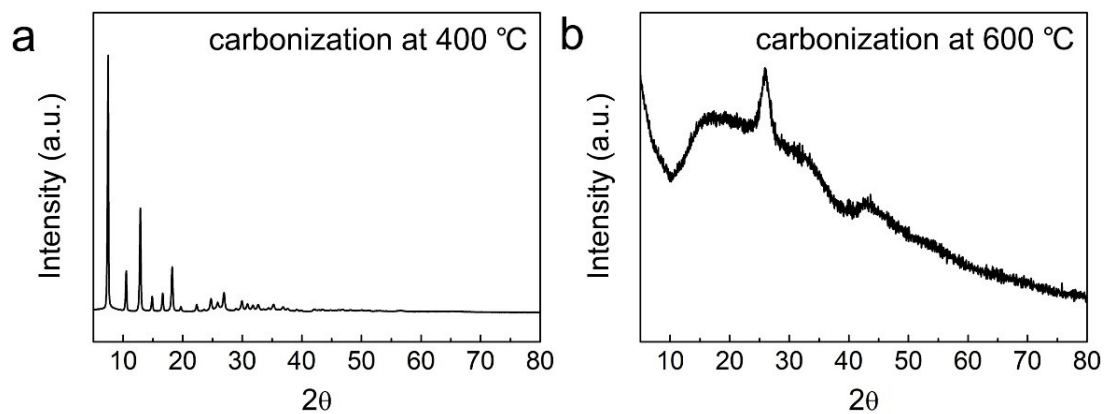


Figure S1. XRD patterns after (a) partial carbonization at 400°C (b) full carbonization at 600°C.

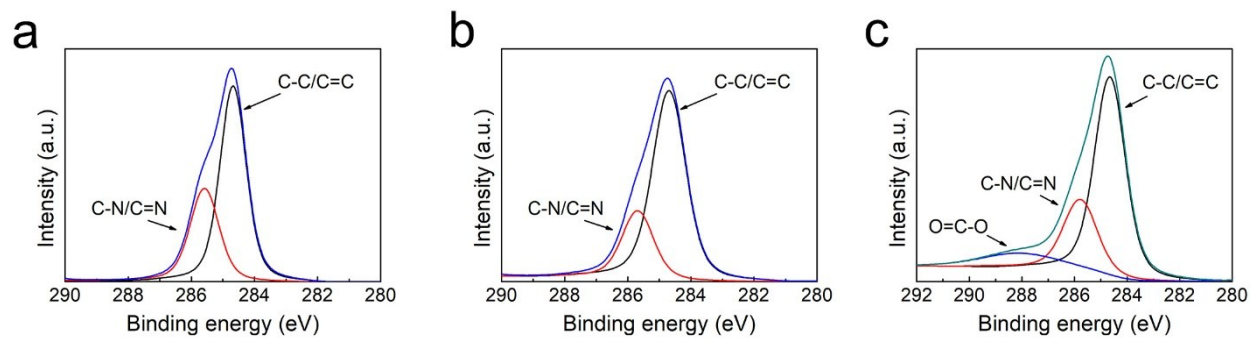


Figure S2. XPS C 1s spectra for (a) pure ZIF-8, (b) partially carbonized ZIF-8, and (c) fully carbonized ZIF-8.

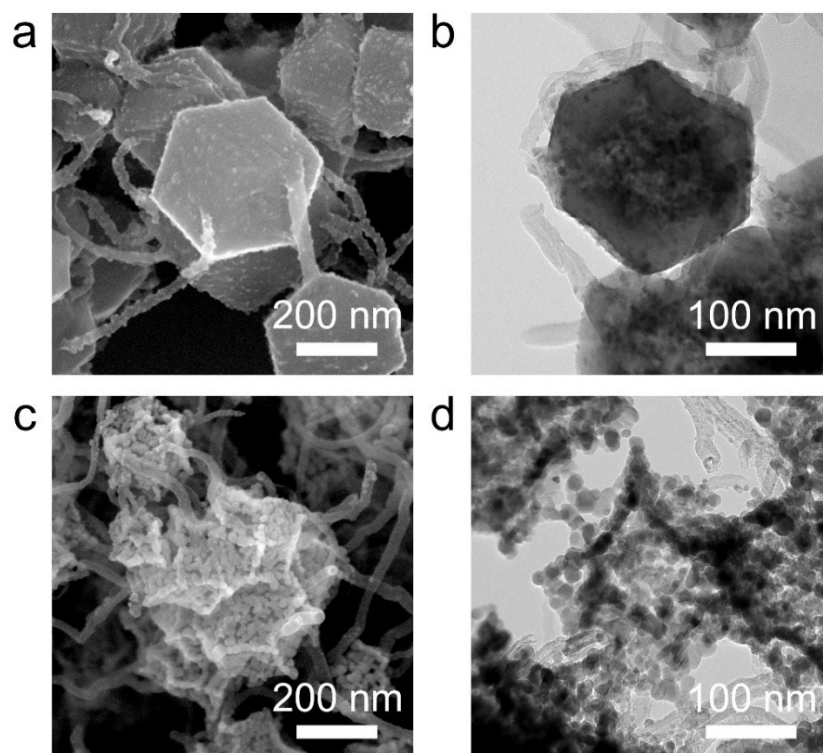


Figure S3. Structural and morphological characterization (a) FE-SEM image, (b) TEM image of f-CZO, (c) FE-SEM image (d) TEM image of n-CZO.

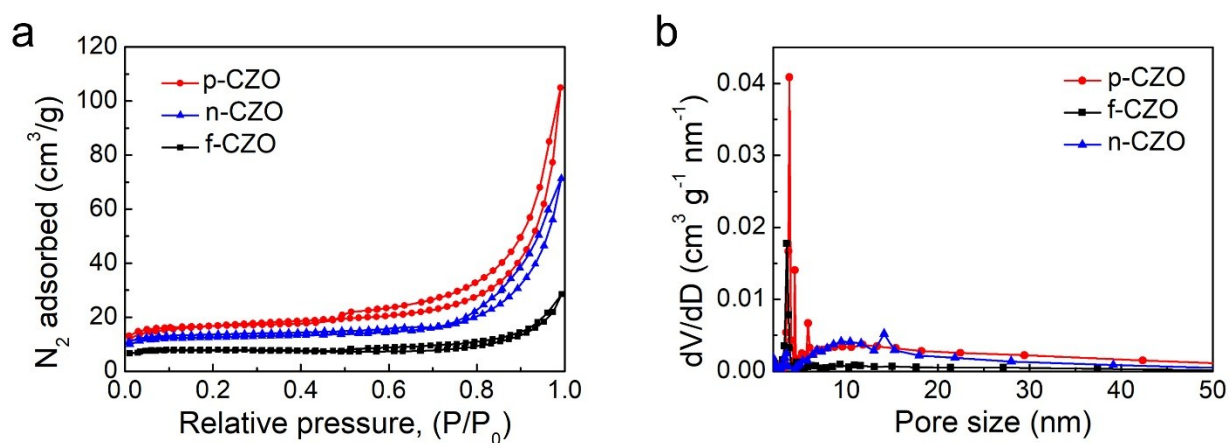


Figure S4. (a) Nitrogen gas adsorption isotherms of p-CZO, n-CZO, and f-CZO. (b) Pore size distribution for p-CZO, n-CZO, and f-CZO, calculated using the Barrett–Joyner–Halenda method.

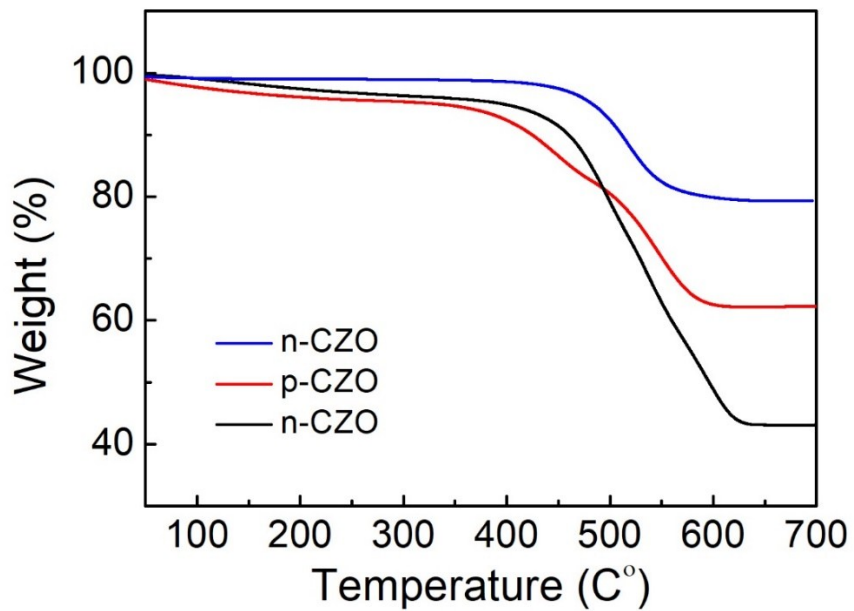


Figure S5. TGA curves under air flow of n-CZO, p-CZO-P, and f-CZO.



Figure S6. EDS chart of p-CZO.

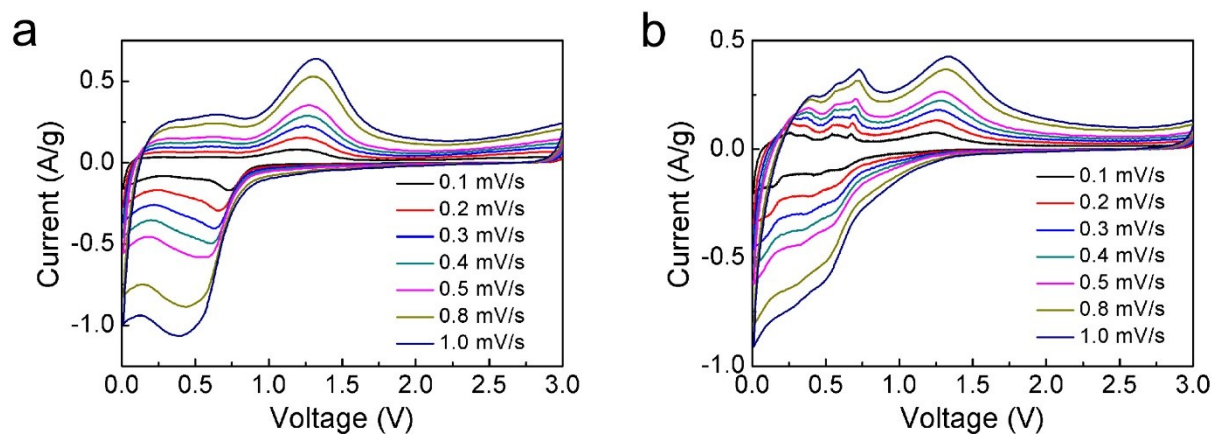


Figure S7. Cyclic voltammetry at scan rates of 0.1 to 1.0 mV/s of (a) f-CZO, (b) n-CZO.

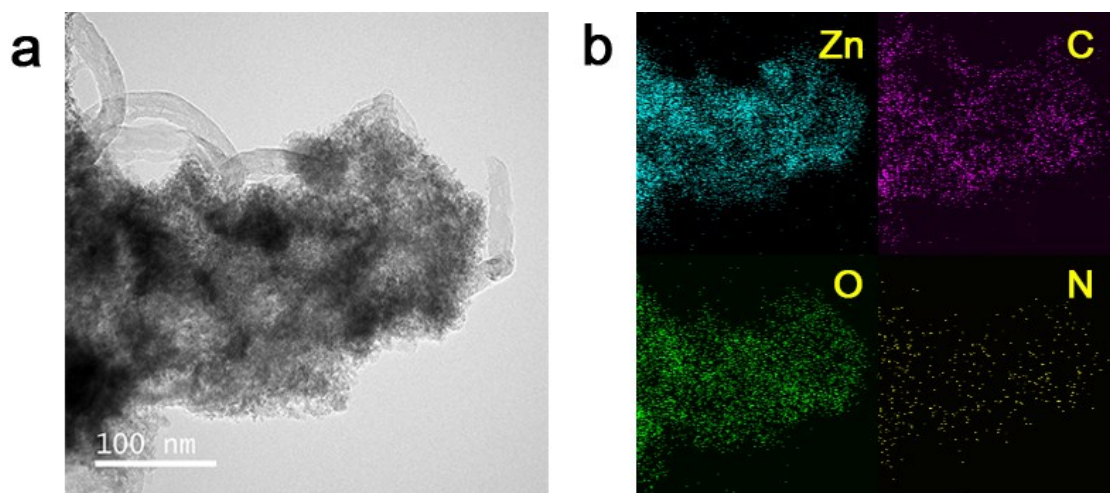


Figure S8. (a) HR-TEM images (b) elemental mapping images of p-CZO after 100 cycles.