

Supporting Information

NiMoO₄ Nanorod Deposited Carbon Sponge with Ant-Nest-Like Interior Channels for High-Performance Pseudocapacitors

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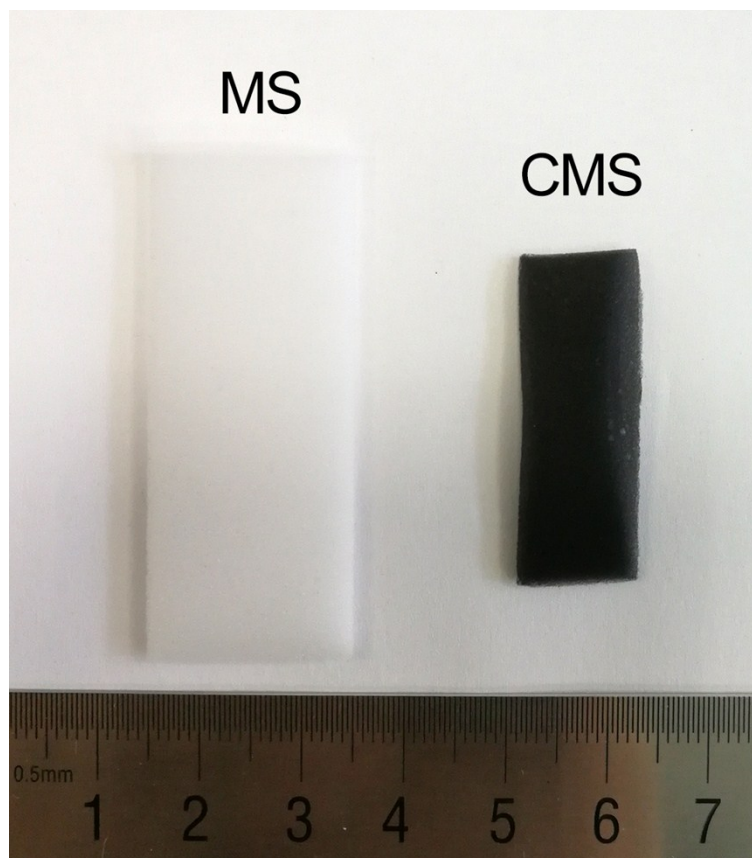


Fig. S1 Digital photographs of melamine sponge (MS) and carbonized melamine sponge (CMS).

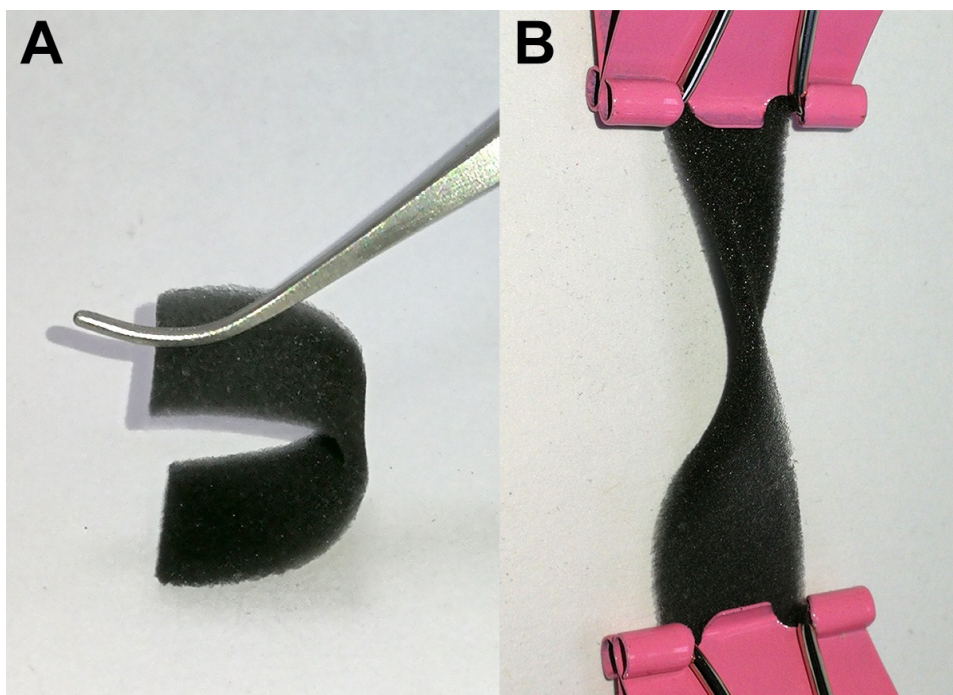


Fig. S2 Demonstration of the (A) bending and (B) twisting tests on CMS.

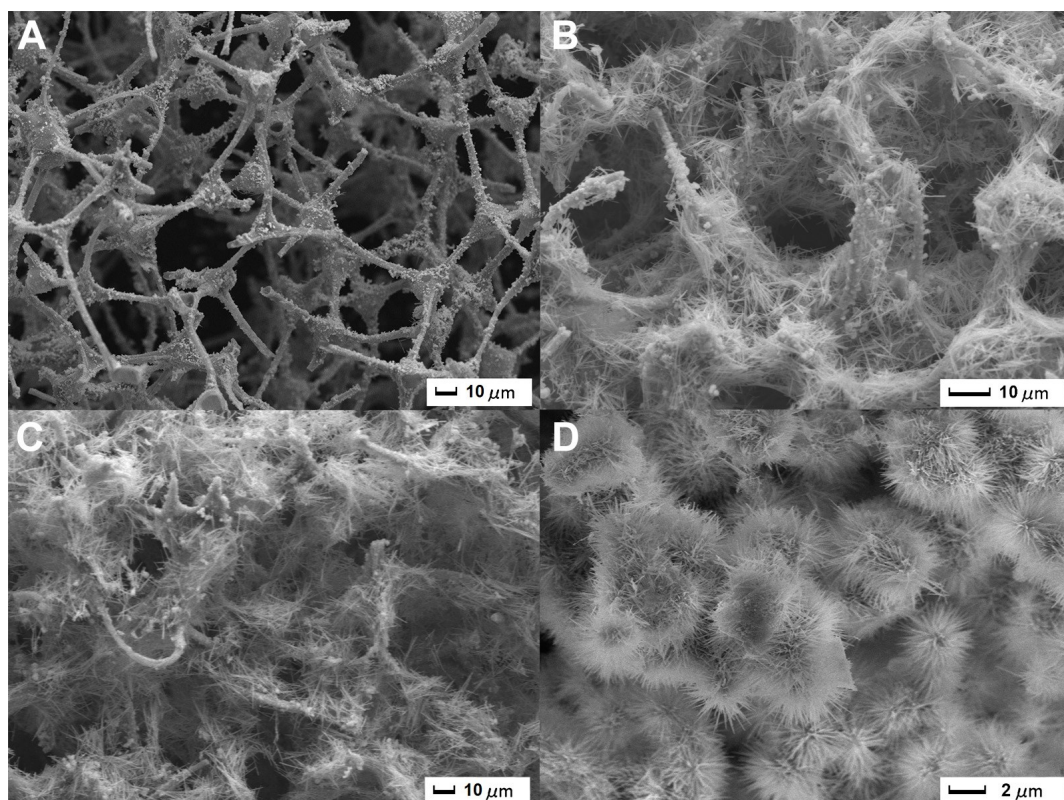


Fig. S3 SEM images of (A) NiMoO₄/CMS-10, (B) NiMoO₄/CMS-30, (C) NiMoO₄/CMS-40 and (D) pure NiMoO₄.

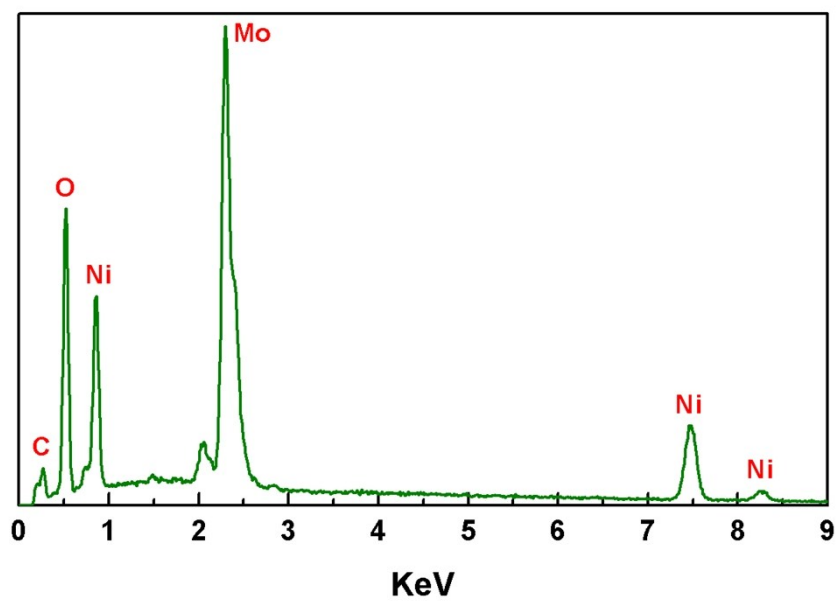


Fig. S4 Elemental distribution on NiMoO₄/CMS-20.

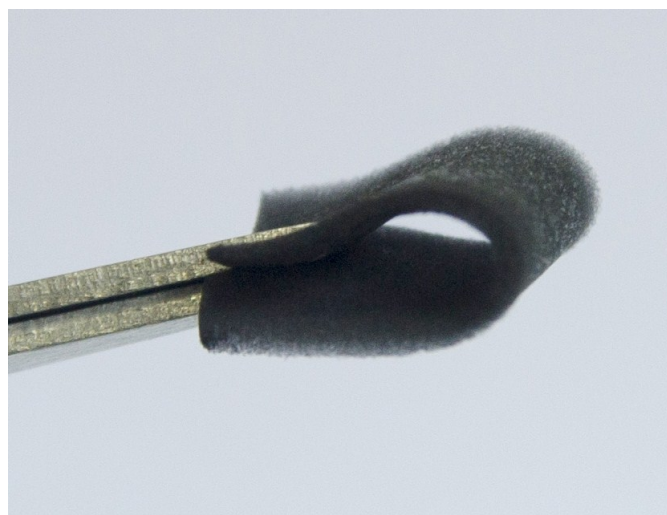


Fig. S5 Digital photograph of NiMoO₄/CMS-20 composite sponge under large scale bending deformation.

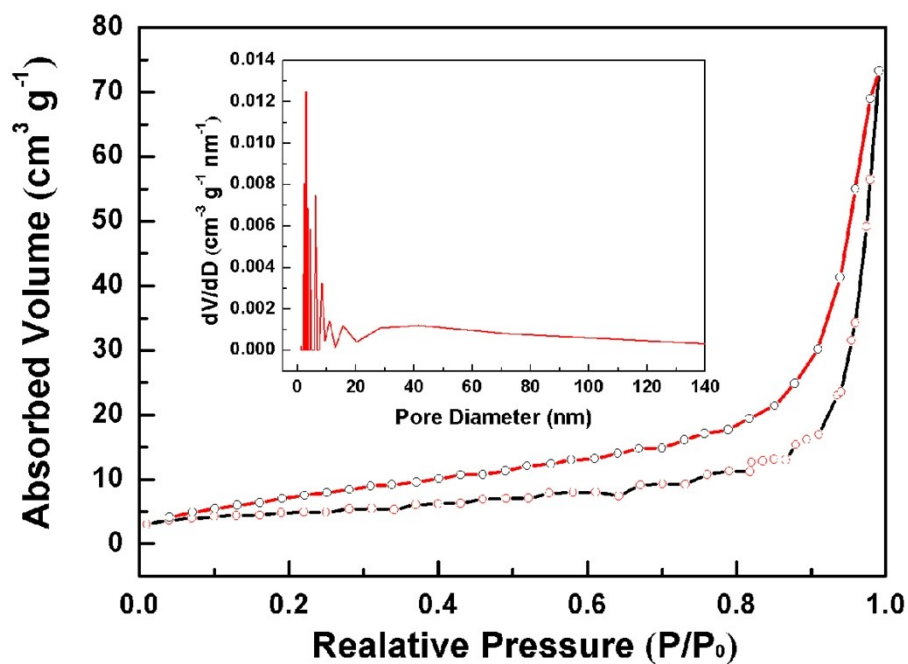


Fig. S6 Nitrogen adsorption/desorption isotherms and pore size distribution of $\text{NiMoO}_4/\text{CMS-20}$ composite sponge.

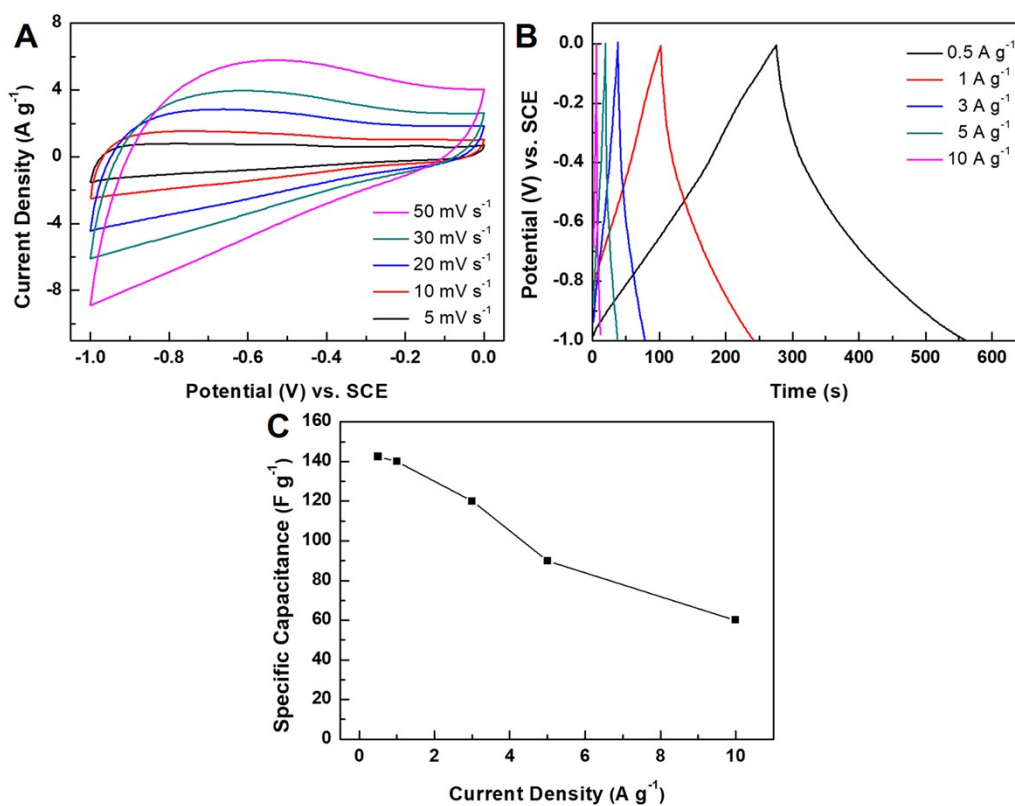


Fig. S7 (A) CV curves and (B) Galvanostatic charge-discharge curves of the AC electrode; (C) Specific capacitance of AC electrode at different current densities.

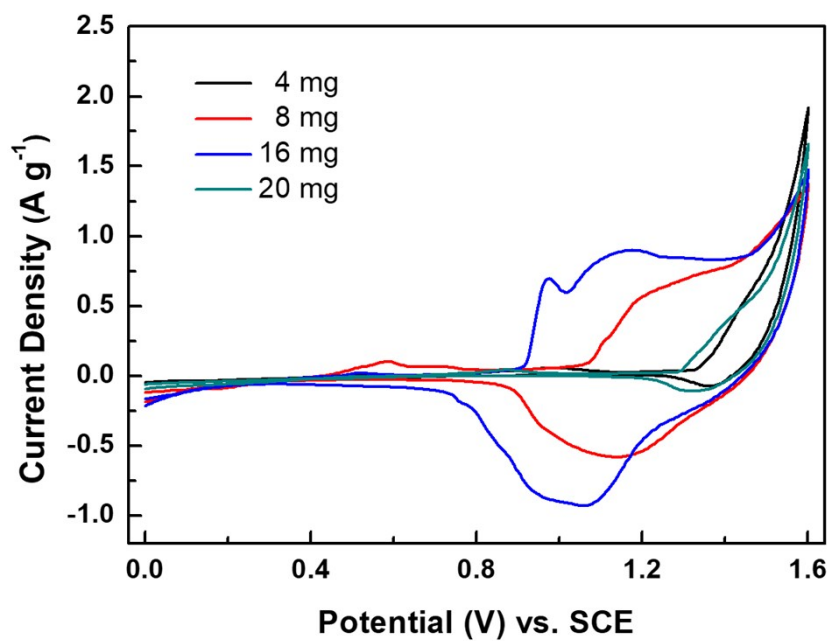


Fig. S8 CV curves of the asymmetric supercapacitors devices with different AC masses.

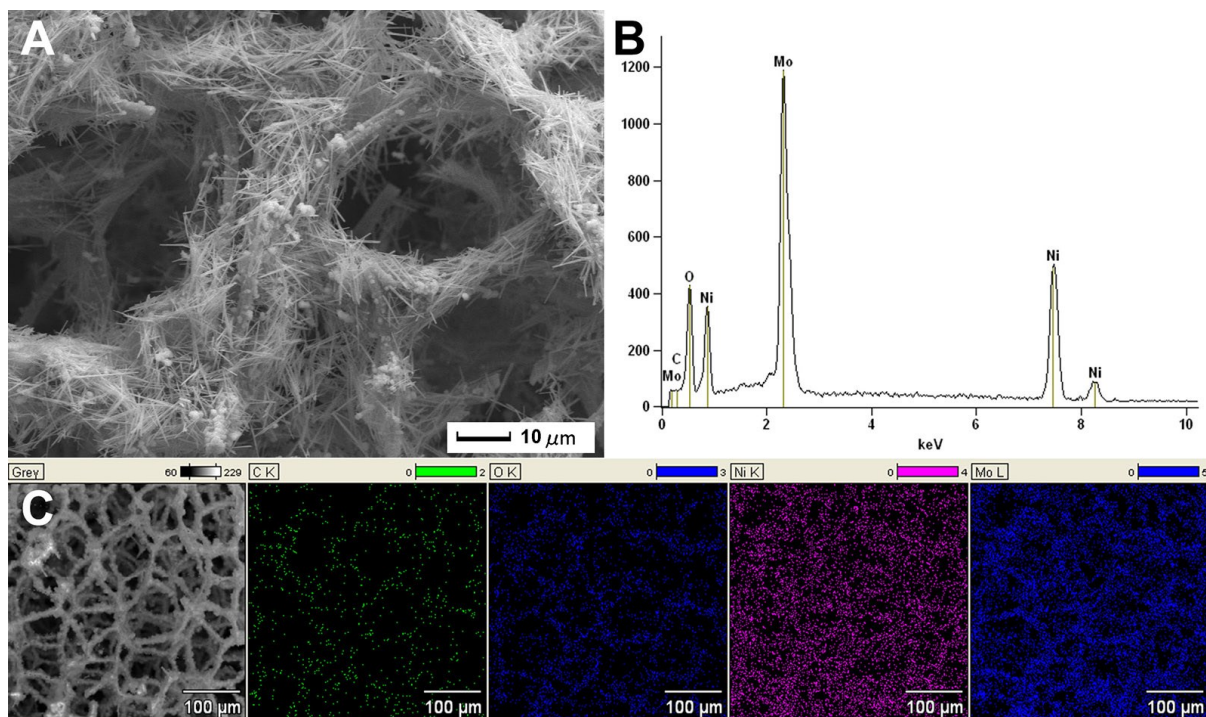


Fig. S9 (A) SEM image and (B, C) elemental mapping of NiMoO₄/CMS-20 after electrochemical tests.

Table S1 Comparison of the electrochemical performance of NiMoO₄/CMS composite sponge and other NiMoO₄ based electrode materials reported in literatures.

Electrode materials	Substrates	Mass loading of active components	Electrolyte	Current density (A g ⁻¹)	Specific capacitance (F g ⁻¹)	References
α-NiMoO ₄ Nanorods	-	-	3 M KOH	-	730	1
NiMoO ₄ /graphene	Graphene	-	6 M KOH	5	161	2
MnO ₂ @NiMoO ₄ core-shell nanostructure	MnO ₂	-	2 M KOH	-	1123.7	3
NiMoO ₄ nanosheet	Ni foam	1.2 mg cm ²	2 M KOH	1	1221.2	4
NiMoO ₄ -carbon composite nanofibers	Carbon nanofiber	50 wt%	6 M KOH	1	1438	5
CoMoO ₄ @NiMoO ₄ core-shell heterostructure	Carbon fabric	1.8 mg cm ²	2 M KOH	1	1582	6
NiMoO ₄ /CMS composite sponge	Carbonized melamine sponge	4.6 wt%	3 M KOH	1	1689	This work

References:

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