

Hollow metallic 1T MoS₂ arrays grown on carbon cloth: a freestanding electrode for sodium ion batteries

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Table S1. Comparison of electrochemical performance of MoS₂ based anode materials for SIBs.

Anode materials	Initial capacity	Current density	Stable capacity after n-cycles	Initial Coulombic efficiency	Ref.
3D-ANCNT @MoS₂	945.6 mAh g ⁻¹	0.1 A·g ⁻¹	579.4 mAh·g ⁻¹ after 100 cycles	75.2%	1
MoS₂/CNFs	1,238 mAh g ⁻¹	0.1 A·g ⁻¹	500 mAh·g ⁻¹ after 80 cycles	50%	2
MoS₂@C-C MC	556 mAh g ⁻¹	80 mA·g ⁻¹	286 mA h g ⁻¹ after 100 cycles	79.4%	3
N-C@MoS₂	810 mAh g ⁻¹	150 mA·g ⁻¹	340 mAh g ⁻¹ after 150 cycles	71.5%	4
MoS₂/C	681 mAh g ⁻¹	0.1 A·g ⁻¹	447 mAh g ⁻¹ after 100 cycles	73%	5
MoS₂/PANI	888 mAh g ⁻¹	300 mA·g ⁻¹	456 mAh g ⁻¹ after 100 cycles	83.2%	6
1T MoS₂-graphene	630 mAh g ⁻¹	50 mA·g ⁻¹	313 mAh g ⁻¹ for 200 cycles.	64%	7
1T-MoS₂/CC	989 mAh g ⁻¹	200 mA·g ⁻¹	576 mAh g ⁻¹ after 200 cycles	77.7 %	This work

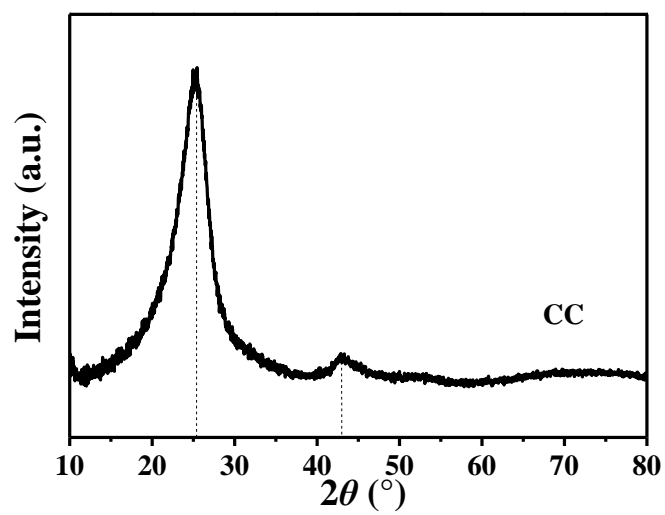


Fig. S1. XRD pattern of carbon cloth.

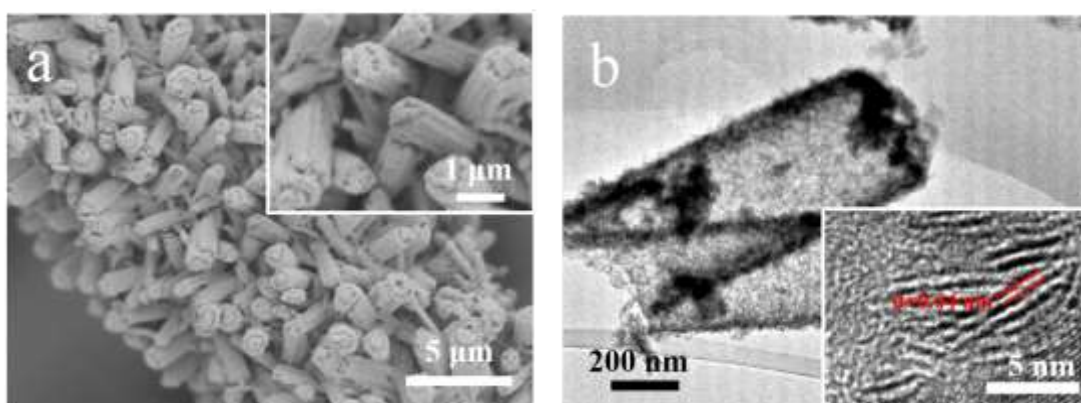


Fig. S2. (a) SEM images of 2H-MoS₂/CC; (b) TEM and HRTEM images of 2H-MoS₂/CC.

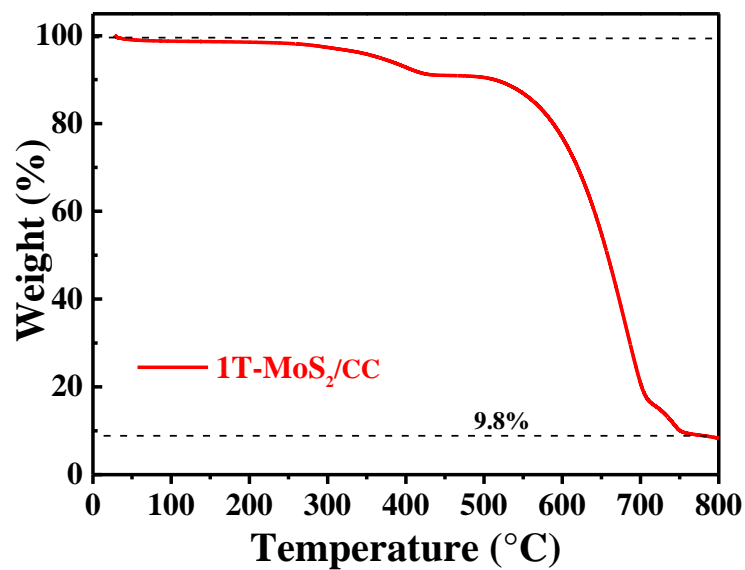


Fig. S3. TGA curve of 1T-MoS₂/CC arrays in air.

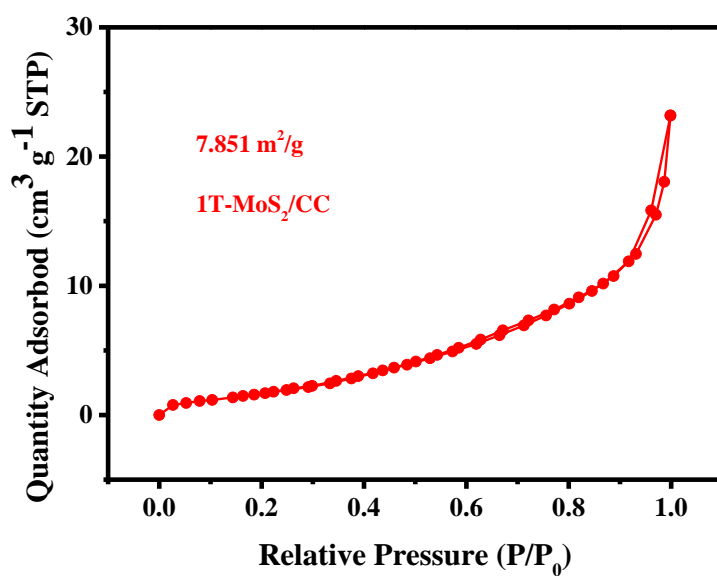


Fig. S4. Nitrogen adsorption-desorption isotherm curve of 1T-MoS₂/CC arrays.

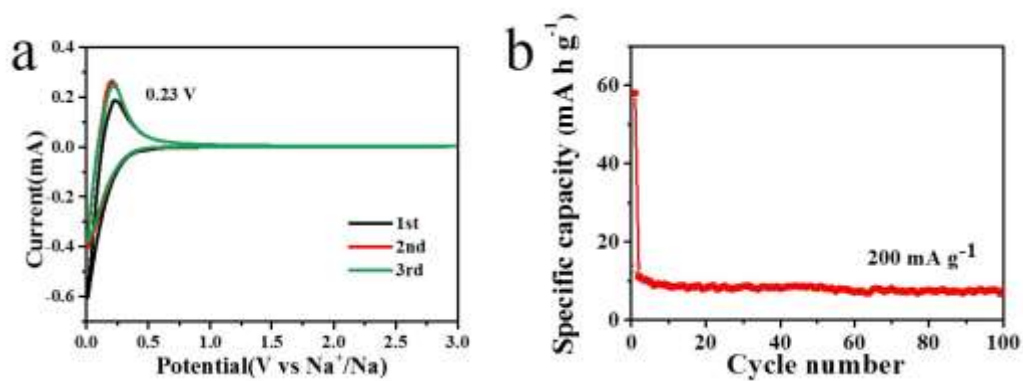


Fig. S5. (a) CV curves of carbon cloth electrode for SIBs for the first three cycles; (b) cycling performance of carbon cloth for SIBs.

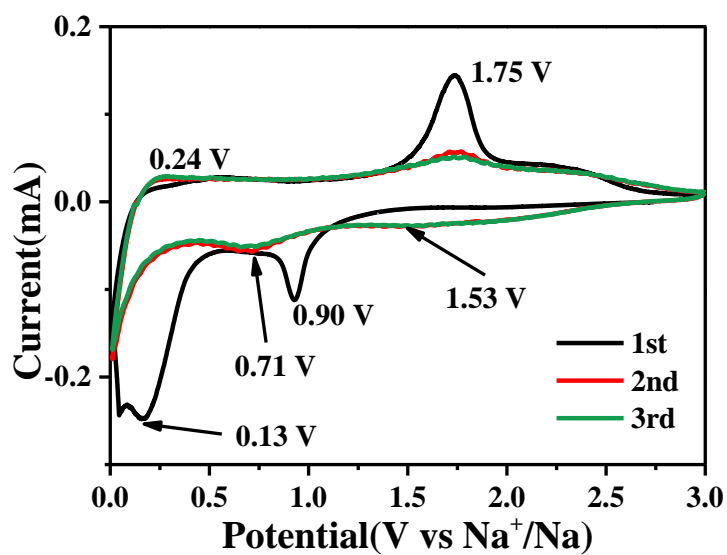


Fig. S6. CV curves of 2H-MoS₂/CC electrode at a scan rate of 0.1 mV s⁻¹ for the first three cycles.

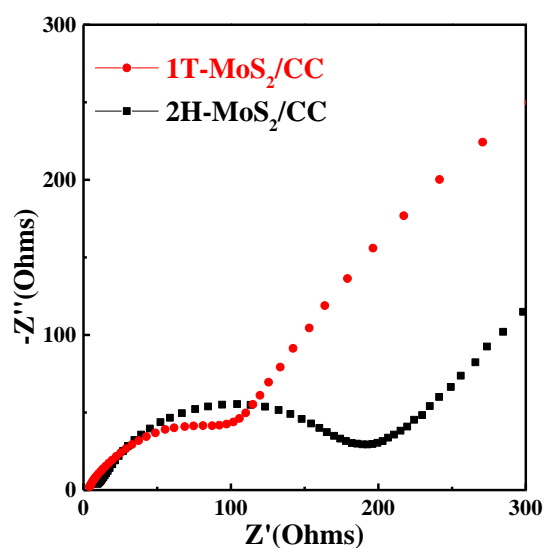


Fig. S7. Nyquist plots of 2H-MoS₂/CC and 1T-MoS₂/CC electrodes after the initial cycle.

Reference

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