

Supporting Information for

Bimetallic NiCo₂S₄ Nanoneedles Anchored on Mesocarbon

Microbeads as Advanced Electrodes for Asymmetric Supercapacitors

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Supplementary Figures

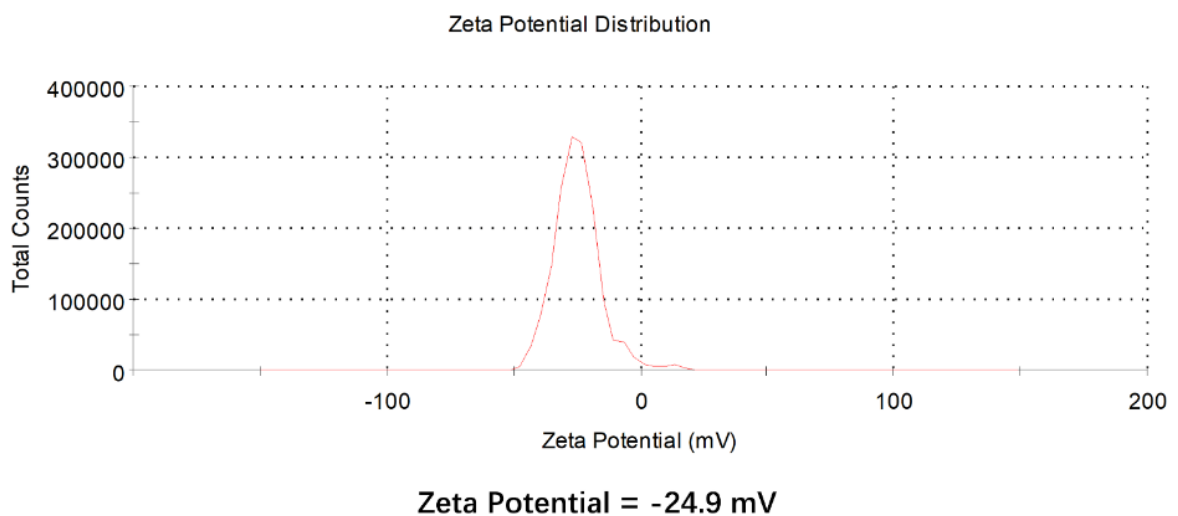


Fig. S1 Zeta potential of pure MCMB

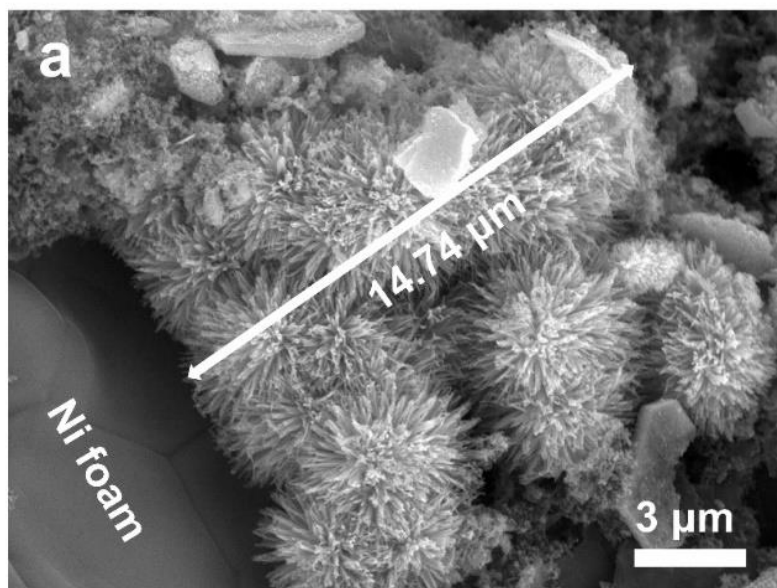


Fig. S2 Cross section of the NCS@MCMB electrode

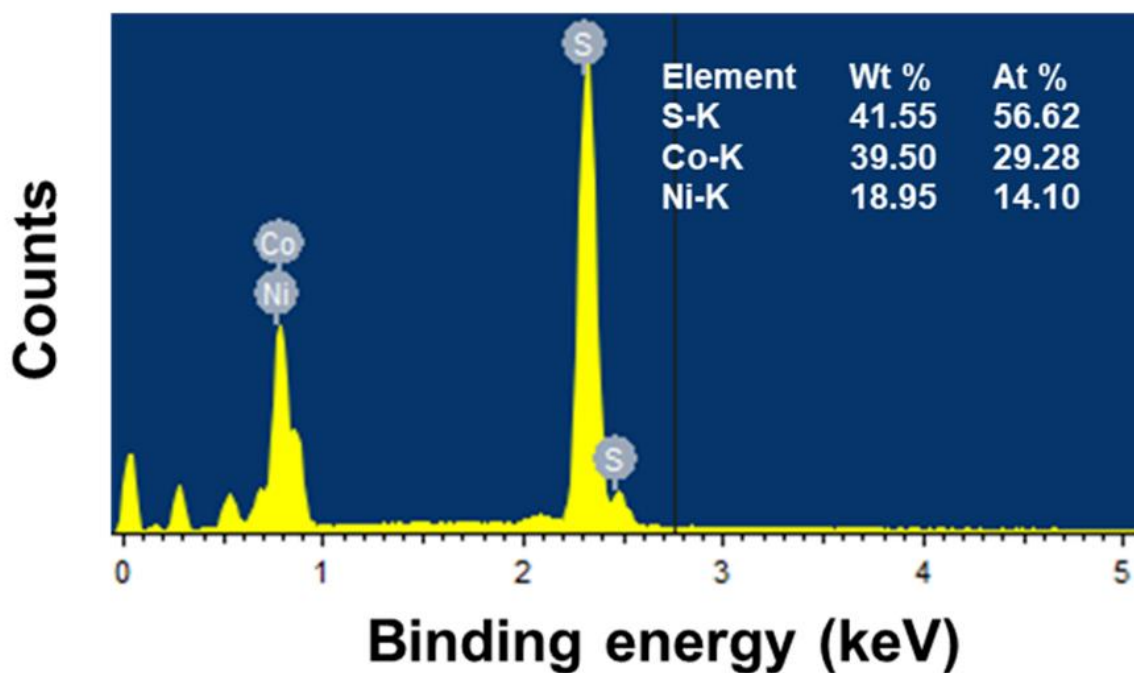


Fig. S3 EDX spectra of NCS@MCMB composite

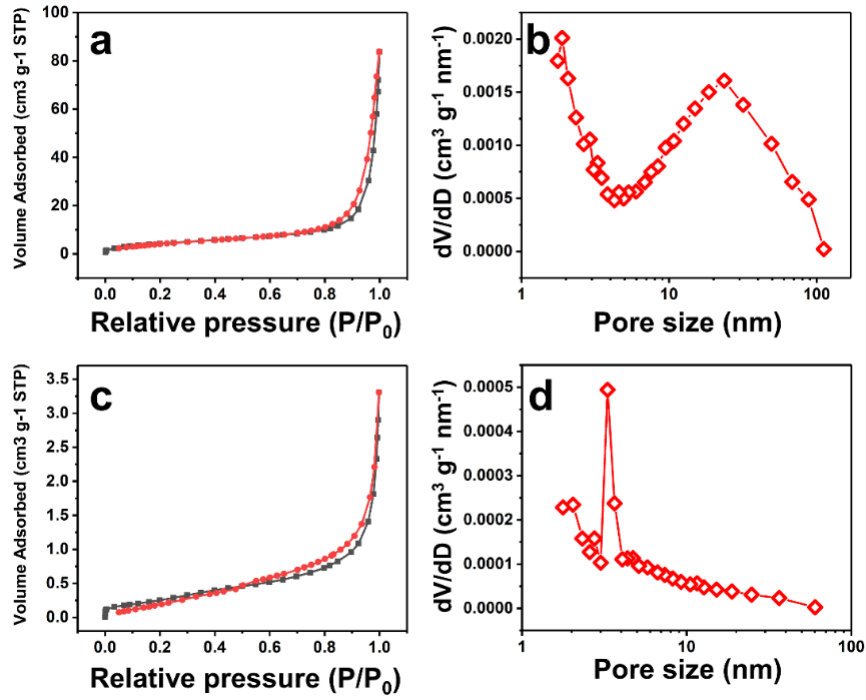


Fig. S4 a, c Nitrogen adsorption/desorption isotherms and b, d pore-size distribution of pure NCS and MCMB

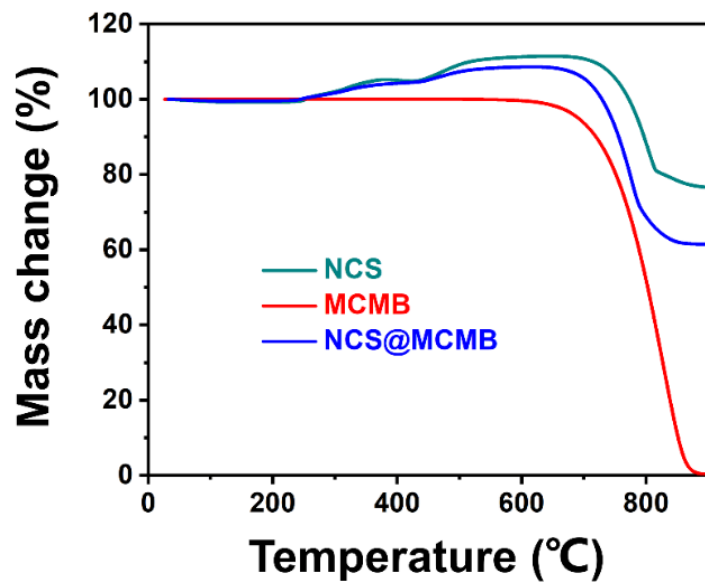


Fig. S5 TGA curves of pure NCS, MCMB, and NCS@MCMB-75%

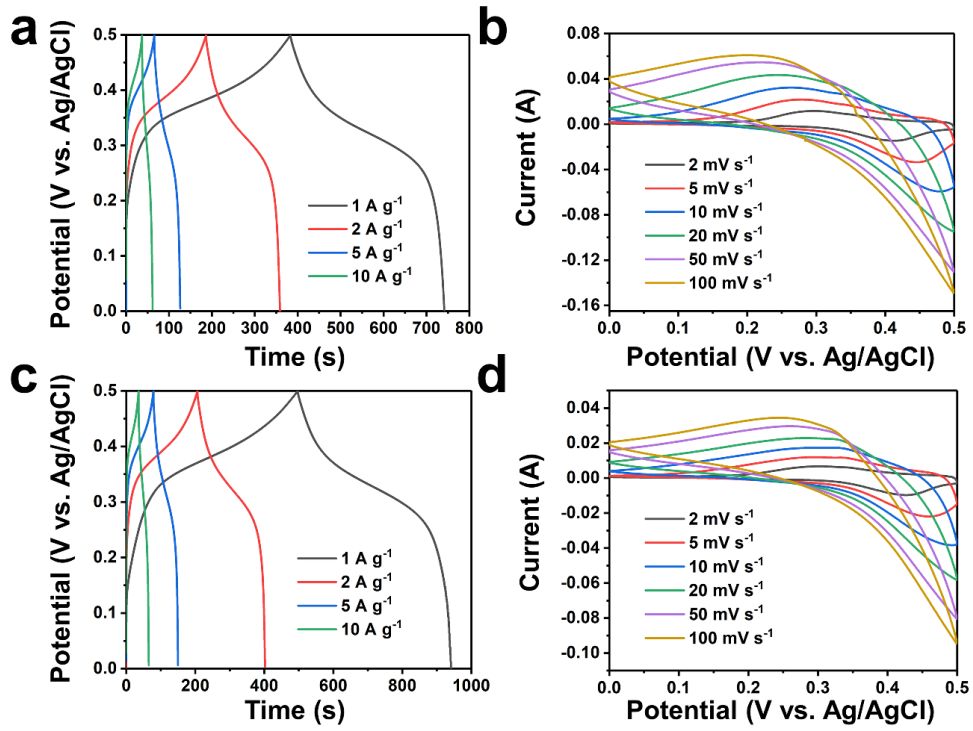


Fig. S6 a, c GCD curves and b, d CV curves of NCS@MCMB-65% and NCS@MCMB-85%

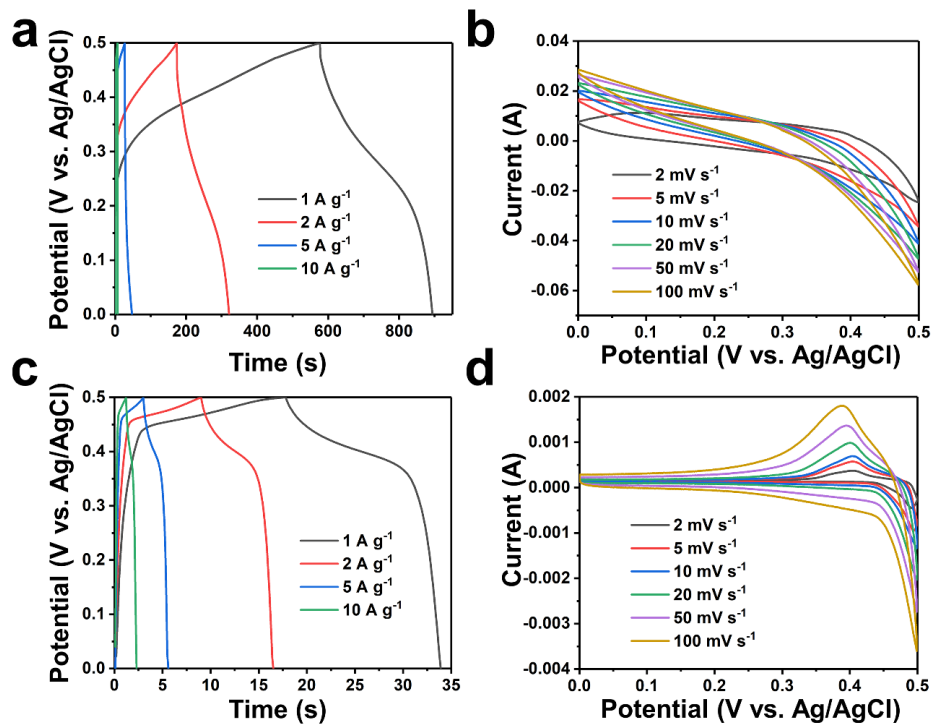


Fig. S7 a, c GCD curves and b, d CV curves of pure NCS and MCMB

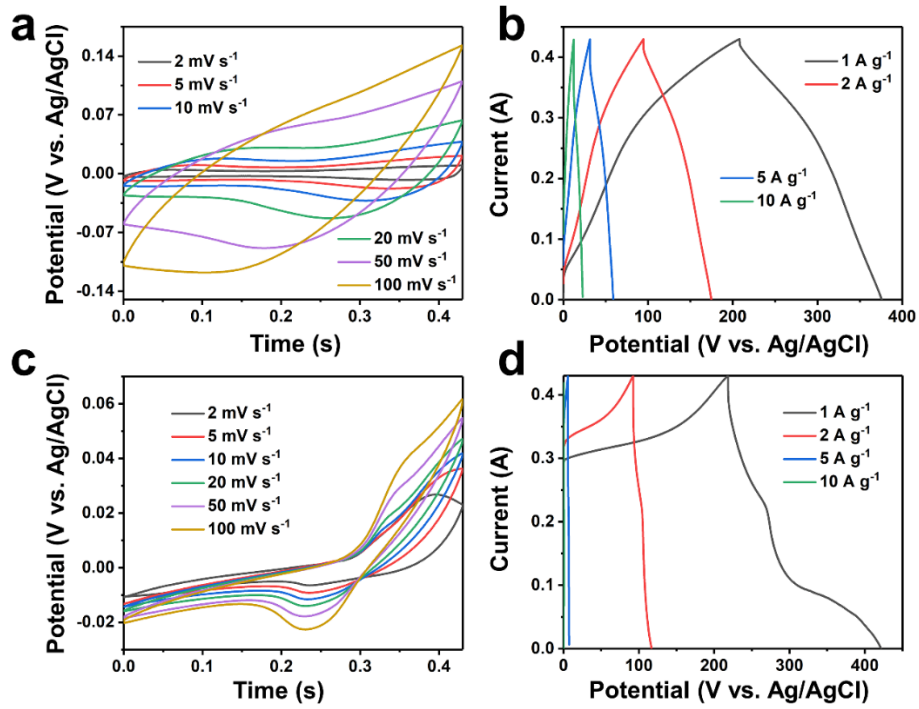


Fig. S8 a, c CV curves and b, d GCD curves of CoS@MCMB and NiS@MCMB

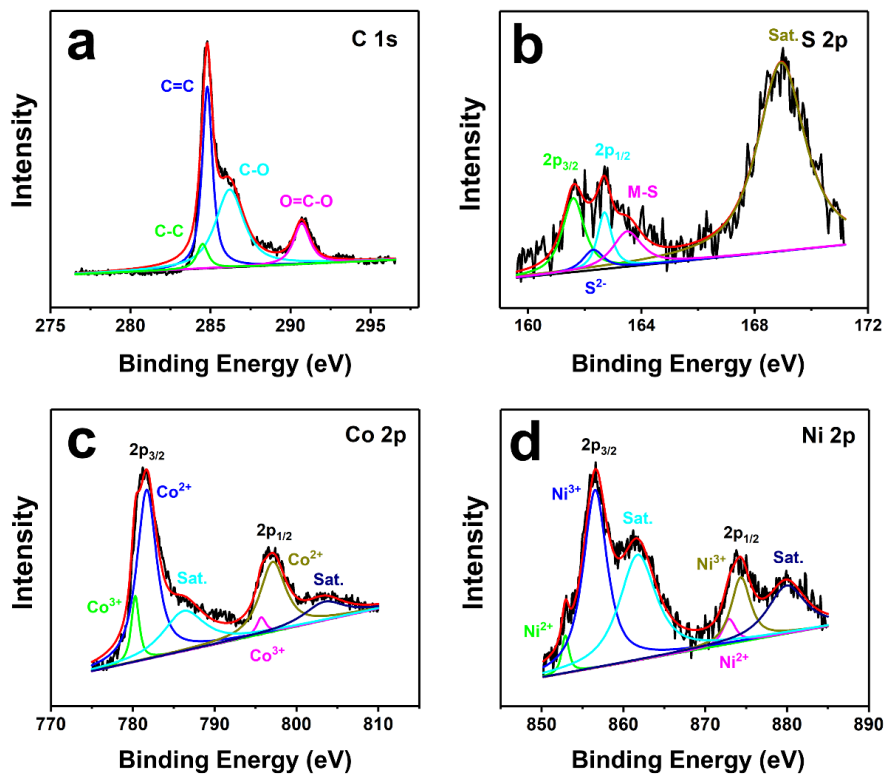


Fig. S9 XPS high-resolution spectra after cycling of a C 1s, b S 2p, c Co 2p, and d Ni 2p

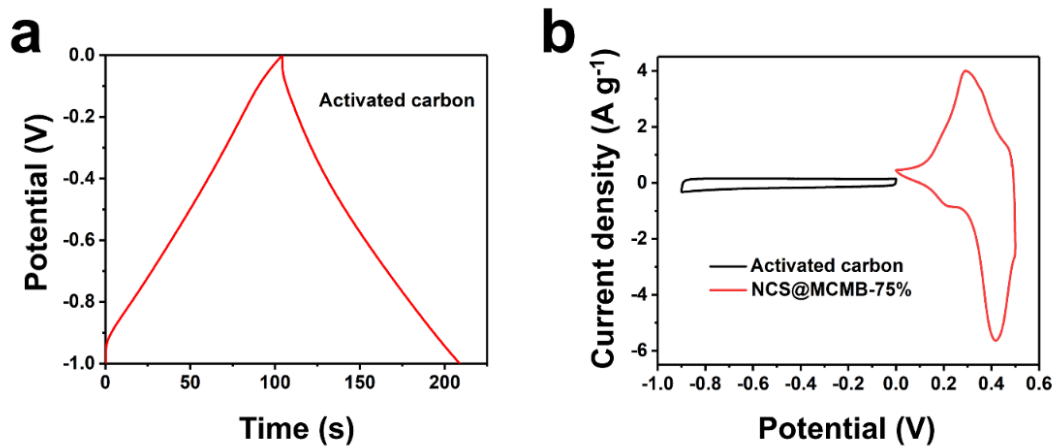


Fig. S10 **a** GCD curve of activated carbon at a current density of 1 A g^{-1} . **b** CV curves of activated carbon and NCS@MCMB-75% at a scan rate of 2 mV s^{-1}

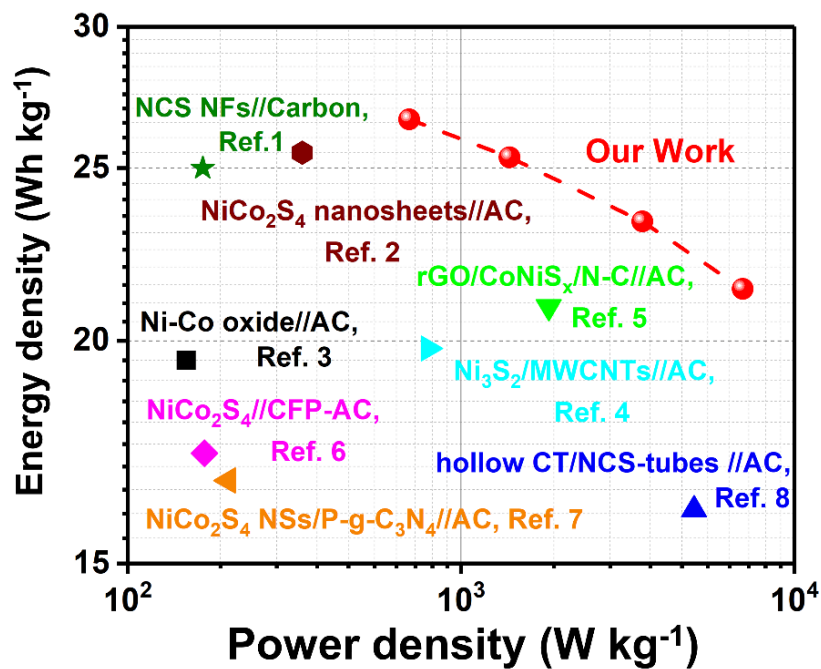


Fig. S11 Ragone plot of the NCS@MCMB//AC ASC

Supplementary References

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