Supporting Information

Covalent Organic Framework as Dual-Active-Center Cathode for High-Performance Aqueous Zinc-Ion Battery

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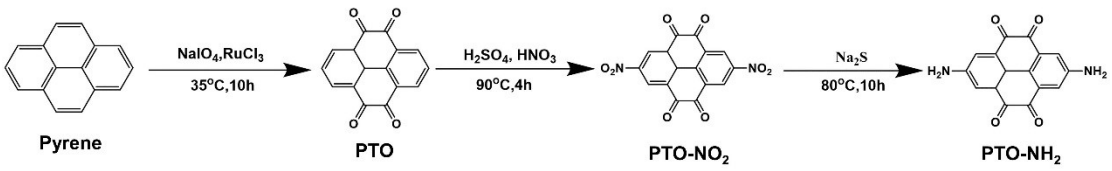

Scheme S1. Synthetic route of 2,7-diaminopyrene-4,5,9,10-tetraone (PTO-NH_2).

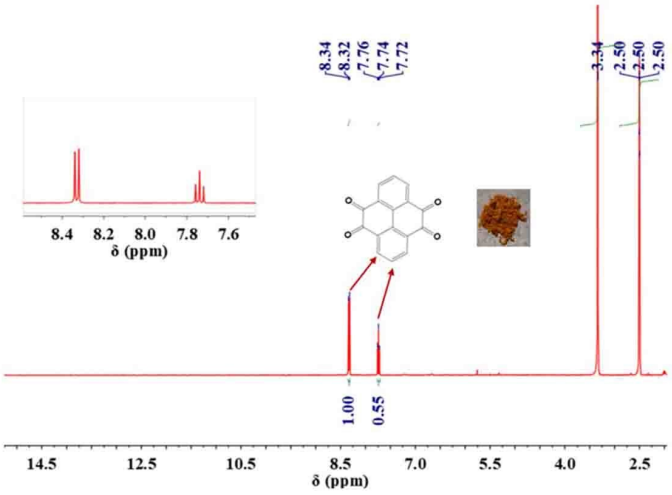

Fig. S1 ^{1}H NMR (400 MHz, DMSO-d_6, 298 K) spectrum of PTO.

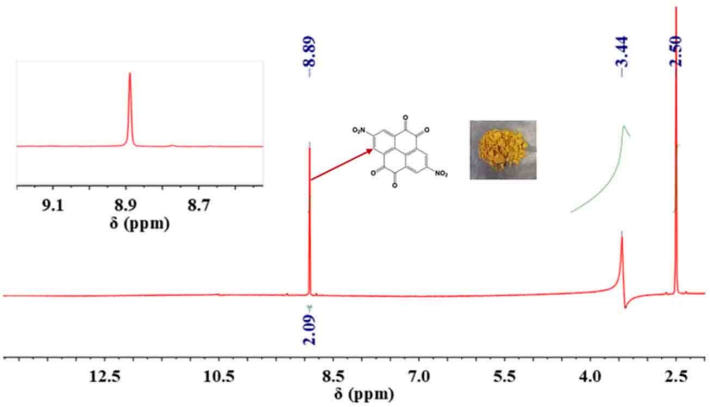

Fig. S2 ^{1}H NMR spectrum of PTO-NO_2.

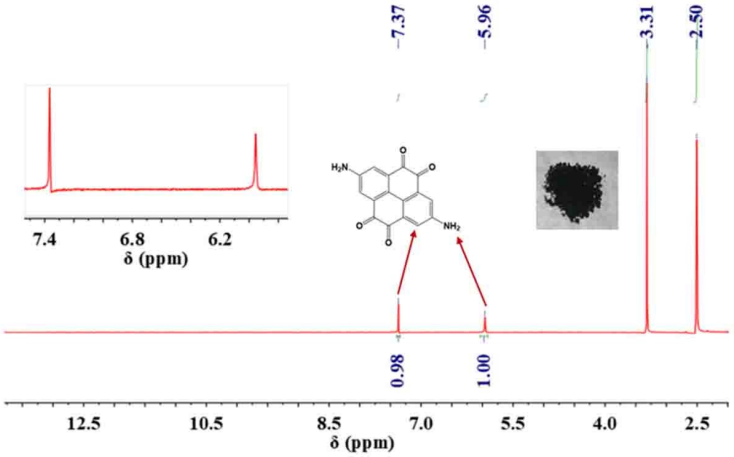

Fig. S3 ^{1}H NMR spectrum of PTO-NH_2.

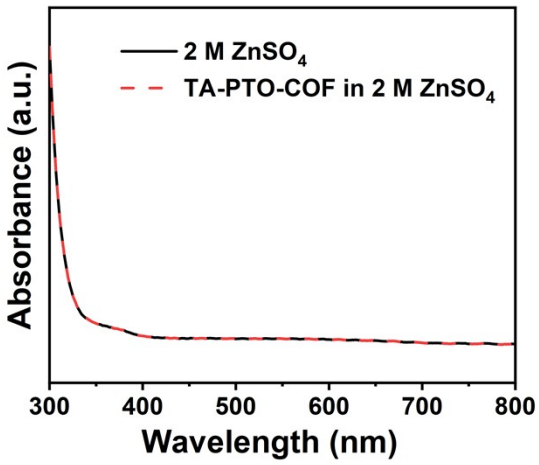

Fig. S4 UV-vis spectra of TA-PTO-COF in the electrolyte (2 M $ZnSO_4$).

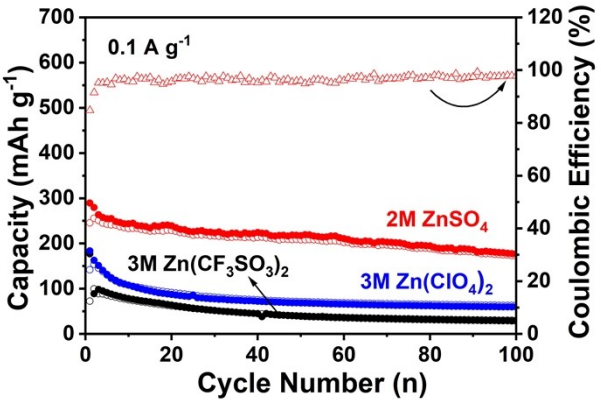

Fig. S5 Cycle stability of TA-PTO-COF in different electrolyte at 0.1 A g^{-1}.

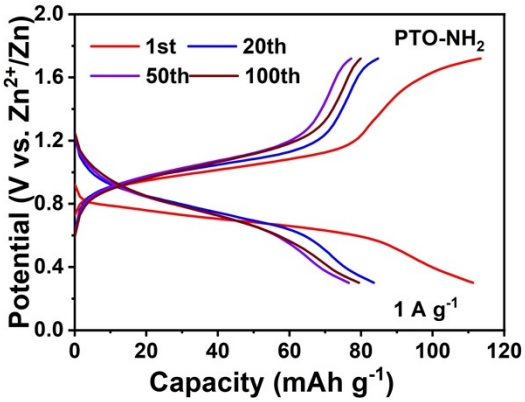

Fig. S6 Discharge/charge profiles of PTO-NH_2 in 2 M $ZnSO_4$ electrolyte at 1 A g^{-1}.

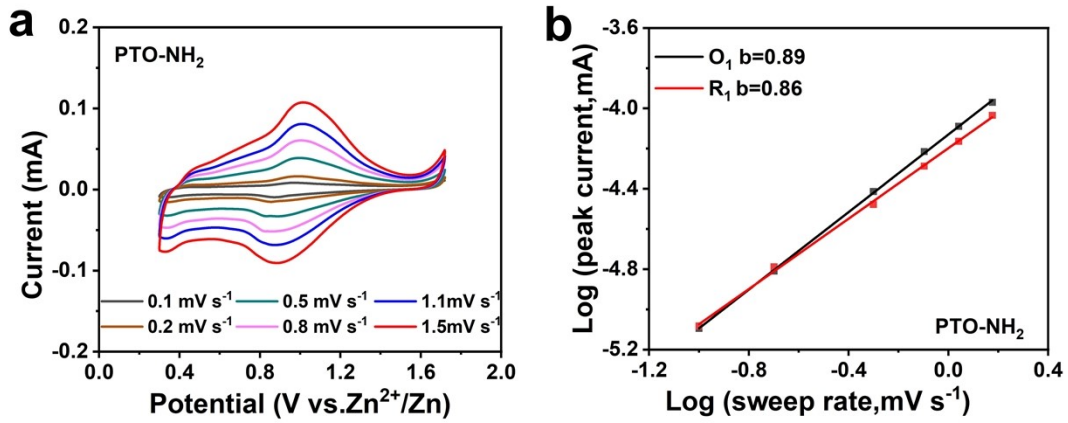

Fig. S7 (a) CV curves of the PTO-NH_2 cathode at various scan rates. (b) b values of PTO-NH_2.

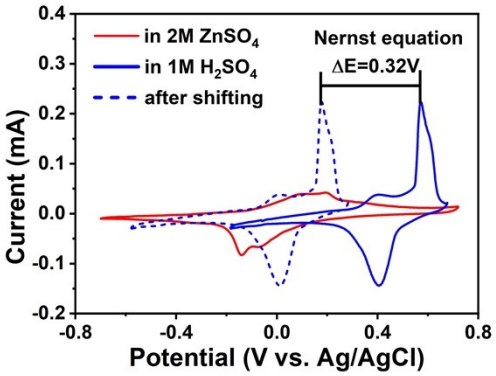

Fig. S8 Typical CV curves of TA-PTO-COF at 0.1 mV s^{-1} in 2M $ZnSO_4$ and 1M H_2SO_4 electrolyte.