

## **Unveiling the Abnormal Capacity-Rising Mechanism of MoS<sub>2</sub> Anode during Long-Term Cycling for Sodium-Ion Batteries**

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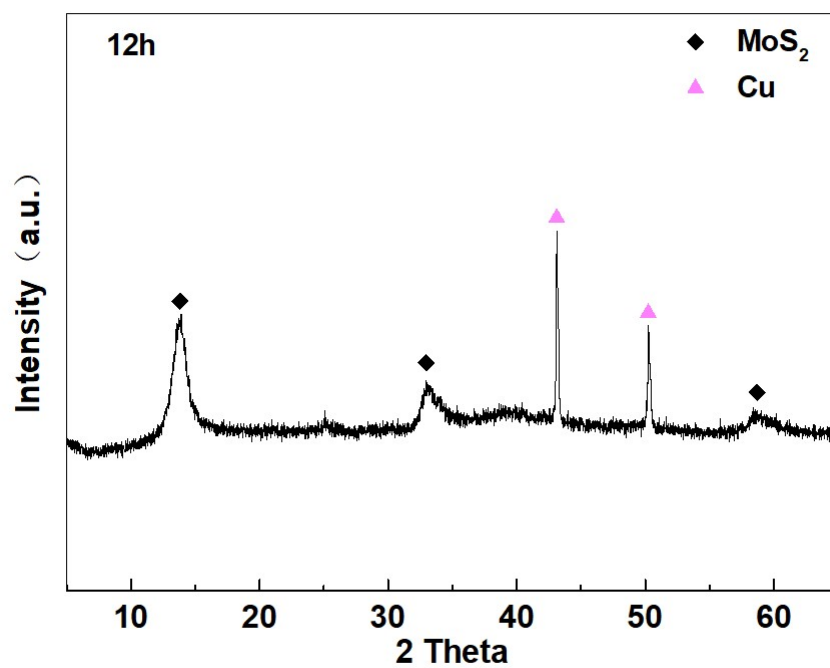
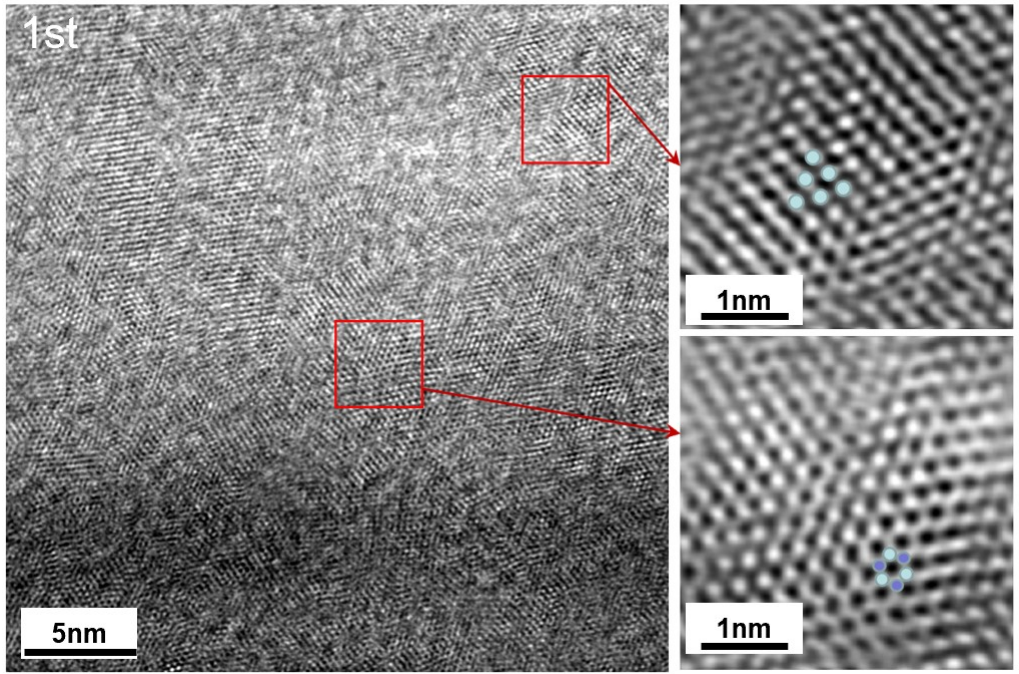


Fig. S1 XRD patterns of 2H-MoS<sub>2</sub> resting for 12h under battery environment.



**Fig. S2** HRTEM patterns pattern of MoS<sub>2</sub> after first charge/discharge process

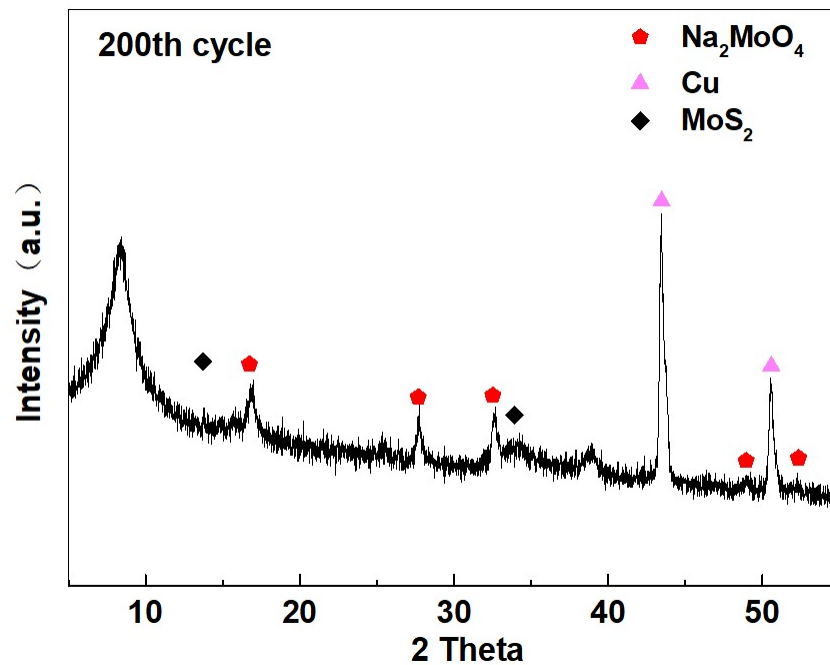
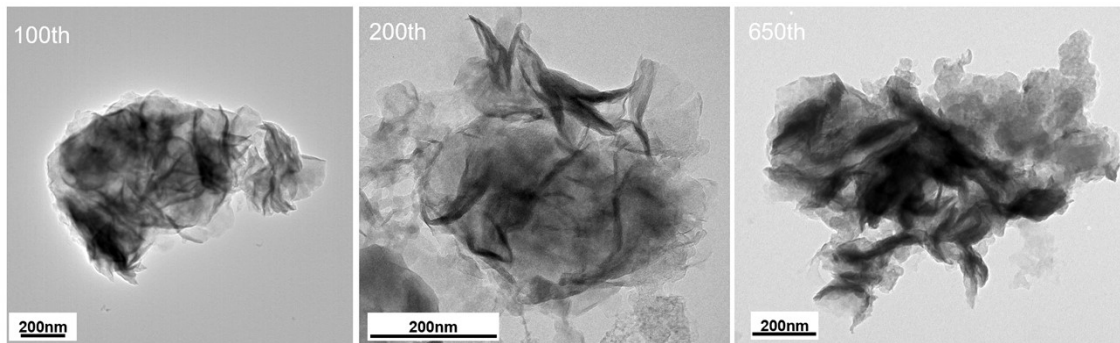


Fig. S3 XRD patterns of 2H-MoS<sub>2</sub> after 200<sup>th</sup> cycle



**Fig. S4** HRTEM patterns of MoS<sub>2</sub> anode after 100 cycles, 200 cycles and 650 cycles

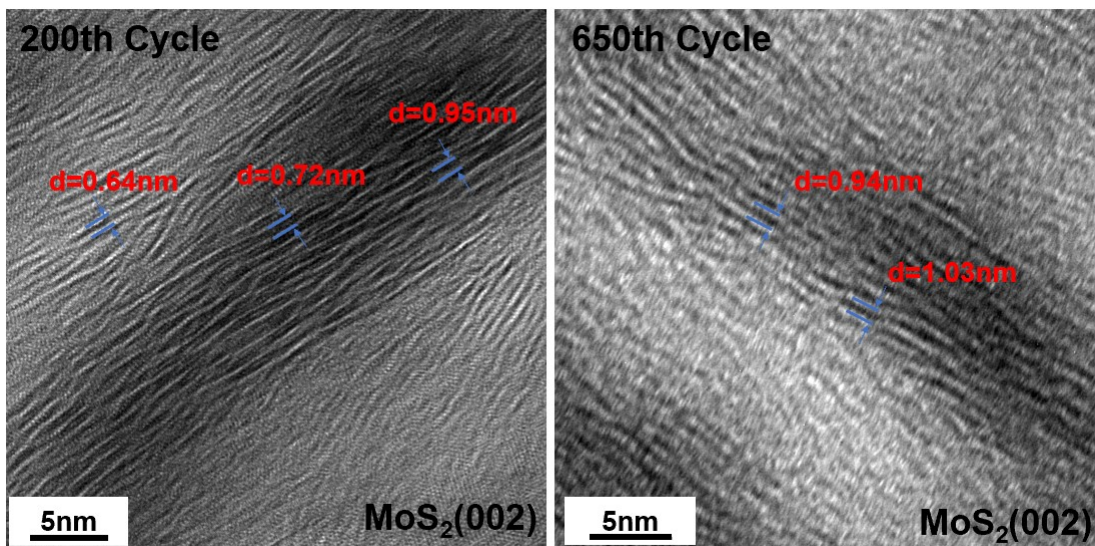


Fig. S5 HRTEM patterns of MoS<sub>2</sub> anode after 200<sup>th</sup> cycle and 650<sup>th</sup> cycle