

## Electronic Supplementary Information for

# Enhanced Hydrogen Evolution Catalysis from Osmotic Swelled Ammoniated MoS<sub>2</sub>

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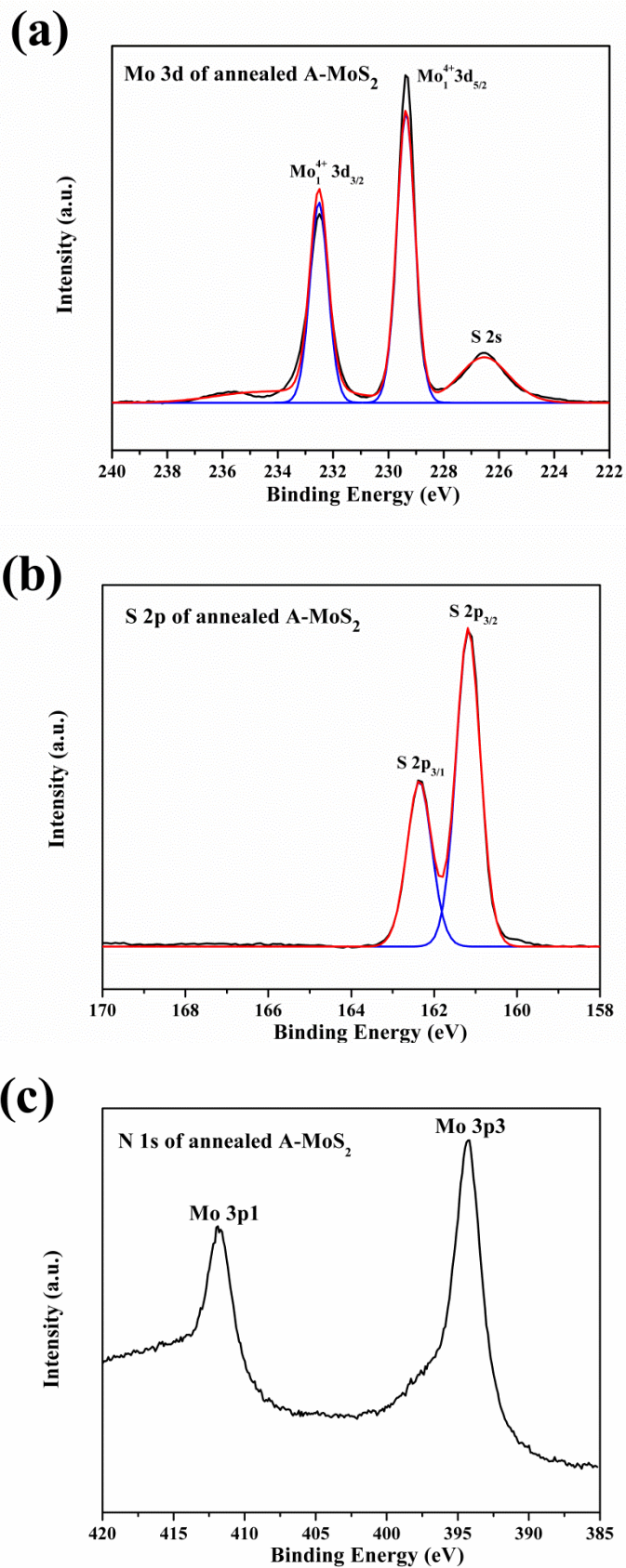
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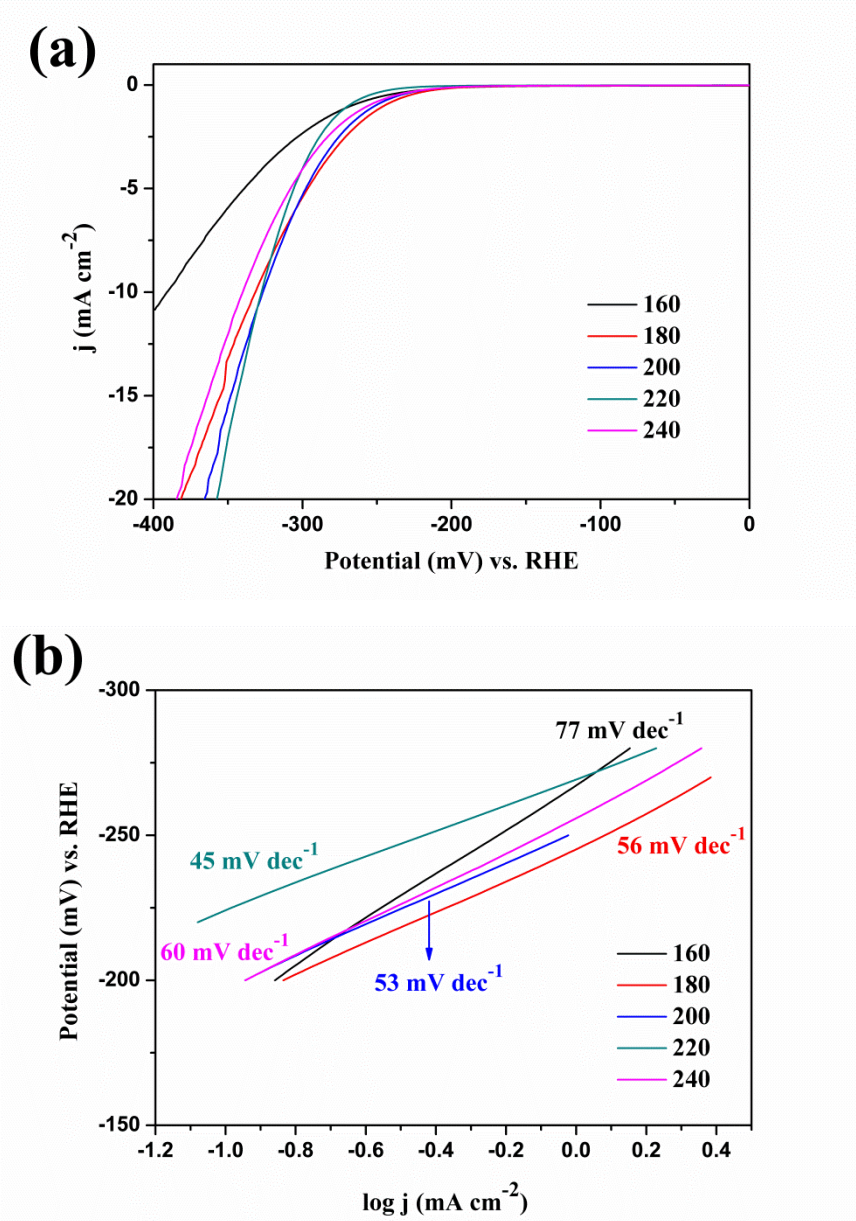
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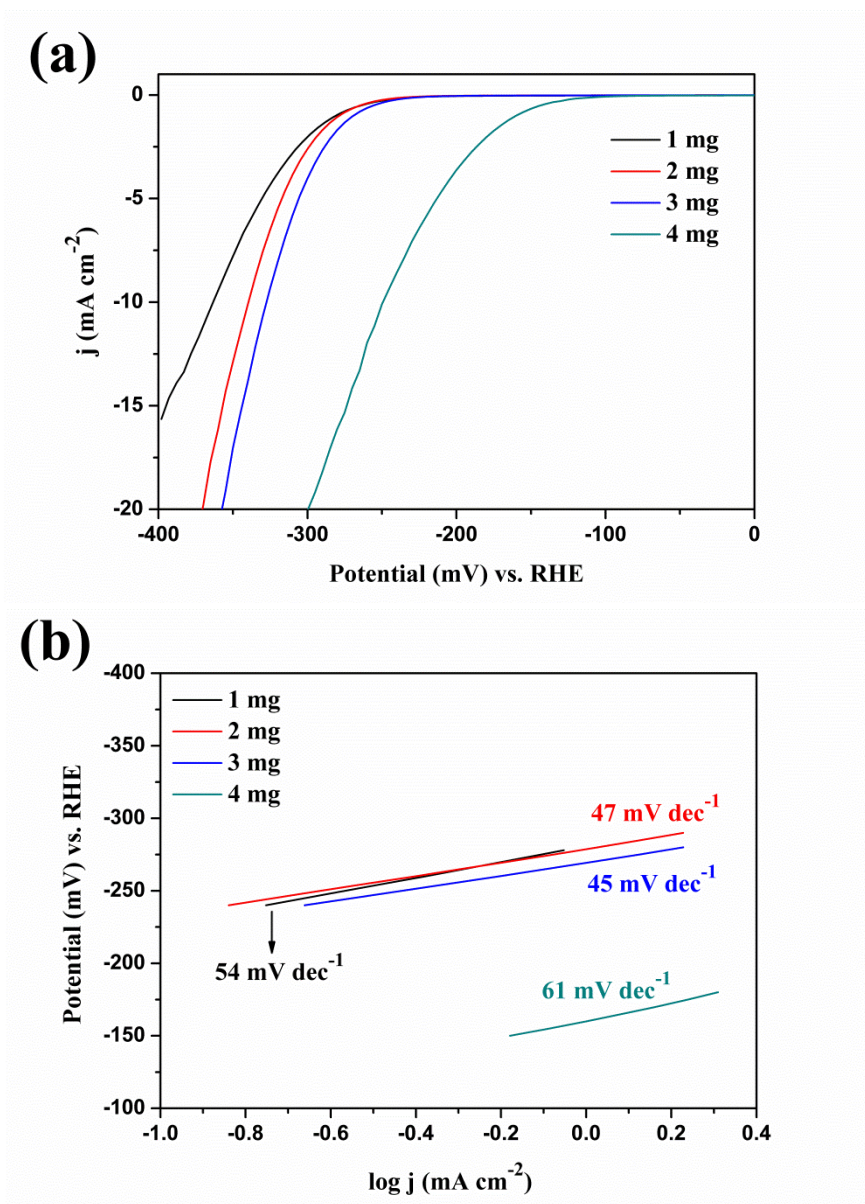
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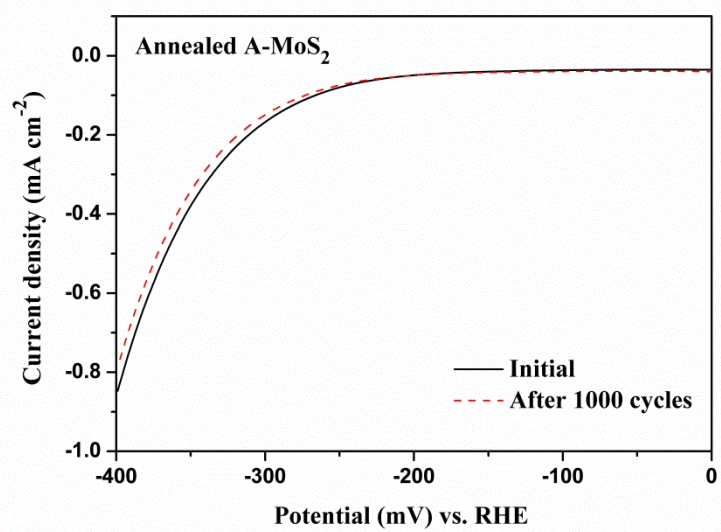
**Fig. S1** XPS of the annealed A-MoS<sub>2</sub>: (a) Mo 3d spectrum; (b) S 2p spectrum; (c) N 1s spectrum



**Fig. S2** Polarization curves (a) and the derived Tafel plots (b) of the A-MoS<sub>2</sub> catalysts obtained at different temperatures (from 160 to 240 °C)



**Fig. S3** Polarization curves (a) and the derived Tafel slopes (b) of the A-MoS<sub>2</sub> catalysts with different mass loadings (from 1 mg to 4 mg).



**Fig. S4** Durability test of the annealed A-MoS<sub>2</sub>.