

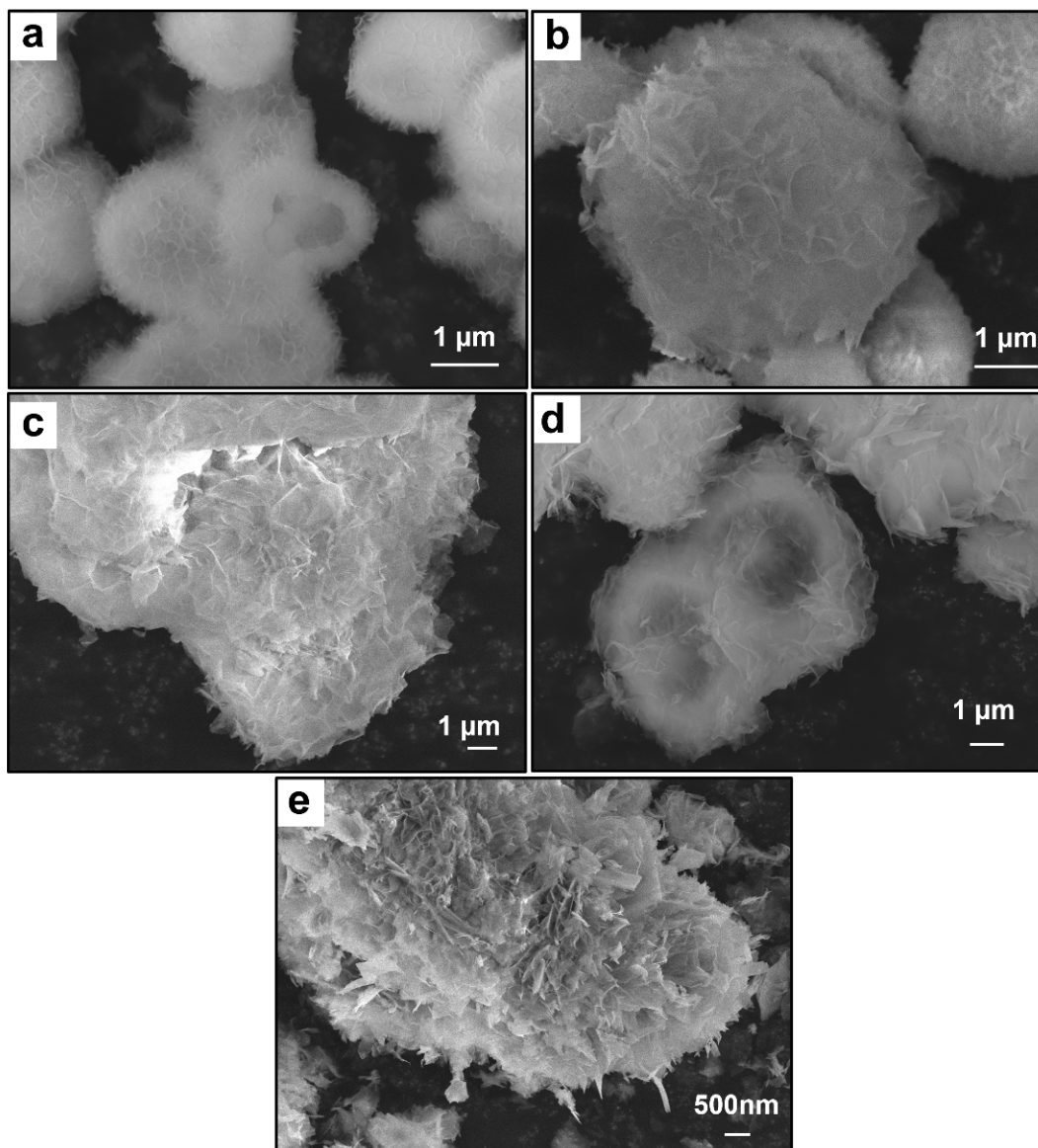
## Electronic Supplementary Information

### **Zn-doped NiMoO<sub>4</sub> enhances rechargeable aqueous NiZn batteries**

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**Fig. S1** SEM images of obtained powder materials: (a)  $\text{NiMoO}_4$ , (b)  $\text{Ni}_{0.75}\text{Zn}_{0.25}\text{MoO}_4$ , (c)  $\text{Ni}_{0.5}\text{Zn}_{0.5}\text{MoO}_4$ , (d)  $\text{Ni}_{0.25}\text{Zn}_{0.75}\text{MoO}_4$ , and (e)  $\text{ZnMoO}_4$ , respectively.

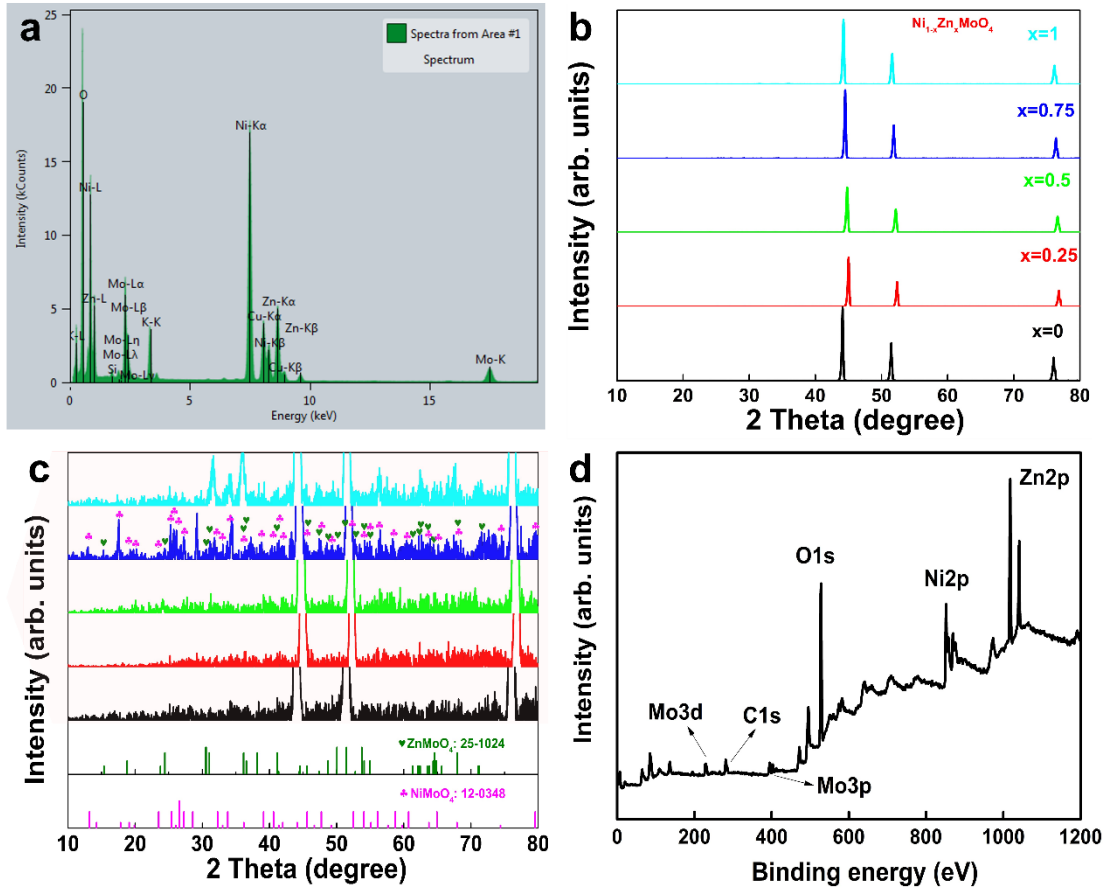


Fig. S2 (a) the corresponding element spectrum, (b) the XRD patterns of obtained bind-free materials, (c) the corresponding partial enlarged patterns, and (d) the XPS spectrum of  $\text{Ni}_{0.75}\text{Zn}_{0.25}\text{MoO}_4$ .

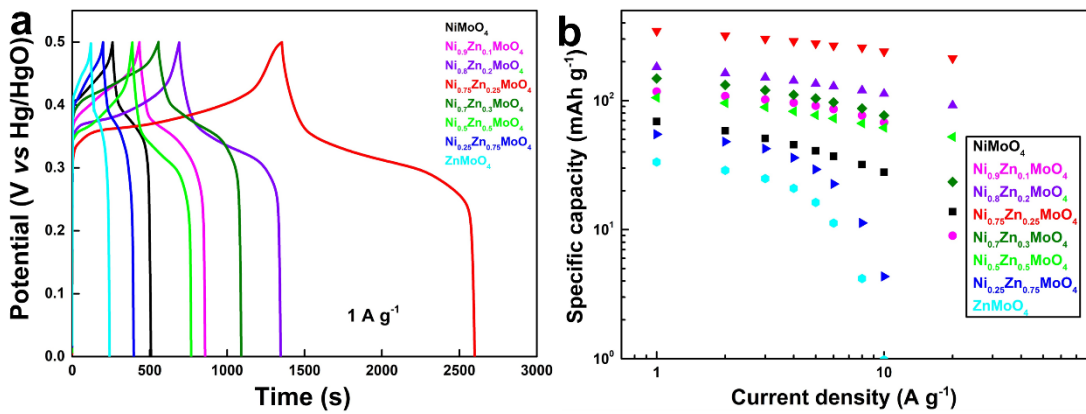
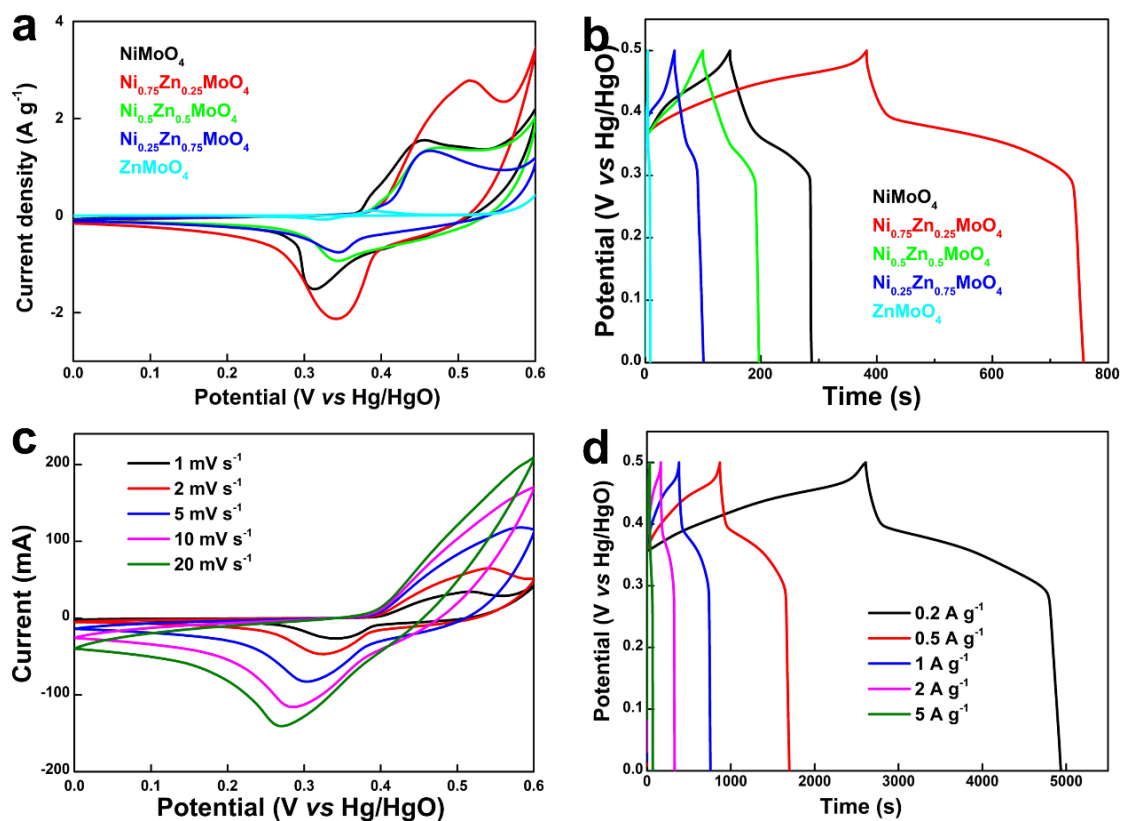
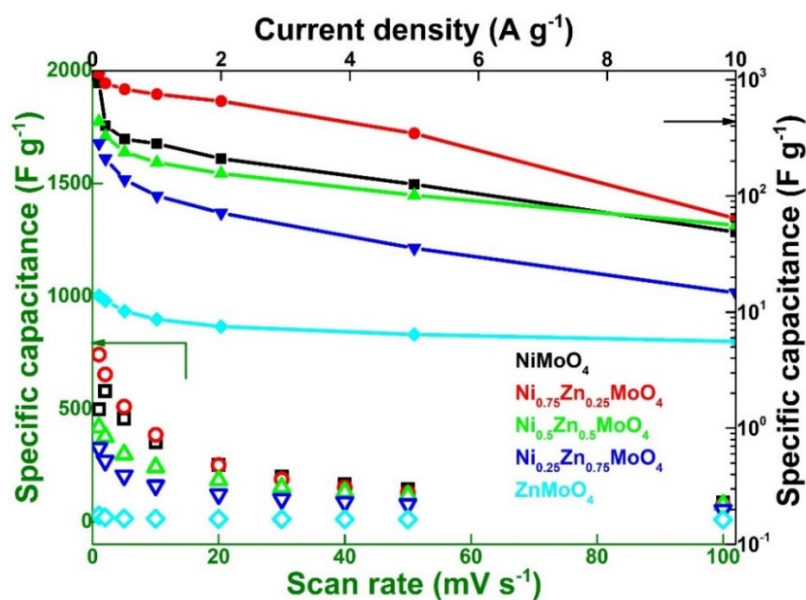


Fig. S3 Comparison of electrochemical performance of obtained materials in a three-electrode system (6 M KOH): (a) comparison GCD curves, and (b) specific capacitances at different current densities.



**Fig. S4** Electrochemical performance of obtained powder materials in a three-electrode system (6 M KOH): (a and b) comparison CV and GCD curves, respectively, (c and d) CV and GCD curves of Ni<sub>0.75</sub>Zn<sub>0.25</sub>MoO<sub>4</sub> powder.



**Fig. S5** Specific capacitances of obtained powder materials at different scan rates and current densities.

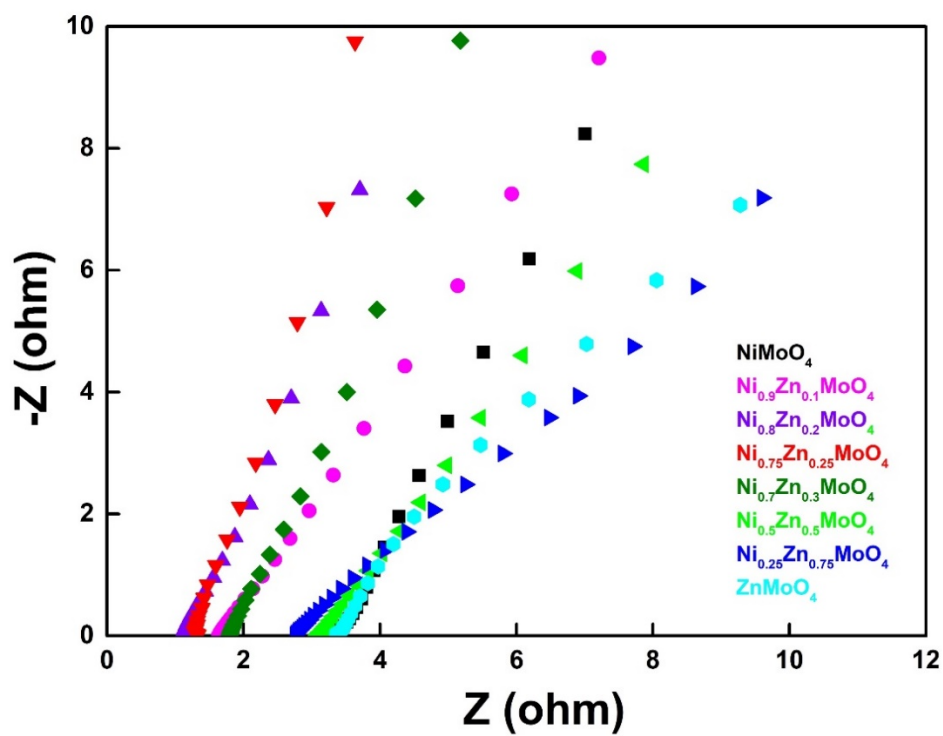


Fig. S6 Comparison of EIS plots of obtained materials in a three-electrode system (6 M KOH).

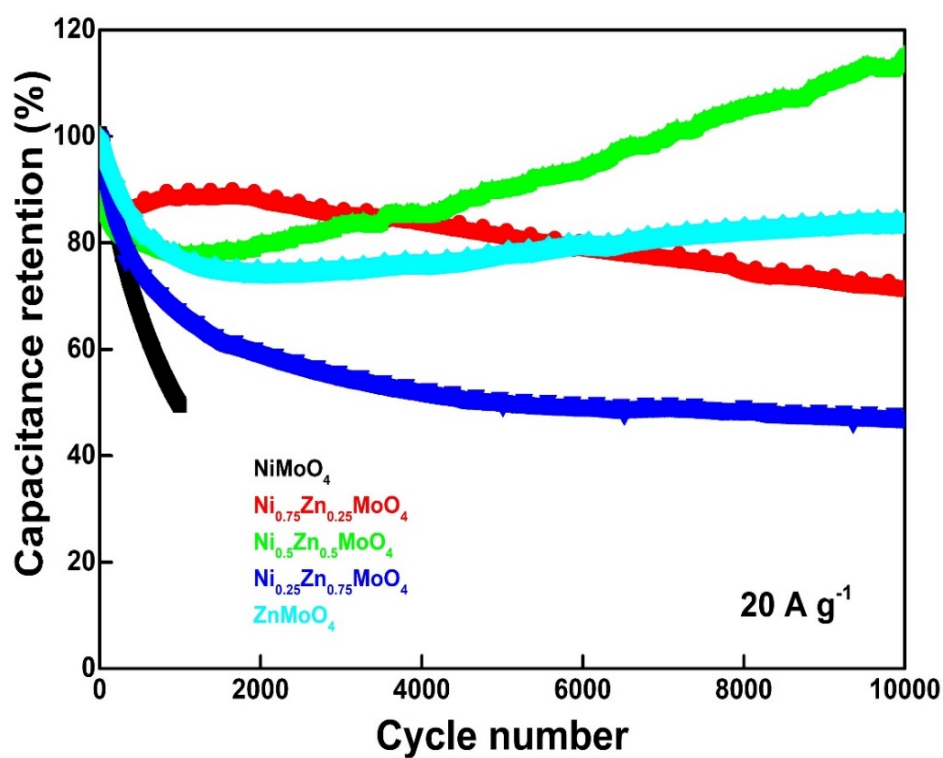


Fig. S7 Comparison of cycling stability of all the obtained powder materials at 20 A g<sup>-1</sup>.