Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information

Unveiling the reconstructed active phase of Ni_3Se_2 model for water splitting

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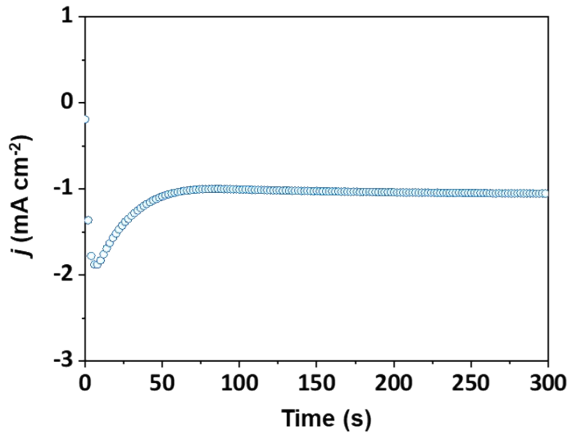

Figure S1. The corresponding electrodeposition chronoamperometric curve for preparing the sample of Ni_3Se_2/FTO.

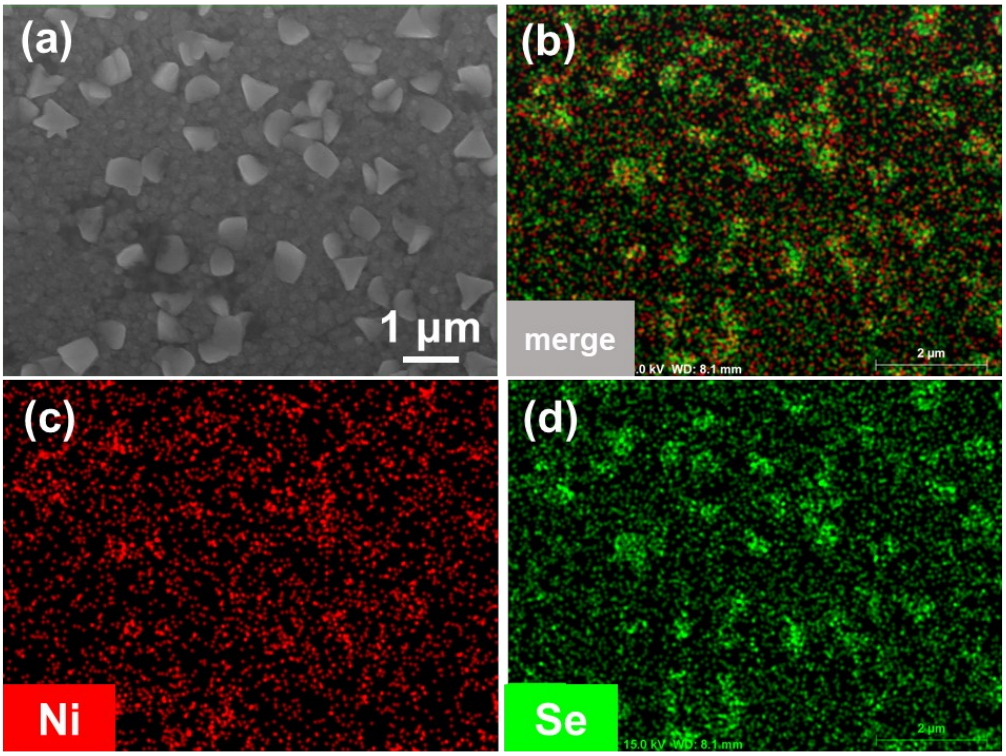

Figure S2. SEM images and EDS profiles of pristine Ni_3Se_2/FTO.

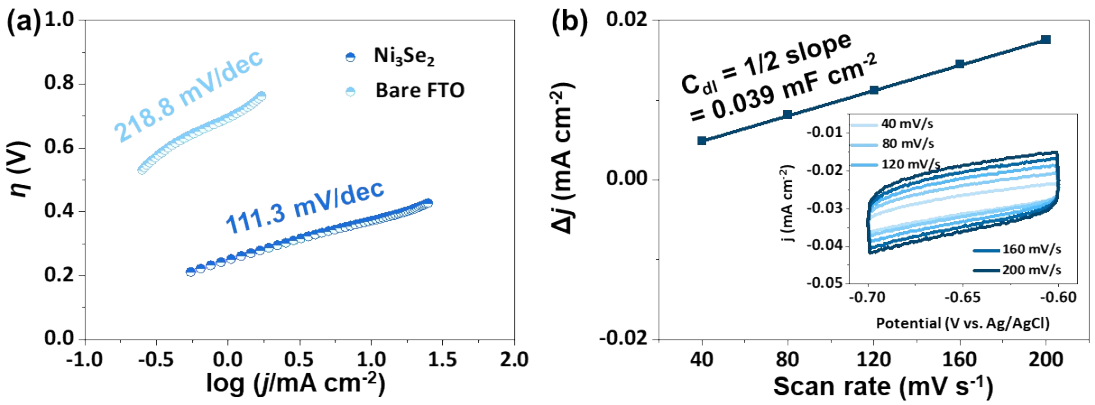

Figure S3. (a) Tafel plots derived from HER LSV curves of Ni_3Se_2/FTO and blank FTO substrate in 1.0 M KOH. (b) Scan rate dependence of the current densities ($\Delta j = j_a - j_c$) for Ni_3Se_2/FTO at -0.65 V vs Ag/AgCl.

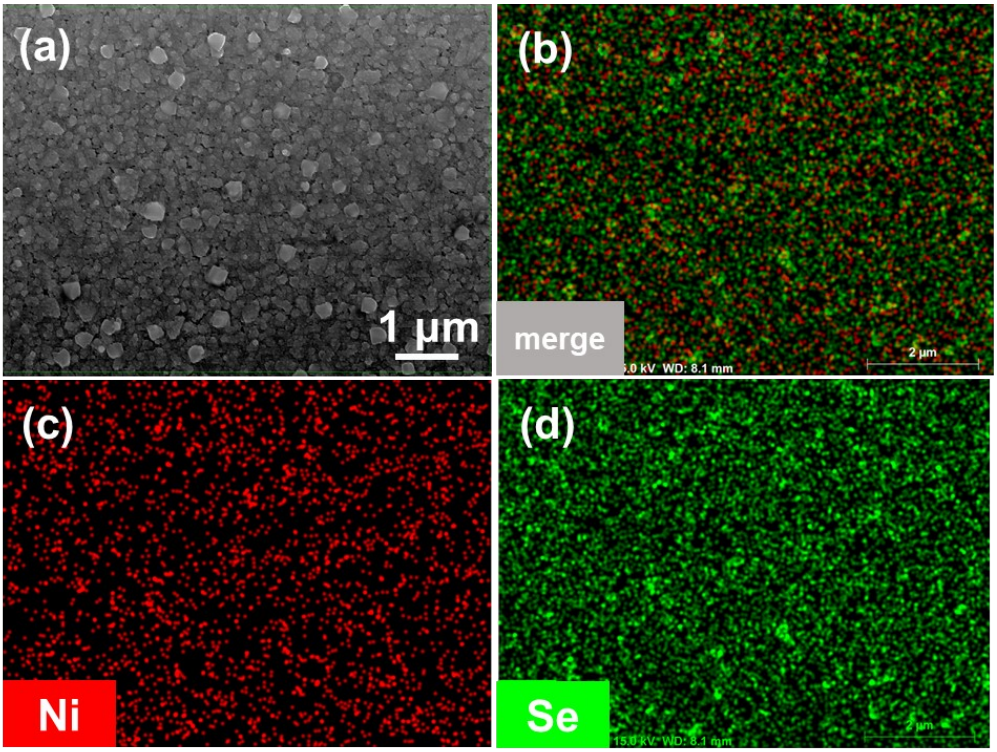

Figure S4. SEM images and EDS profiles of Ni_3Se_2/FTO after HER stability test.

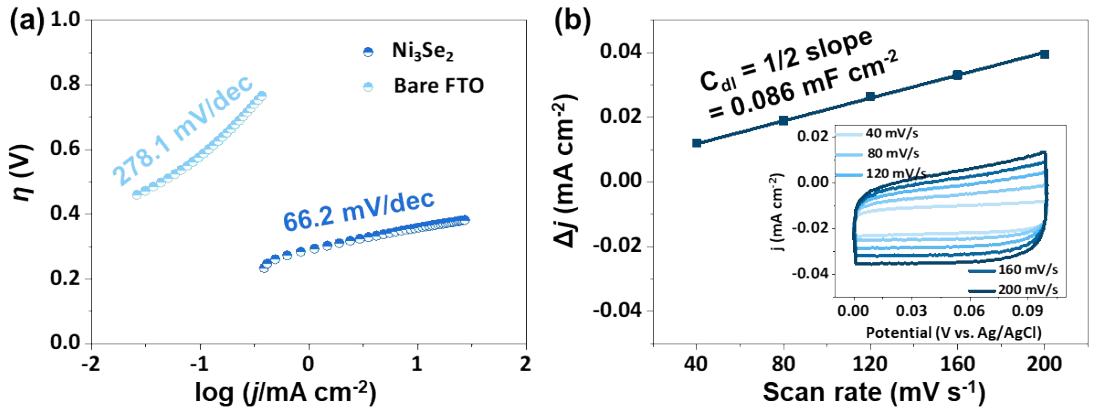

Figure S5. (a) Tafel plots derived from OER LSV curves for the samples of Ni_3Se_2/FTO and blank FTO substrate in 1.0 M KOH. (b) Scan rate dependence of the current densities ($\Delta j = j_a - j_c$) for Ni_3Se_2/FTO at 0.05 V vs Ag/AgCl.

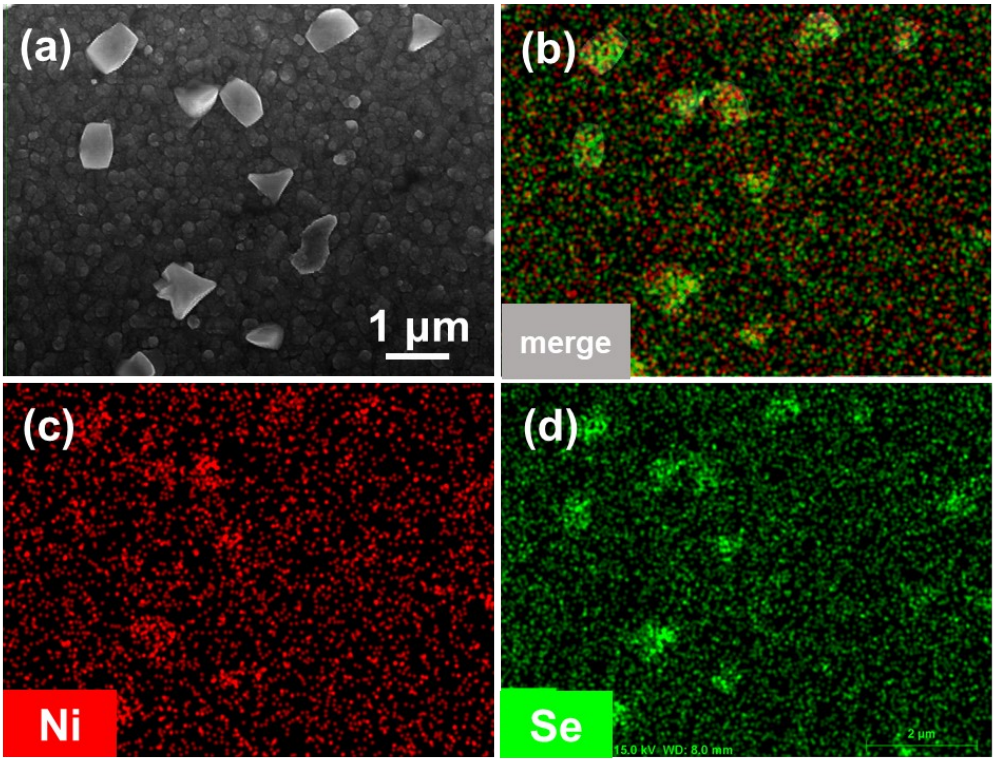

Figure S6. SEM images and EDS profiles of Ni_3Se_2/FTO after OER stability test.

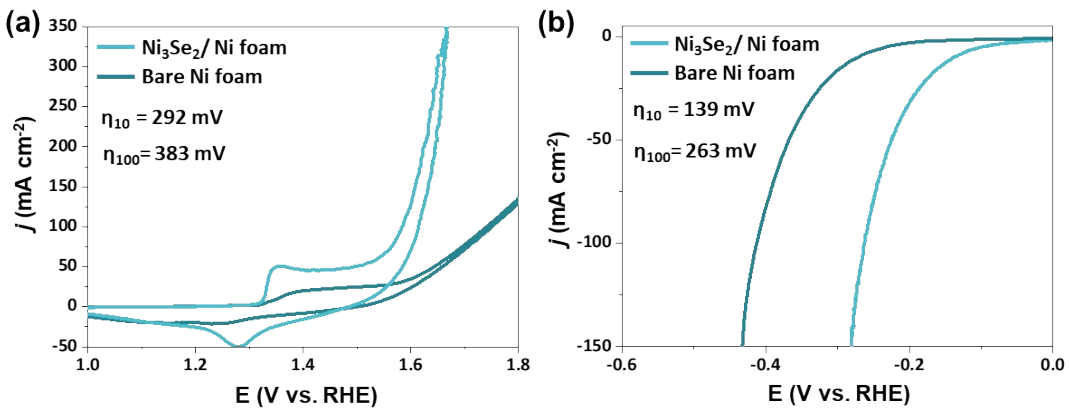

Figure S7. (a) Cyclic voltammetry (CV) curves toward OER for Ni_3Se_2/Ni foam and bare Ni foam. Considering the intense redox peak of Ni species, we show the CV curves rather than linear sweep voltammetry (LSV) curves. (b) LSV curves towards HER for Ni_3Se_2/Ni foam and bare Ni foam.