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## **Supplementary Materials**

## Rational design of flower-like cobalt-manganese-sulfide nanosheets for high

## performance supercapacitor electrode materials

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**Fig. S1.** (a) CV curves of CoMnS-2 electrode at different scanning rates, (b) CV curves of CoMnS-3 electrode at different scanning rates, (c) CV curves of CoMnS-5 electrode at different scanning rates, (d) CV curves of CoMnS-6 electrode at different scanning rates.



**Fig. S2.** (a) GCD curves of the CoMnS-2 electrode at different current densities, (b) GCD curves of the CoMnS-4 electrode at different current densities, (c) GCD curves of the CoMnS-5 electrode at different current densities, (d) GCD curves of the CoMnS-6 electrode at different current densities.

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**Fig. S3.** Specific capacity of CoMnS-2, CoMnS-3, CoMnS-4, CoMnS-5, CoMnS-6 electrodes at various current densities.



**Fig. S4.** (a–c) Low- and high-magnification SEM images of the CoMnS-4 nanomaterials after cycling test, (d) EDS elemental content of the corresponding SEM image.



**Fig. S5.** (a) CV curves of AC electrode at different scanning rates, (b) GCD curves of the AC electrode at different current densities.



Fig. S6. Specific capacity of the CoMnS-4//AC ASC device at various current densities