Supporting Information

CoS_2 Nanoparticles Wrapping on Flexible Freestanding Multichannel Carbon Nanofibers with High Performance for Na-Ion Batteries

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The file includes Figure S1-S3 and Table S1.

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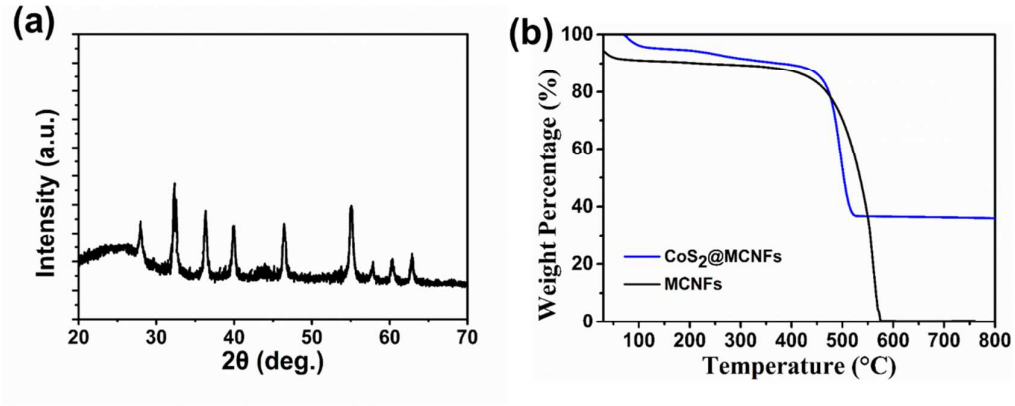


Figure S1 (a) XRD pattern of the bare CoS_2; (b) TGA curves of CoS_2@MCNFs composites and bare MCNFs.

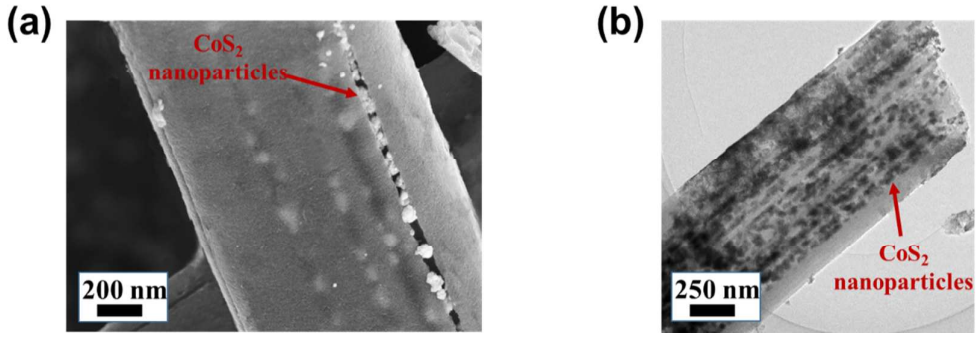


Figure S2 (a) SEM image and (b) TEM image of treated CoS_2@MCNFs composites with HCl solution.

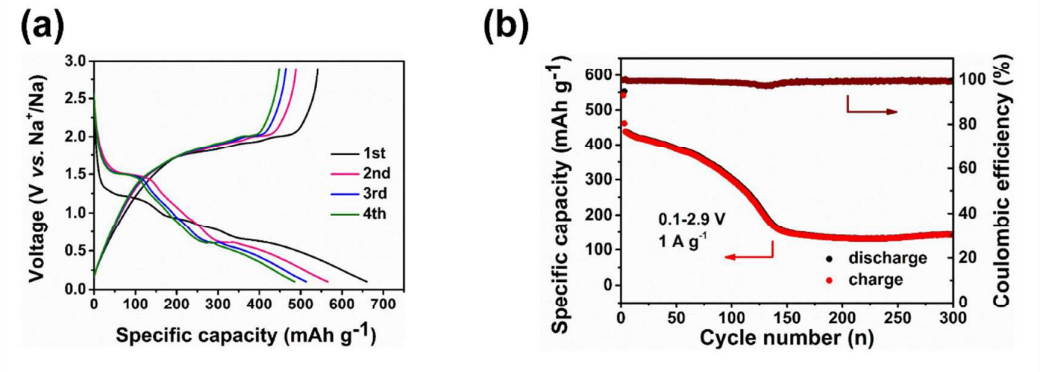


Figure S3 Electrochemical performance in the potential window of 0.1-2.9 V. (a) Galvanostatic discharge/charge curves of CoS_2@MCNFs composites in the first four cycles at 100 mA g^{-1}. (b) Rate performance of CoS_2@MCNFs composites at 1 A g^{-1}.

Table S1 Comparison of the Na-storage performance with reported Transition-metal sulfides-based electrode materials.

Types of materials	Current density	Cycle number	Capacity retention (relative to 2nd)	Specific capacity (mAh g^{-1})	Ref.
SnS_2-RGO	1 A g^{-1}	400	77.9%	500	1
MoS_2/Grapghene	320 mA g^{-1}	300	79.2%	227	2
SnS_2/C Nanospheres	50 mA g^{-1}	100	85.4%	570	3
VS4/rGO	100 mA g^{-1}	50	91.8%	237	4
SnSbS x / PCNF	100 mA g^{-1}	80	69.4%	584	5
CoS_2@MCNFs	1 A g^{-1}	1000	87.3%	314	This work

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