

Supporting information for

Article

Preparation of Few-Layered MoS₂ by One-Pot Hydrothermal Method for High Supercapacitor Performance

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Text S1: Experimental Section

Chemicals: Sodium molybdate dihydrate (Na₂MoO₄ · 2H₂O, 99%), thioacetamide (C₂H₅NS, 99%), sodium borohydride (NaBH₄, 98%), anhydrous sodium sulfate were (Na₂SO₄, 99%), potassium chloride (KCl, 99.8%) and ethanol (C₂H₆O, 95%) were purchased from Sinopharm Chemical Reagent Co. Ltd. (Shanghai, China). All chemicals were used without any further purification.

Text S2: Electrochemical measurements and evaluations

This experiment uses a three electrode testing method to test the electrochemical performance of the sample on an electrochemical workstation. The three electrodes refer to the working electrode (active materials: carbon black: PVDF=8:1:1), reference electrode (Ag/AgCl electrode), and counter electrode (Pt electrode), respectively. Among them, the electrolytic cell solution in the three electrode testing system is 1 M Na₂SO₄ solution.

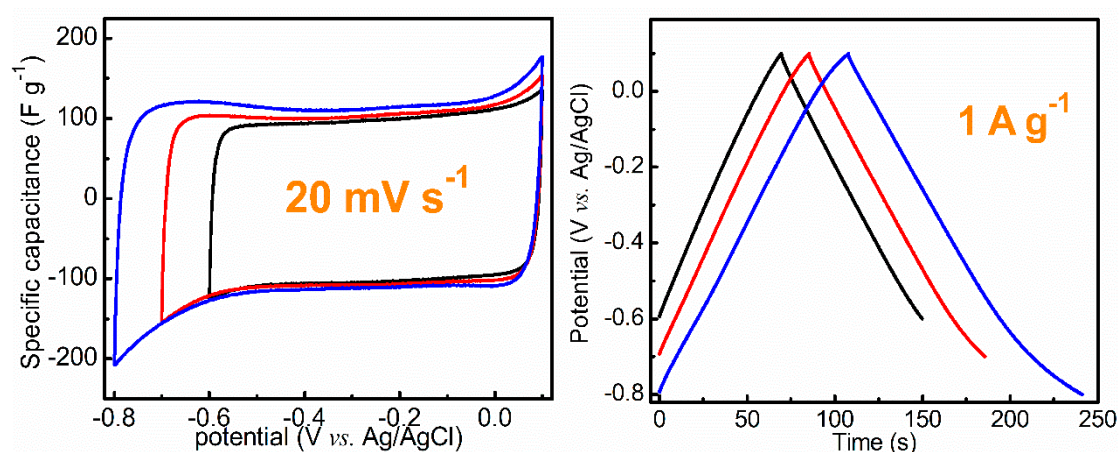


Figure S1. The different potential windows of MoS₂-0.3894 for the cyclic voltammetry (CV) and galvanostatic charge-discharge (GCD) curves at a same scan rate of 20 mV s⁻¹ and current density of 1 A g⁻¹.

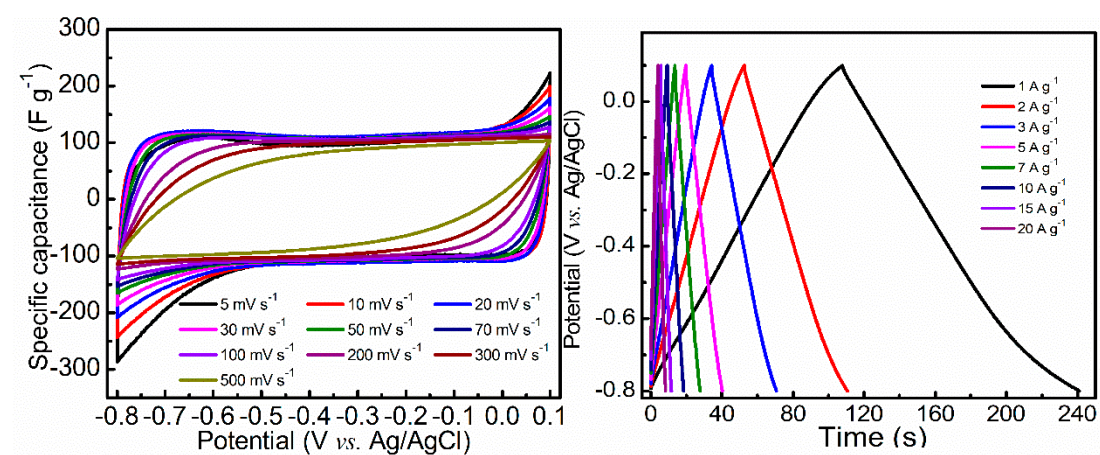


Figure S2. The CV and GCD curves of MoS₂-0.3894 at a series of scan rates and current densities.

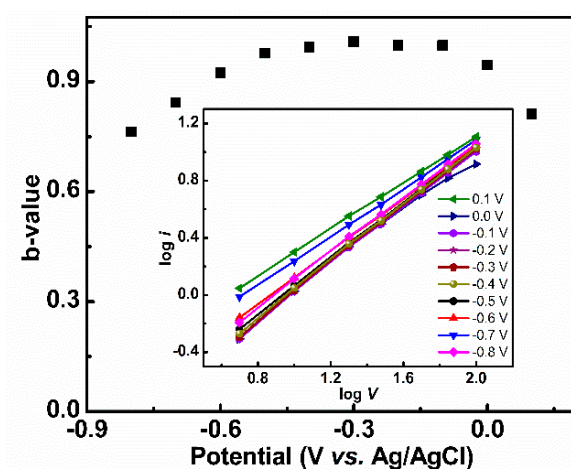


Figure S3. *b*-value for MoS₂-0.3894 electrode.

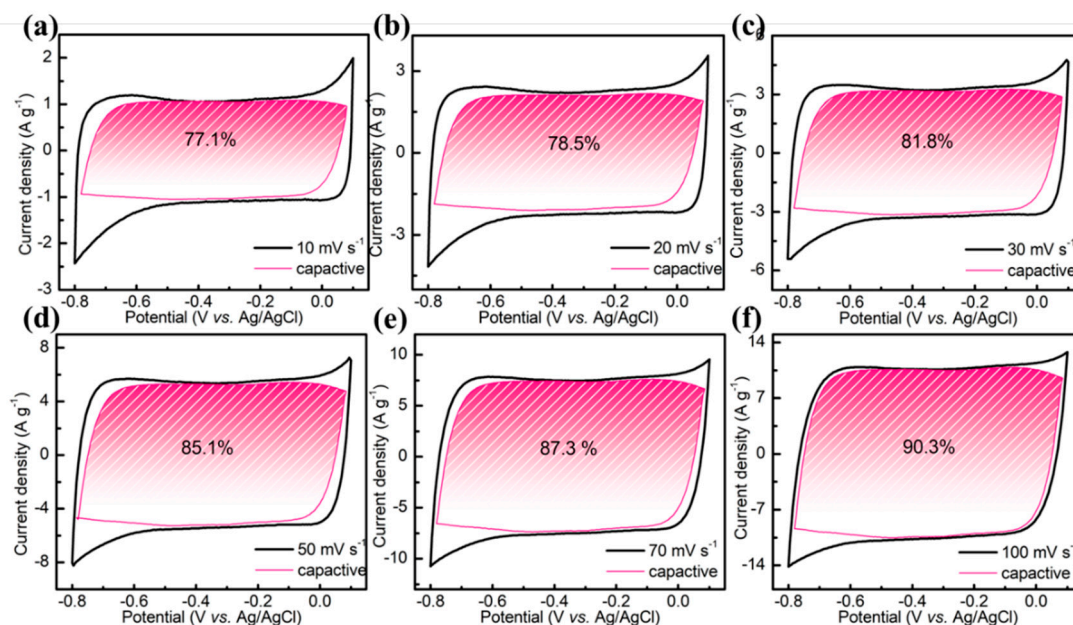


Figure S4. (a-f) CV partition analysis showing the capacitive contribution to the total current at select scan rates of 10, 20, 30, 50, 70 and 100 mV s^{-1} .

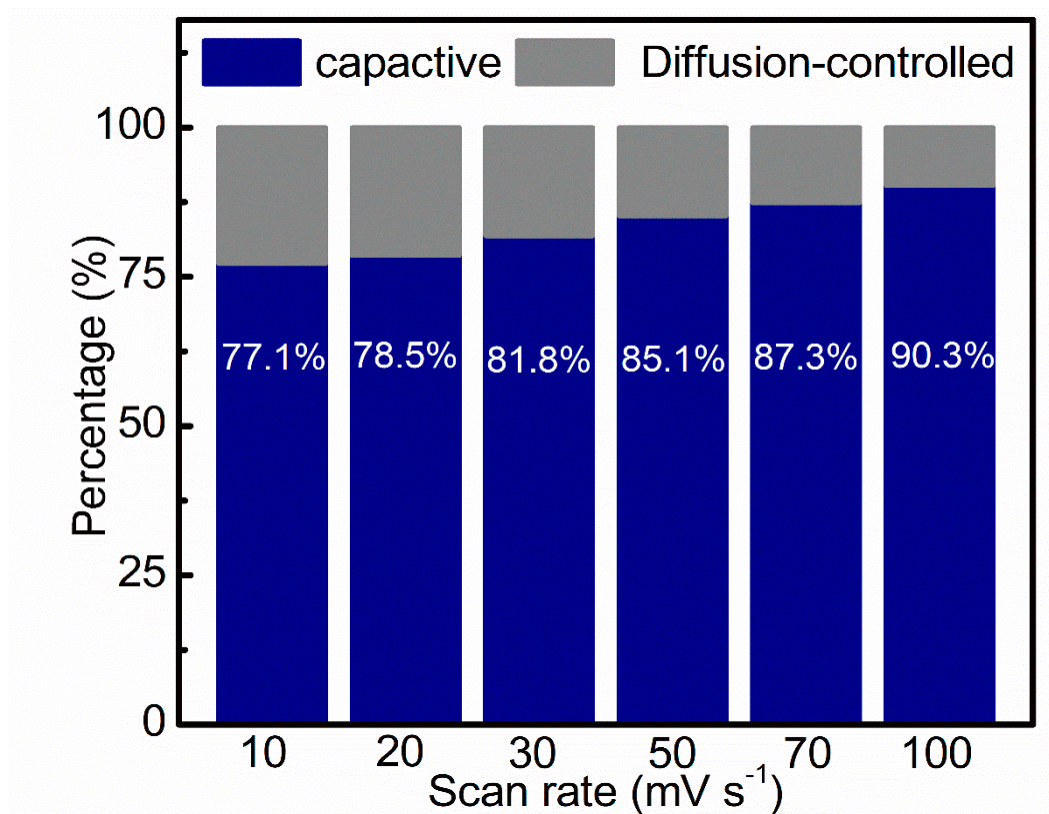


Figure S5. Normalized contribution ratio of capacitive capacitance at different scan rates.