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SUPPORTING INFORMATION

Facile synthesis of $MnCo_2S_4$ nanosheets as a binder-free electrode material for high performance supercapacitor applications

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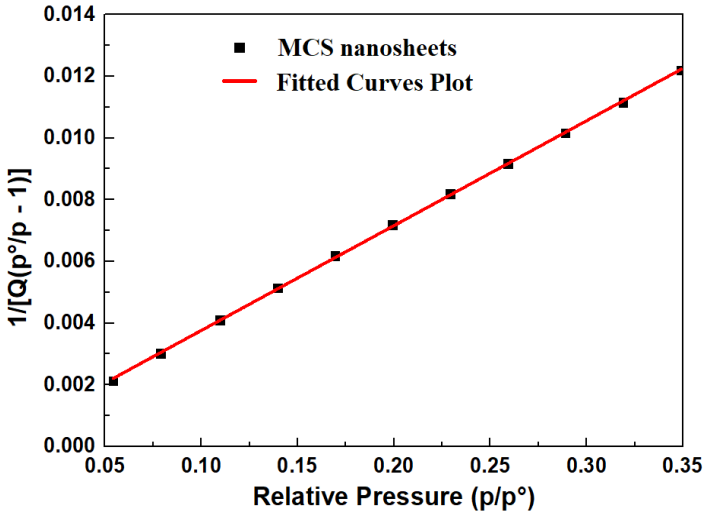

Fig. S1. BET surface area plot of MCS nanosheets.

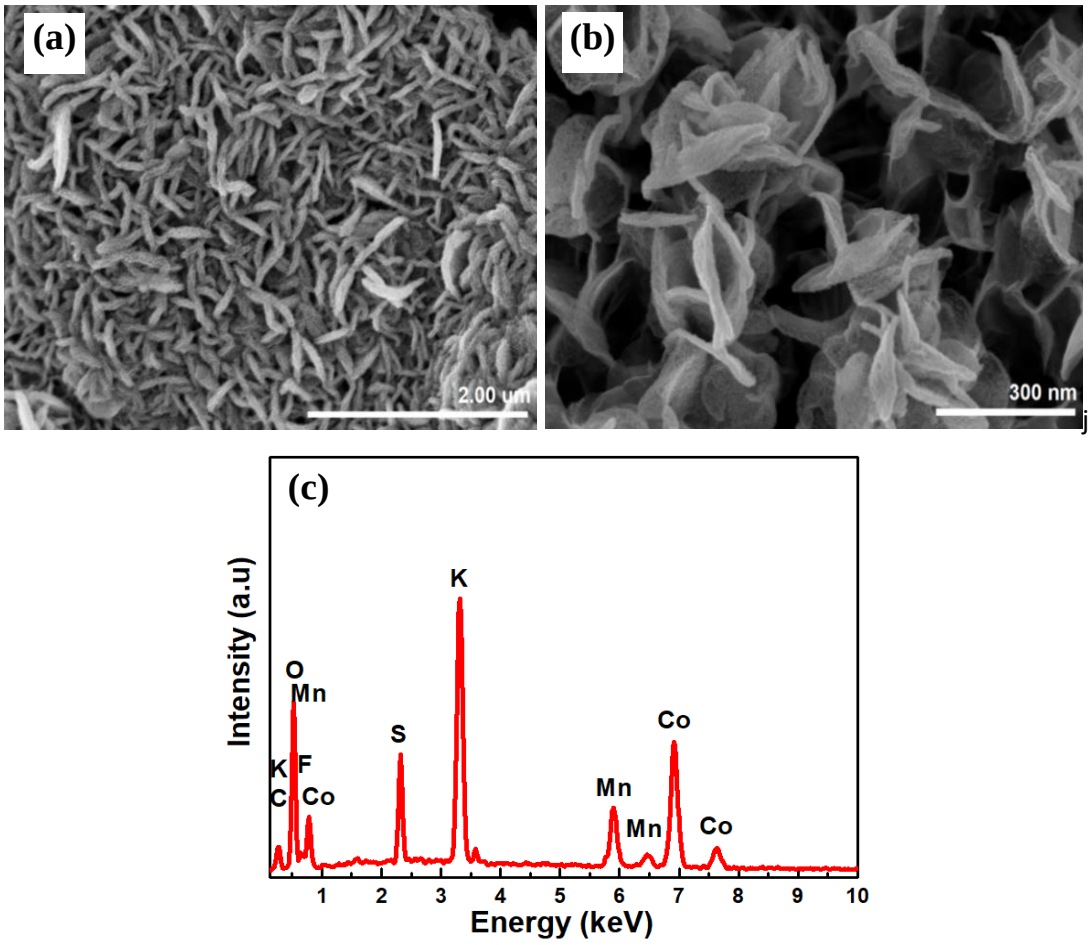

Fig. S2. SEM images (a, b) and EDS spectrum of MCS electrode after 5000 cycles.

Table S1. Comparison of the electrochemical performance of the $MnCo_2S_4$//$MnCo_2S_4$ device with various supercapacitors from previous reports.

Supercapacitor	Electrolyte	Voltage (V)	Specific capacitance (Fg^{-1})	Energy density ($Whkg^{-1}$)	Power density (Wkg^{-1})	Ref.
$MnCo_2S_4$//$MnCo_2S_4$ SSC	**6M KOH**	**1.7**	**239 Fg^{-1}**	**96**	**1857**	**This work**
$MnCo_2S_4$//$MnCo_2S_4$ SSC	3M KOH	1.8	59.7 $mAhg^{-1}$	106.5	850	[S1]
$MnCo_2S_4$/HNTs// $MnCo_2S_4$/HNTs SSC	Polymer gel	0.8	76.12 Fg^{-1}	6.98	1976	[S2]
$MnCo_2S_4$//AC ASC	3M KOH	1.6	160 Fg^{-1}	57	1000	[S3]
$MnCo_2S_4$//rGO	2M KOH	1.6	121 Fg^{-1}	43	801	[S4]
CoMnS//AC ASC	2M KOH	1.6	241.62 Fg^{-1}	85.91	800	[S5]
$CoMn_2O_4$//$CoMn_2O_4$ SSC	KOH/PVA gel	1	46.5 $mAhg^{-1}$	23.29	500	[S6]
$NiFe_2O_4$//$NiFe_2O_4$ SSC	KOH/PVA gel	1.2	236 Fg^{-1}	47	333	[S7]
$NiCo_2S_4$/Co_9S_8//AC ASC	1M KOH	1.6	103.2 Fg^{-1}	36.7	800	[S8]
$CuCo_2S_4$//AC ASC	3M KOH	1.4	76.8 Fg^{-1}	15	422.5	[S9]
$CuCo_2S_4$//AC ASC	2M KOH	1.4	231 Fg^{-1}	63.6	700	[S10]

Note: AC= active carbon, rGO = reduced graphene oxide, ASC=asymmetric supercapacitor, SSC=symmetric supercapacitor.

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