Supporting information

Engineering oxygen vacancies and surface chemical reconstruction of MOF-derived hierarchical CoO/Ni_2P-Co_2P nanosheet arrays for advanced aqueous zinc-ion batteries

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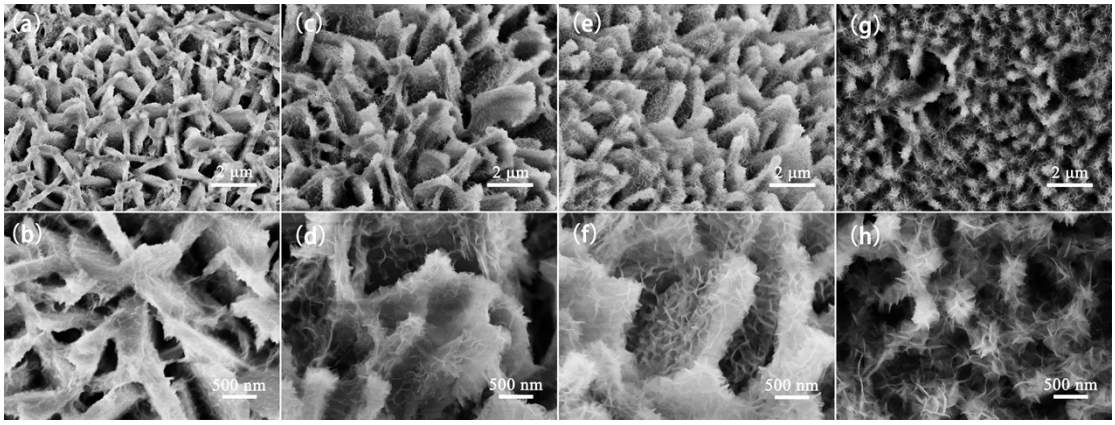

Fig. S1 SEM images of Co-MOF etching for (a, b) 30 minutes, (c, d) 60 minutes, (e, f) 90 minutes and (g, h) 120 minutes.

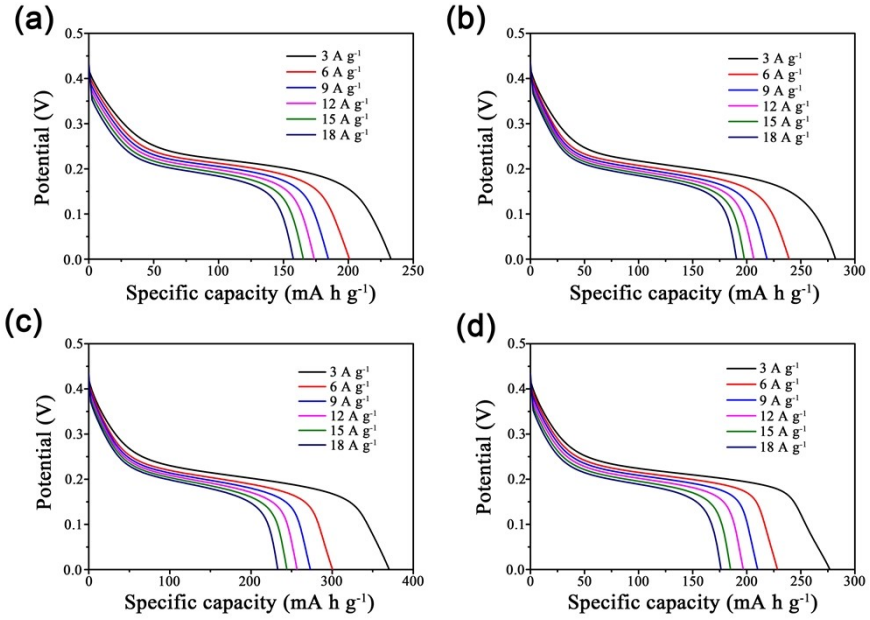

Fig. S2 Discharge curves of samples after subsequent phosphorization with different etching time (a) 30 minutes, (b) 60 minutes, (c) 90 minutes and (d) 120 minutes.

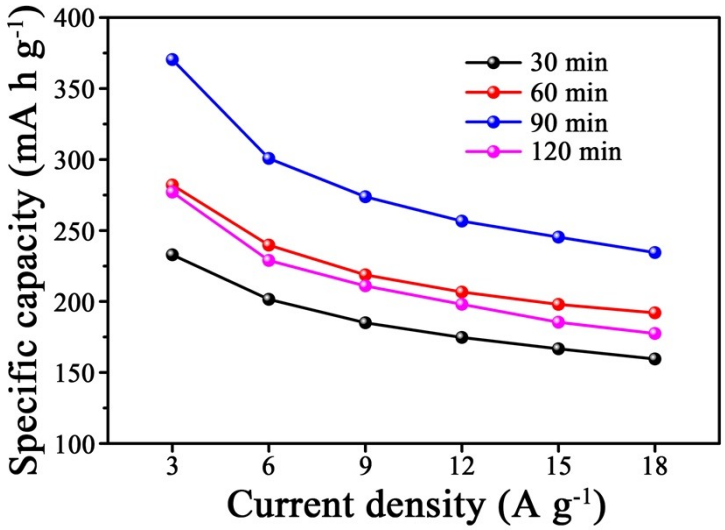

Figure. S3 Comparison of specific capacities for samples with different etching time.

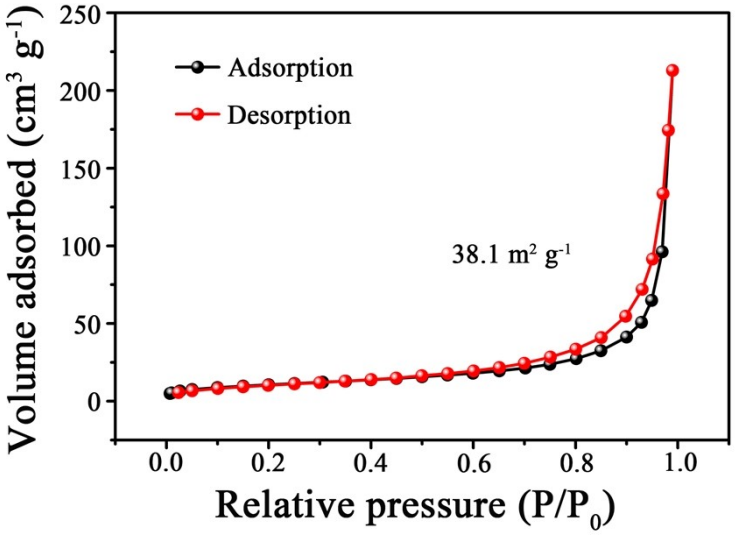

Fig. S4 Nitrogen adsorption/desorption isotherms of CoO/Ni_2P-Co_2P sample.

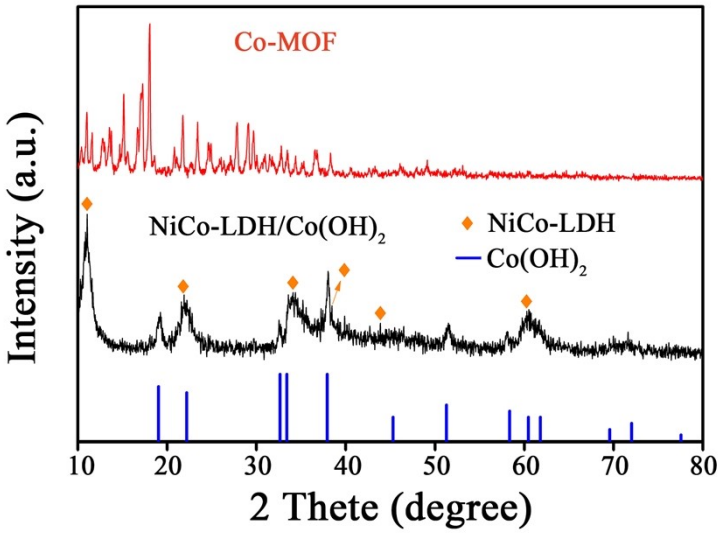

Fig. S5 XRD patterns of Co-MOF and NiCo-LDH/$Co(OH)_2$

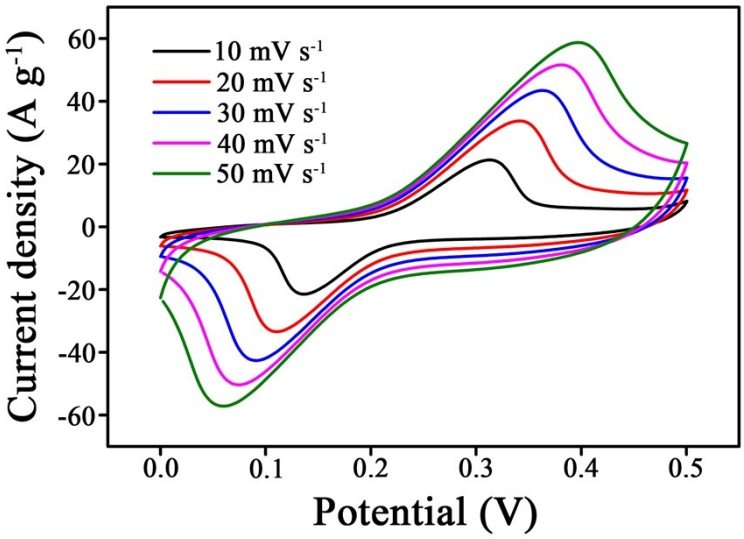

Fig. S6 CV curves of $NiCo_2O_4$/NiO at various scan rates.

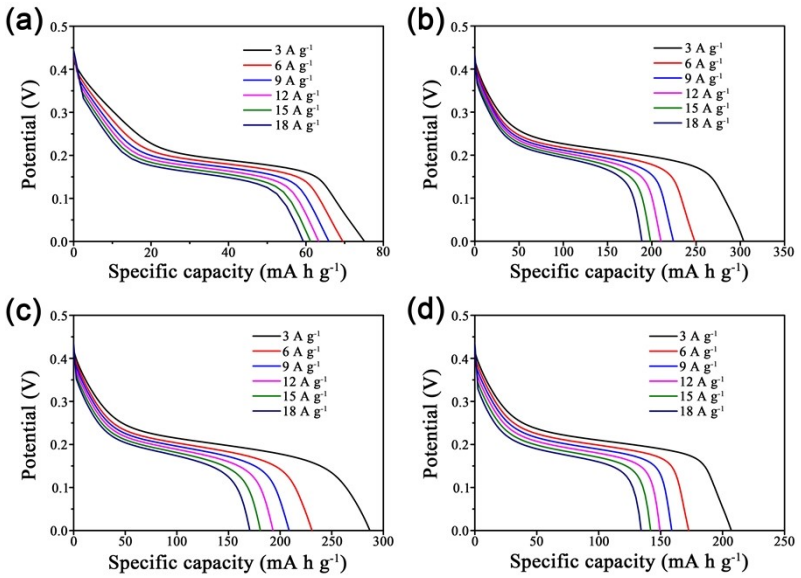

Fig. S7 Discharge curves at various current densities of (a) $NiCo_2O_4$/NiO electrode, (b) CoO/Ni_2P-Co_2P-15 electrode, (c) CoO/Ni_2P-Co_2P-60 electrode and (d) CoO/Ni_2P-Co_2P-120 electrode.

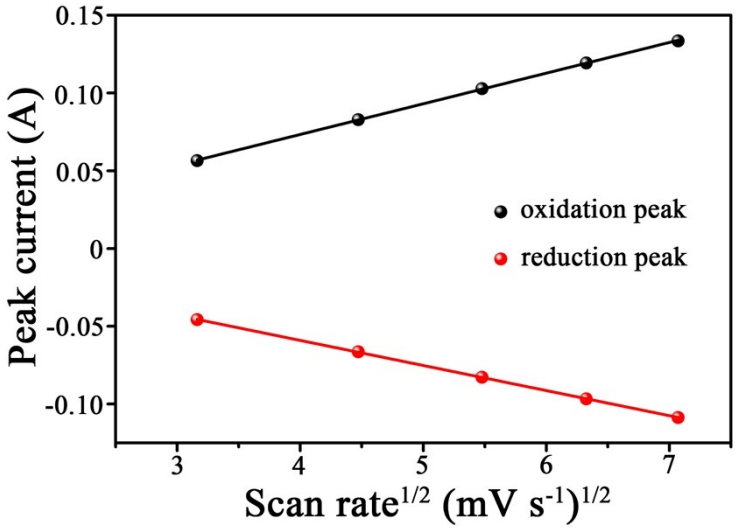

Fig. S8 Linear fitting of the relationship between peak current and the square root of scan rates.

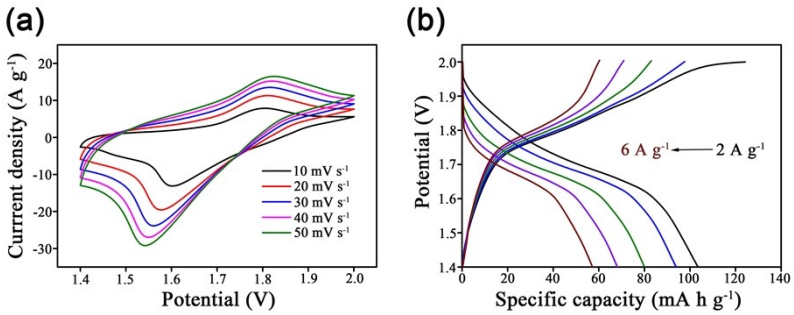

Fig. S9 (a) CV curves at various scan rates and (b) GCD curves at various current densities of $NiCo_2O_4$/NiO//Zn battery.