Supporting Information

Hierarchical MoS₂ nanosheets/active carbon fiber cloth as binderfree and free-standing anodes for lithium-ion batteries

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Experiment details of making MoS₂ powder electrode

The anode was prepared by mixing the active material, acetylene black and polyvinylidene fluoride (PVDF) binder in a weight ratio of 80:10:10 in N-methylpyrrolidone to form homogeneous slurry. The slurry was uniformly spread onto pure Cu foil with a doctor blade cast, and dried at 90 °C for 12 h in a vacuum. The electrode was punched into circular disks with diameter of 12 mm.



Fig. S1 Survey XPS spectrum of the ACF cloth



Fig. S2 Survey XPS spectrum of the as-formed hierarchically structured MoS₂/ACF cloth



Fig. S3 Photos of the ACF cloth and hieratical MoS_2/ACF cloth



Fig. S4 SEM image of hierarchical MoS_2/ACF cloth



Fig. S5 Cycling performance of commercial MoS_2 powder at 200 mA g⁻¹



Fig. S6 SEM image of the free-standing MoS_2/ACF cloth electrode after 200 charge and discharge cycles at a constant current density of 500 mA g⁻¹.