

Hydrogen evolution reaction for N-doped amorphous MoS_x

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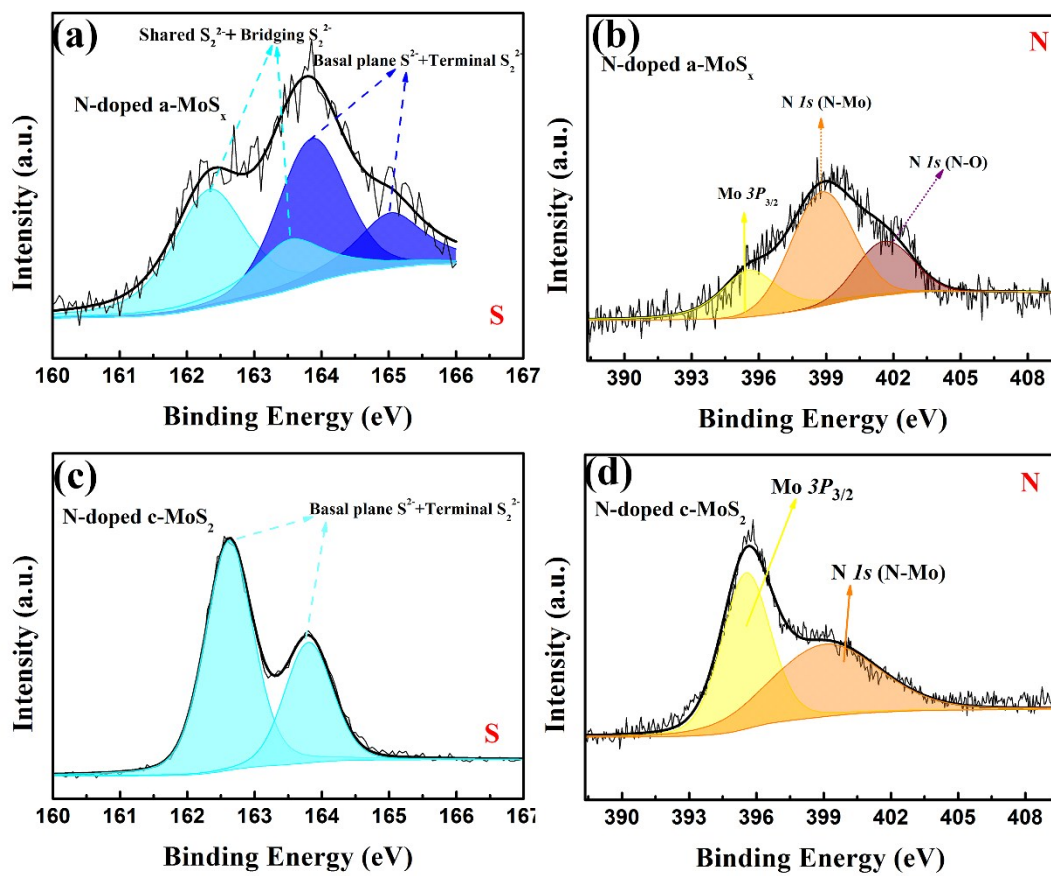


Figure S1. (a) S 2p and (b) Mo 3d of N-doped a-MoS_x; (c) S 2p and (d) Mo 3da of N-doped c-MoS₂.

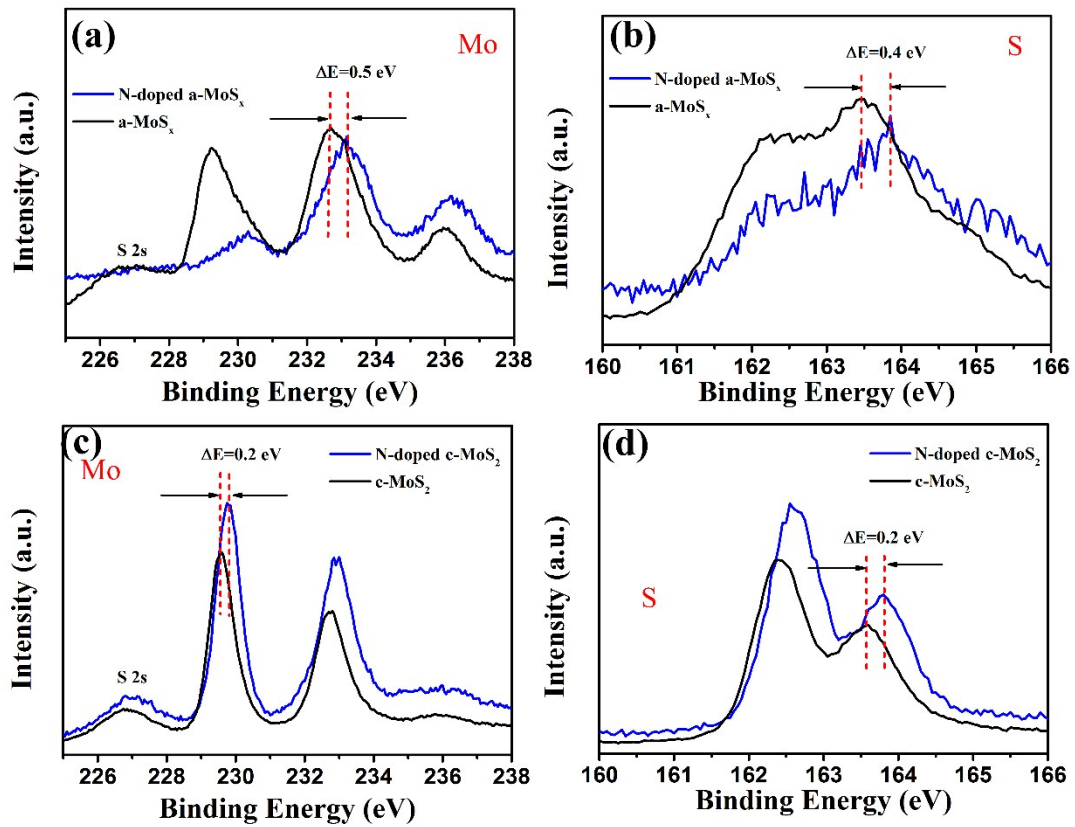


Figure S2. Comparison of Mo 3d (a) and S 2P (b) between N-doped a-MoS_x and a-MoS_x; Comparison of Mo 3d (a) and S 2P (b) between N-doped c-MoS₂ and c-MoS₂.

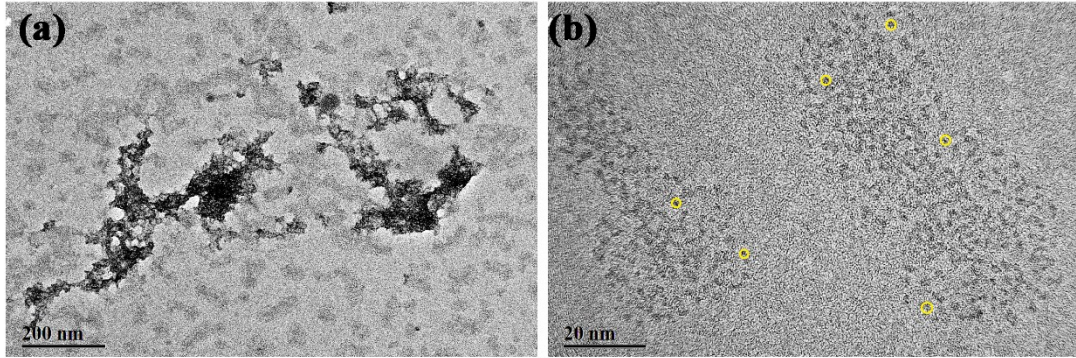


Figure S3. (a) TEM and (b) HRTEM of α - MoS_x .

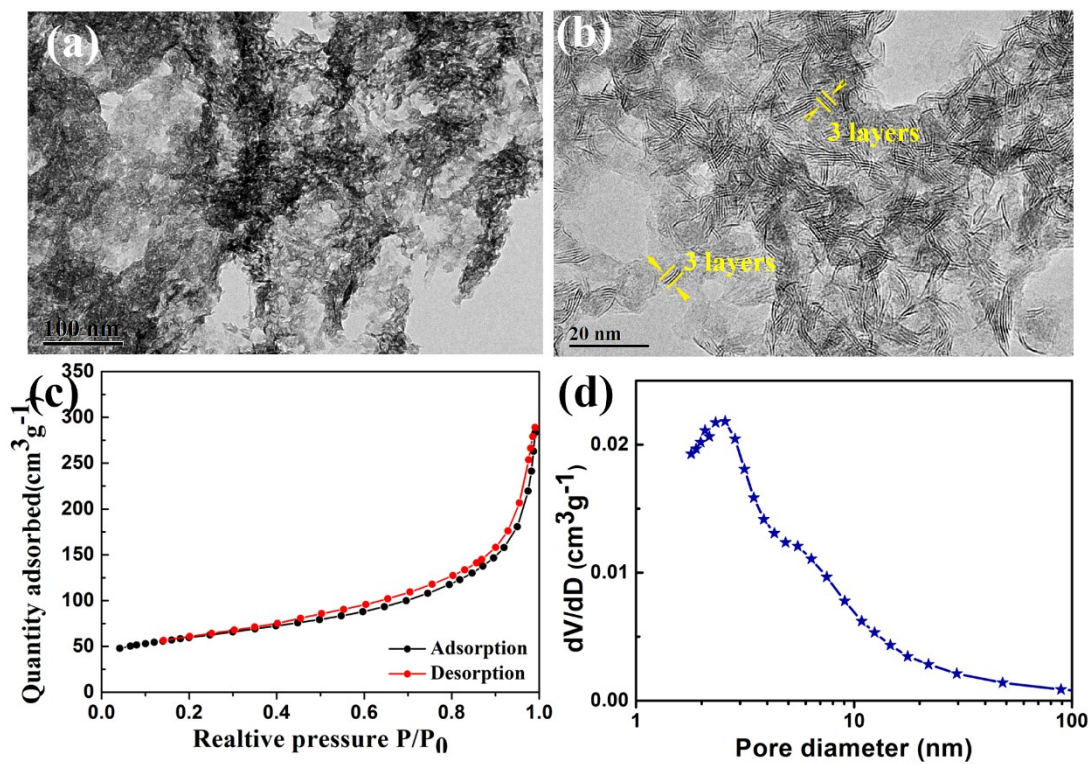


Figure S4. (a) Representative TEM, (b) TEM, (c) Nitrogen adsorption–desorption isotherms and (d) the corresponding pore volume distribution based on the BET method of c-MoS₂.

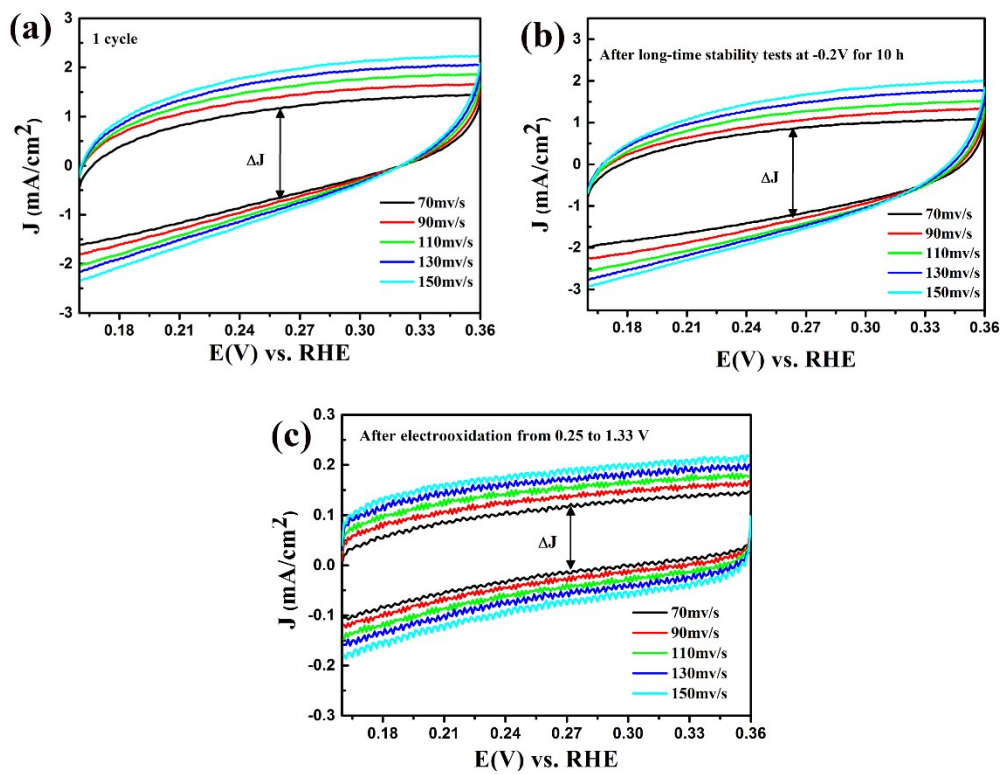


Figure S5. Cyclic voltammety curves of a-MoS_x after 1 cycle (a), after long-time stability test (b) and after electrochemical oxidation(c).

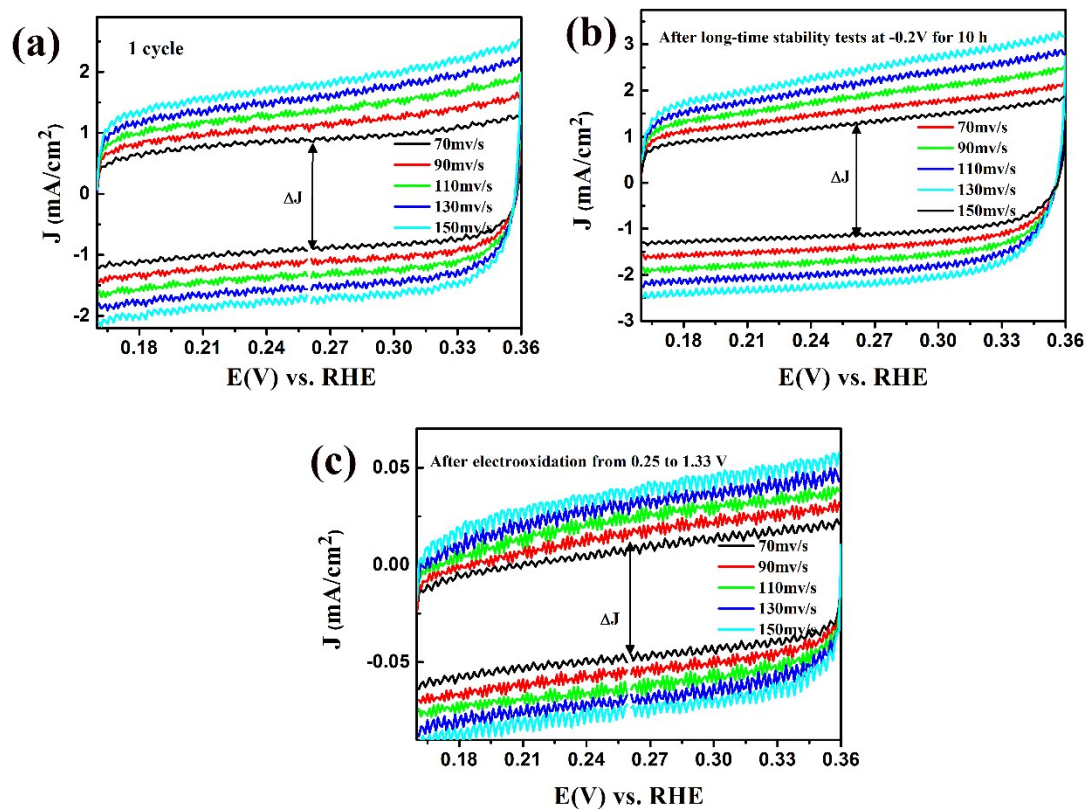


Figure S6. Cyclic voltammograms of N-doped a-MoS_x after 1 cycle (a), after long-time stability test (b) and after electrochemical oxidation (c).

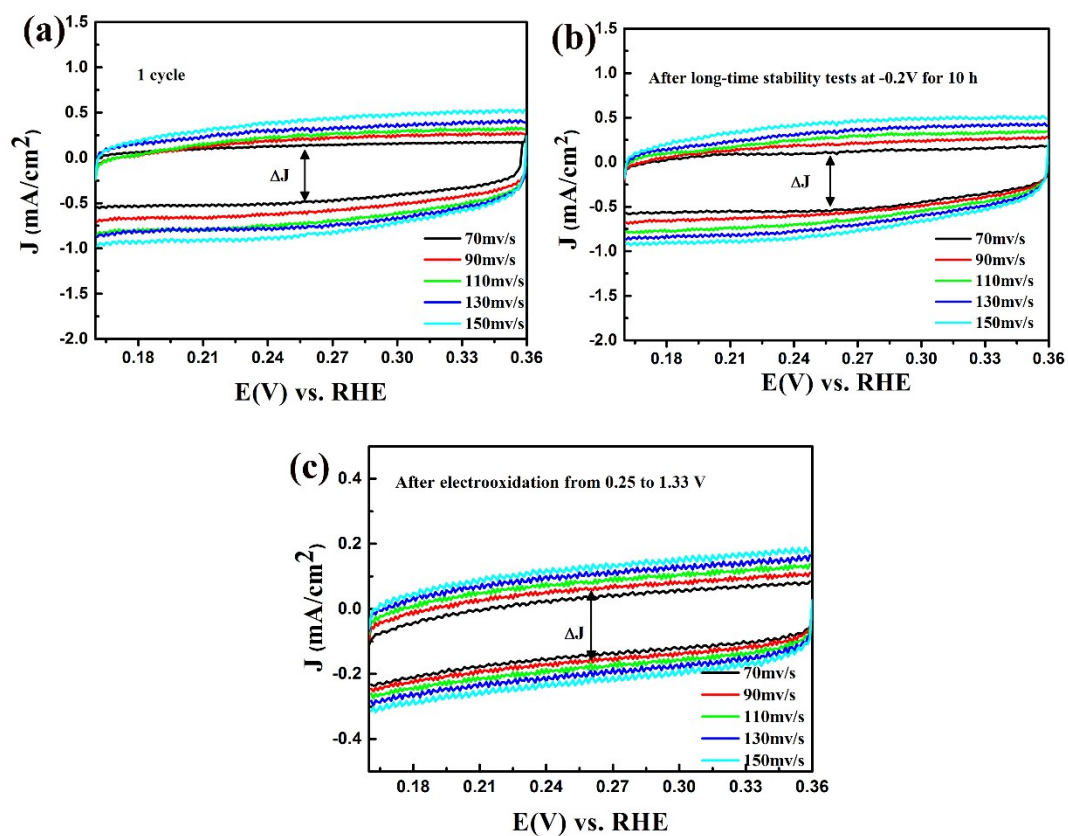


Figure S7. Cyclic voltammetry curves of c-MoS₂ after 1 cycle (a), after long-time stability test (b) and after electrochemical oxidation(c).

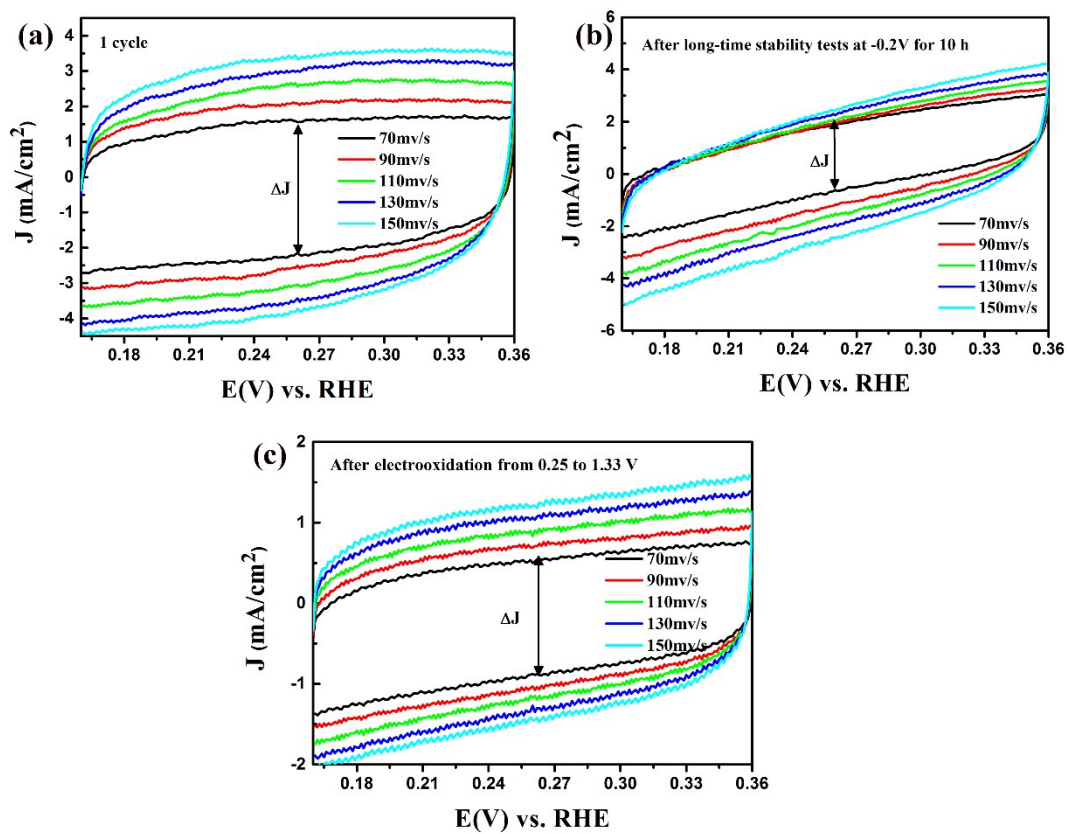


Figure S8. Cyclic voltammety curves of N-doped c-MoS₂ after 1 cycle (a), after long-time stability test (b) and after electrochemical oxidation(c).

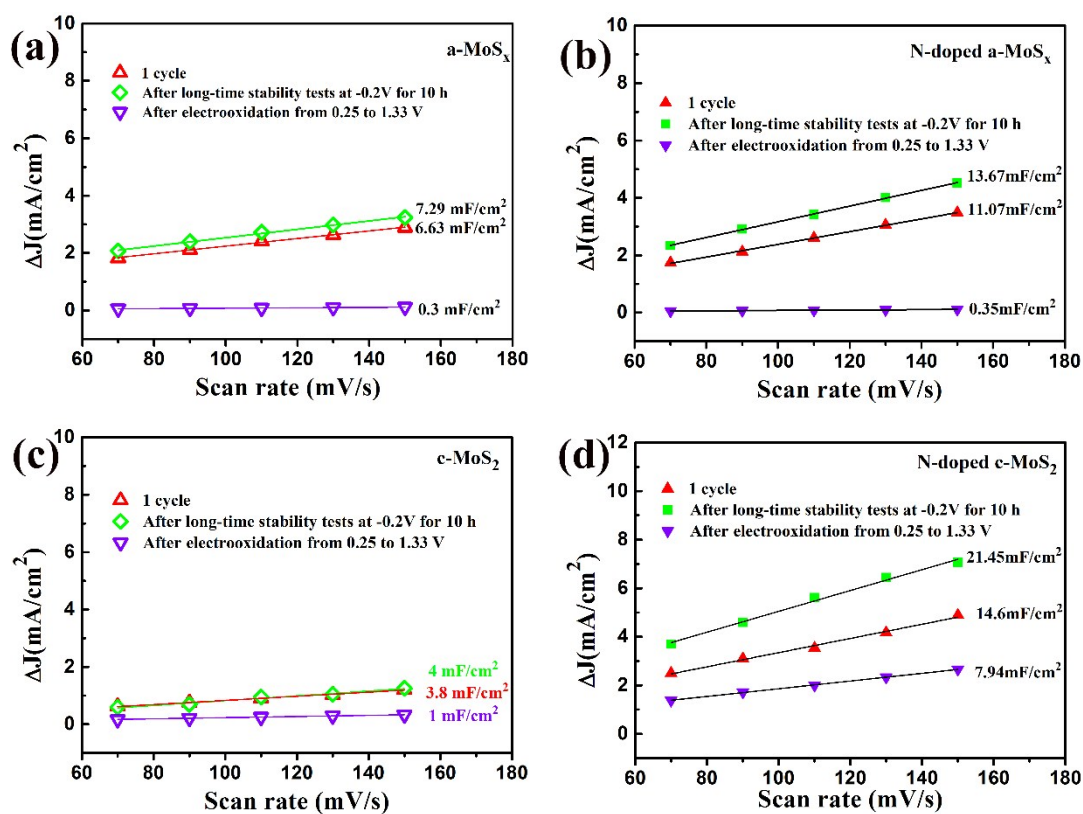


Figure S9. Calculated equivalent double-layer capacitance for a-MoS_x (a), N-doped a-MoS_x (b), c-MoS₂ (c), N-doped c-MoS₂ (d) in 0.5 m H₂SO₄ after 1 cycle, after long-time stability test and after electrochemical oxidation.

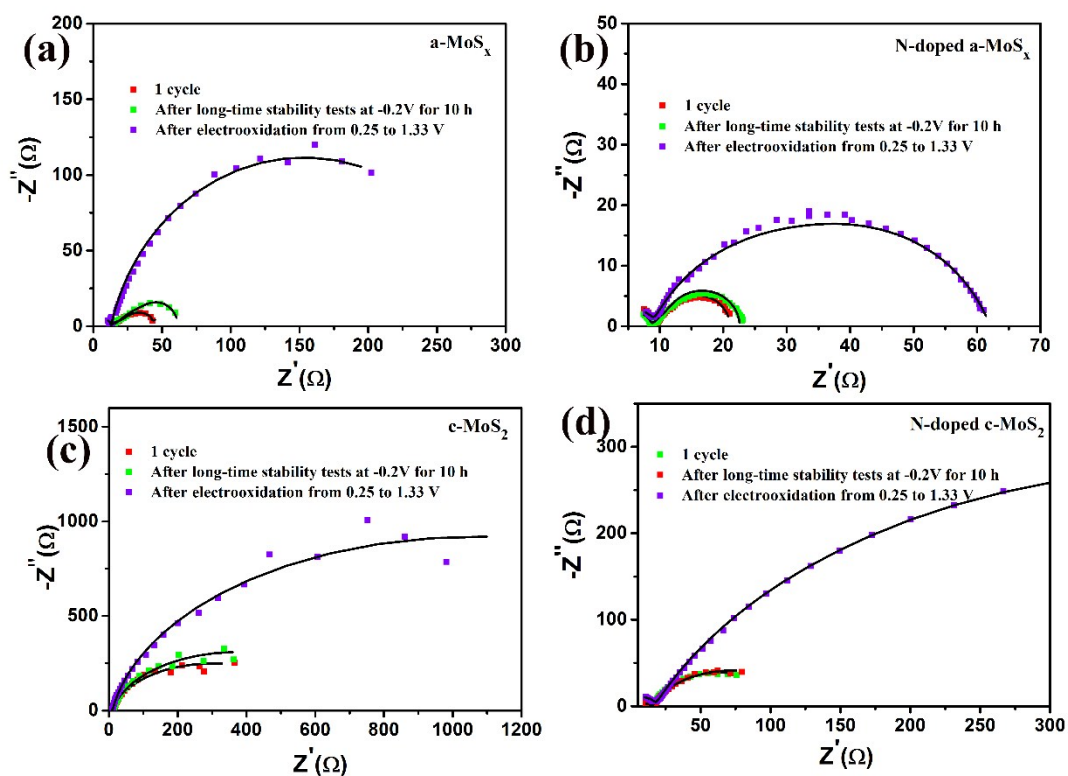


Figure S10. Nyquist plots of a-MoS_x (a), N-doped a-MoS_x(b), c-MoS₂(c), N-doped c-MoS₂ (d) in 0.5 m H₂SO₄ after 1 cycle, after long-time stability test and after electrochemical oxidation.