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Supporting Materials

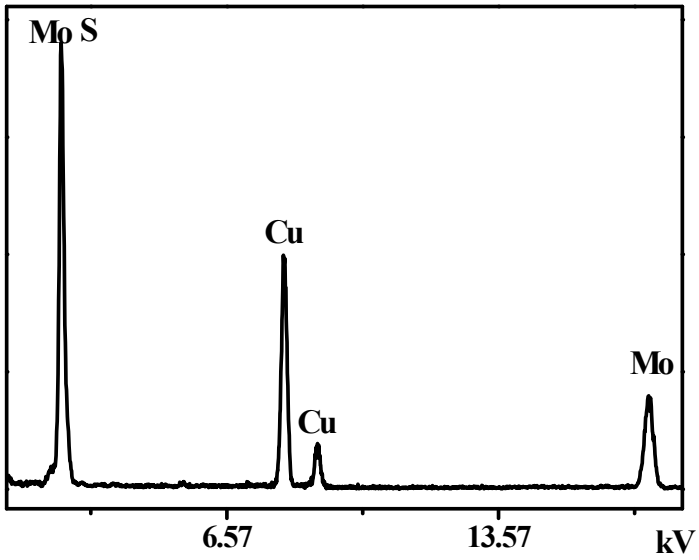

Fig. S1 EDX spectrum of as-prepared MoS_2 nanosheets.

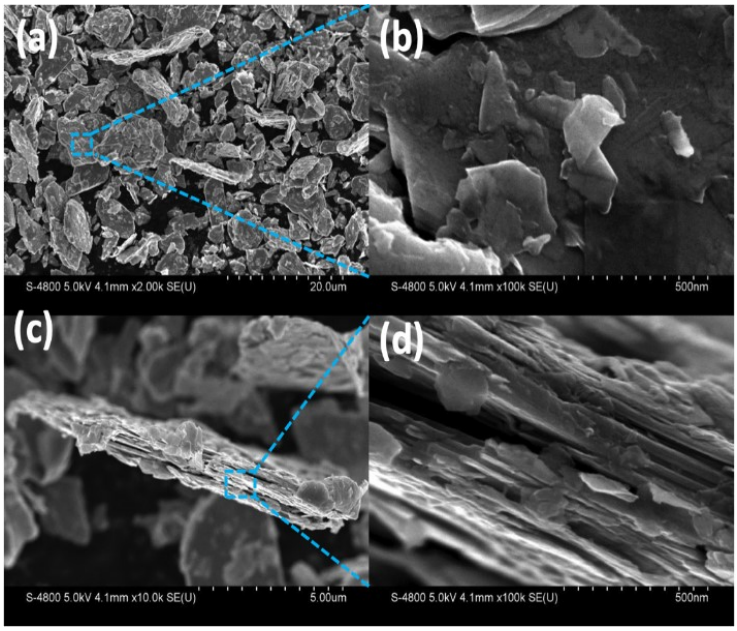

Fig. S2 Typical SEM images of commercial MoS_2 (b is a partial enlargement of a, and c is a partial enlargement of d).

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Tab. S1 Comparison of the capacitive performance of MoS_2 based anode materials.

Anode Materials	**Method**	**Capacity** ($mAhg^{-1}$)	**Current Density** (mAg^{-1})	**Cycles** (retention%)	**References**
MoS_2 nanobelt	In situ sulfuration	520–540	1000	100 (98)	S1
MoS_2/ C composite	Ball milling assisted pyrolysis	530	100	250 (73)	S2
MoS_2/graphene	Ball milling	225	1000	200 (90)	S3
MoS_2 nanotubes	Solvothermal	260	50	30 (98)	S4
MoS_2/PEO/graphene	Ultrasonic exfoliation	654	1000	180 (65)	S5
Dual-phase MoS_2	Solvothermal	670	100	200(45)	S6
MoS_2 microsphere	Solvothermal	253.6	20	100 (26)	S7
MoS_2/graphene	Solvothermal	300	2C	200 (85)	S8
This Work	**Ball milling assisted sonication**	**716**	**100**	**285 (80)**	**-**

References

[1] Z. Zhang, S. Wu, J. Cheng, and W. Zhang, Energy Storage Mater. 15, 65 (2018).

[2] Kong J , Zhao C , Wei Y , et al. Acs Appl Mater Interfaces, 7,43 (2015).

[3] C.J. Hsu, C.Y. Chou, C.H. Yang, T.C. Lee, and J.-K. Chang, Chem. Commun. 52, 1701 (2016).

[4] J. Chen, N. Kuriyama, H. Yuan, H. T. Takeshita, and T. Sakai, J. Am. Chem. Soc. 123, 011813 (2001).

[5] J. Xiao, X. Wang, X.Q. Yang, S. Xun, G. Liu, P. K. Koech, J. Liu, and J. P. Lemmon, Adv. Funct. Mater. 21, 2840 (2011).

[6] J. Wu, J. Liu, J. Cui, S. Yao, M. Ihsan Ul Haq, N. Mubarak, E. Quattrocchi, F. Ciucci, and J.-K. Kim, J. Mater. Chem. A 8, 2114 (2020).

[7] Z. Li, B. Niu, J. Liu, J. Li, and F. Kang, ACS Appl. Mater. Interfaces 10, 9451 (2018).

[8] X. Fan, R. R. Gaddam, N. A. Kumar, and X. S. Zhao, Adv. Energy Mater. 7, 1700317 (2017).