

## Supporting Information

### **Multi-compositional hierarchical nanostructured Ni<sub>3</sub>S<sub>2</sub>@MoS<sub>x</sub>/NiO electrode for enhanced electrocatalytic hydrogen generation and energy storage**

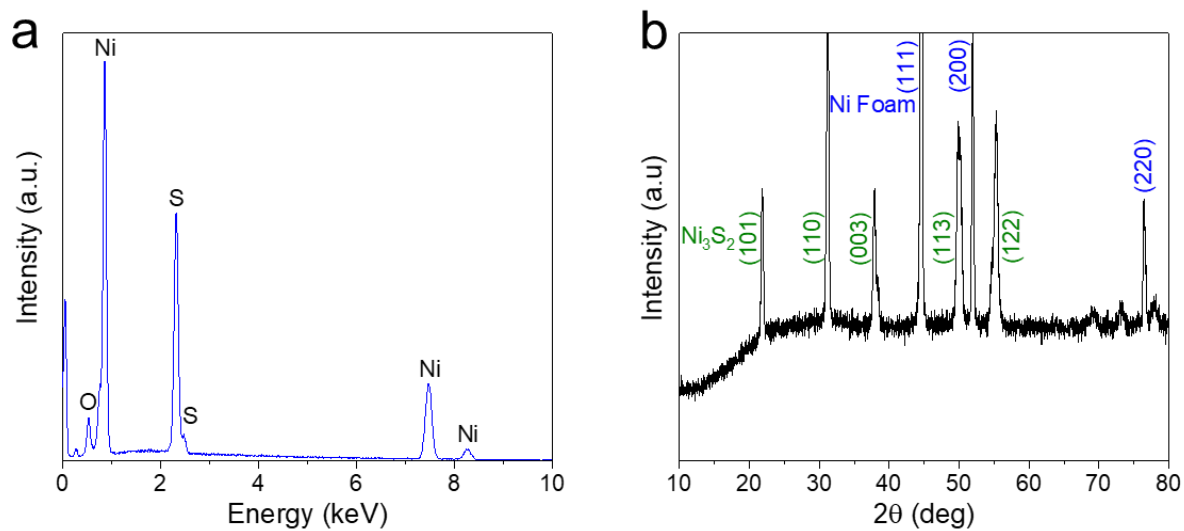
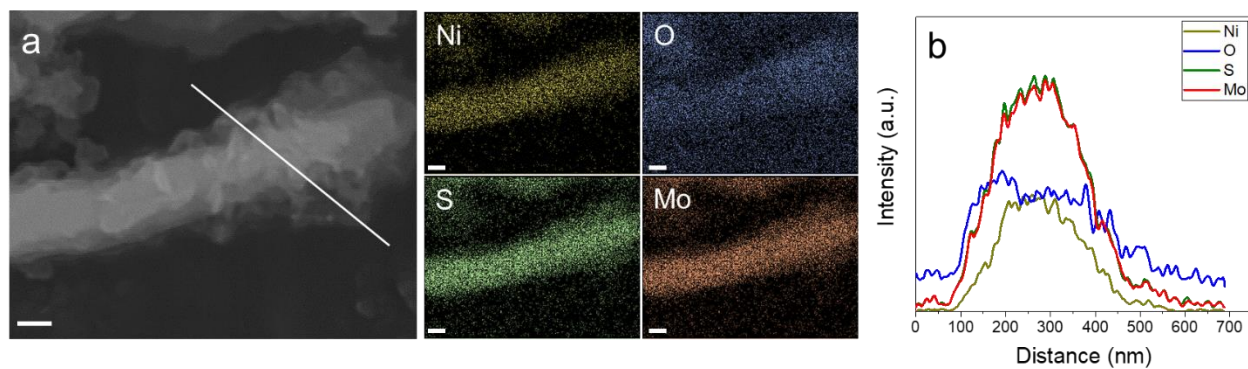
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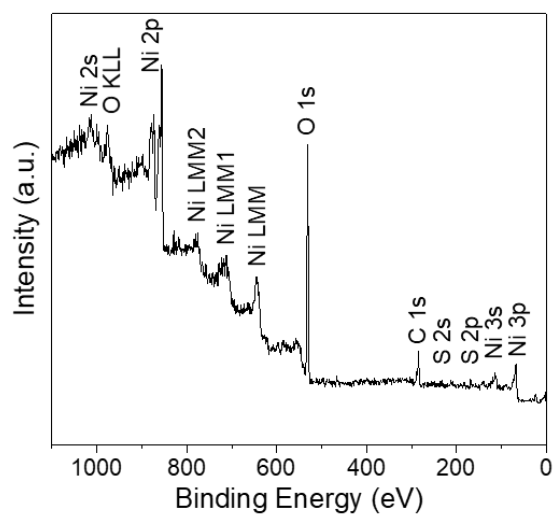


Figure S3. (a) XPS survey scan of NS-rods

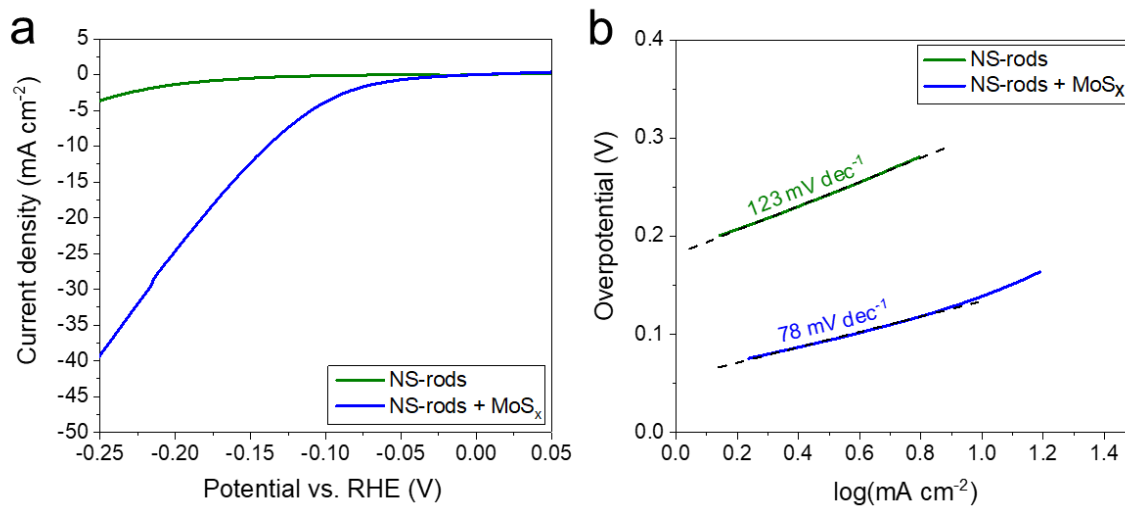


Figure S4. (a) Polarization curves at scan rate  $5 \text{ mVs}^{-1}$  and (b) corresponding Tafel plot of NS-rods and NS-rods coated with  $\text{MoS}_x$

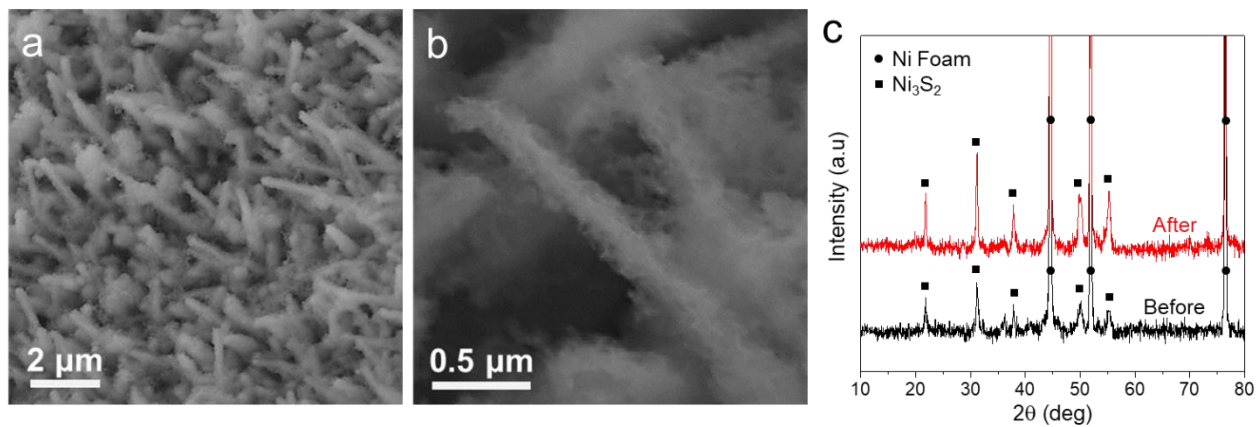


Fig. S5 (a-b) SEM images at different magnification of NM-rods after 50 h of HER stability test. (c) XRD spectra of NM-rods before and after stability test.