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-MoS$_2$. 
Figure S2. Comparison of Mo 3d (a) and S 2P (b) between N-doped a-MoS\textsubscript{x} and a-MoS\textsubscript{x}; Comparison of Mo 3d (a) and S 2P (b) between N-doped c-MoS\textsubscript{2} and c-MoS\textsubscript{2}.
Figure S3. (a) TEM and (b) HRTEM of a-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-MoS$_2$. 
Figure S5. Cyclic voltammetry curves of a-MoS$_x$ after 1 cycle (a), after long-time stability test (b) and after electrochemical oxidation (c).
Figure S6. Cyclic voltammetry curves 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-MoS$_2$ after 1 cycle (a), after long-time stability test (b) and after electrochemical oxidation (c).
Figure S8. Cyclic voltammetry curves of N-doped c-MoS$_2$ 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\textsubscript{x} (a), N-doped a-MoS\textsubscript{x} (b), c-MoS\textsubscript{2} (c), N-doped c-MoS\textsubscript{2} (d) in 0.5 m H\textsubscript{2}SO\textsubscript{4} 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-MoS$_2$(c), N-doped c-MoS$_2$ (d) in 0.5 m H$_2$SO$_4$ after 1 cycle, after long-time stability test and after electrochemical oxidation.