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Fig. S 1. (a)Cycling performance and (b) of pure maleic acid anode.



Fig. S 2. (a) CV curves of pure maleic acid anode at scan rate of 0.2 mV/s. (b)(c)Charge-discharge curves of pure maleic acid anode at 100 mA/g and different current rate.



Fig. S 3 Charge-discharge profiles of (a)MoS₂/Maleic 1:5, (b) 1:2, (c) 2:1,and (a)5:1, at current density of 100 mA/g.



Fig. S 4. Charge-discharge profiles of (a)MoS₂/Maleic 1:5, (b) 1:2, (c) 2:1 and (a)5:1, at different current density.



Fig. S 5. SEM images of (a) pristine MoS2 and (b) MoS₂/Maleic 1:1 anode before cycle.



Fig. S 6. HRSEM image of pristine MoS2/maleic 1:1 anode.