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Supplementary Information for

Designing positive electrodes based on 3D hierarchical $CoMn_2O_4$@NiMn-LDH nanoarray composites for high energy and power density supercapacitors

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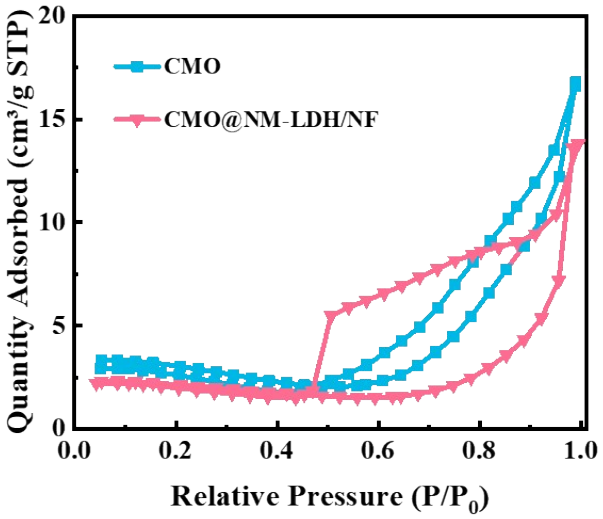

Fig. S1 *Nitrogen absorption-desorption isotherms of CMO and CMO@NM-LDH/NF.*

The surface areas of CMO and CMO@NM-LDH/NF were analyzed through nitrogen absorption-desorption isotherm. As shown in Fig. S1, the observed hysteresis loops are classified as type III which indicates the irregular structure of pores. The BET specific surface area is calculated to be 8.35 m^2 g^{-1} for CMO@NM-LDH/NF, while that of CMO is calculated to be 6.02 m^2 g^{-1}.

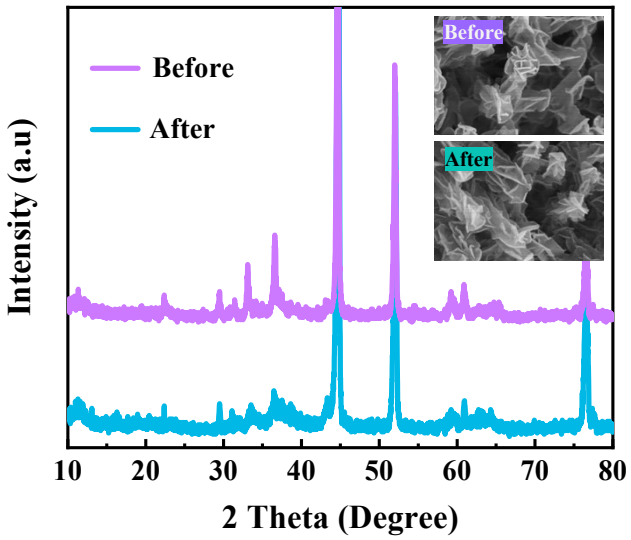

Fig. S2 *XRD patterns and SEM images of CMO@NM-LDH/NF before or after the cyclic stable measurement.*

After the electrochemical cycling test of CMO@NM-LDH/NF, the XRD and SEM

analysis were carried out to study the changes of the sample structure. As displayed in Fig. S2, the XRD characteristic diffraction peaks of CMO and NM-LDH both can be observed for CMO@NM-LDH/NF after cycling. Otherwise, there expresses no obviously changes from SEM images. Therefor, the CMO@NM-LDH/NF materials are stable in the electrochemical charge-discharge procedure.