

# Supporting Information

## Evaluating Electrolyte–Anode Interface Stability in Sodium All-Solid-State Batteries

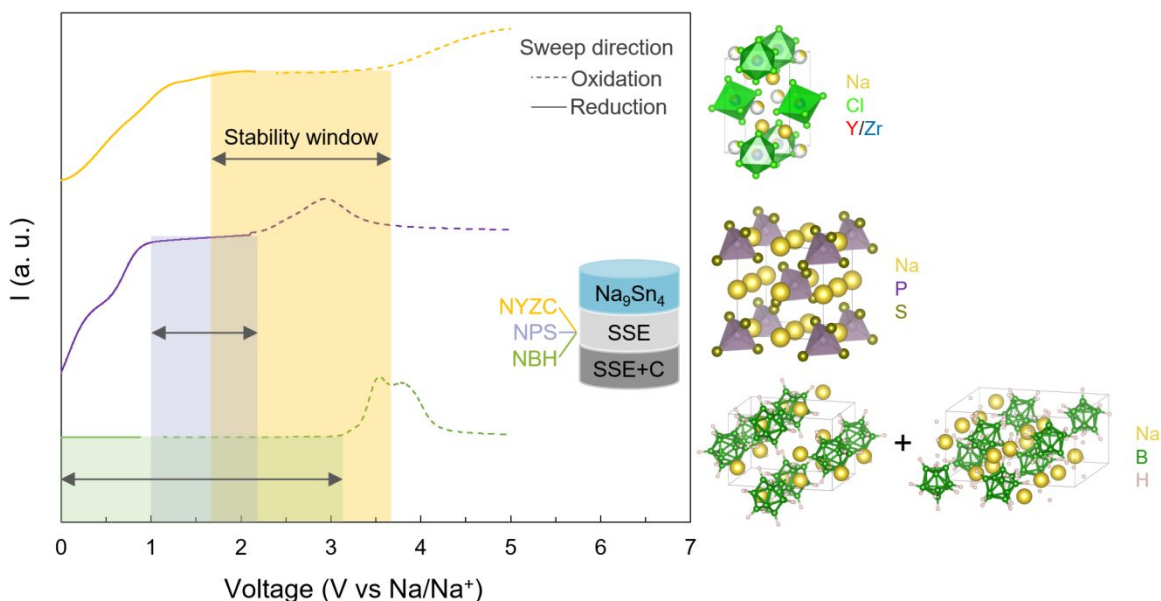
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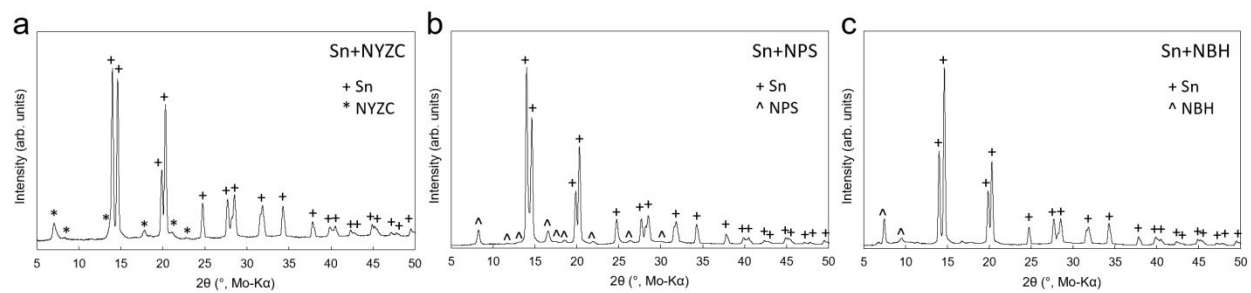
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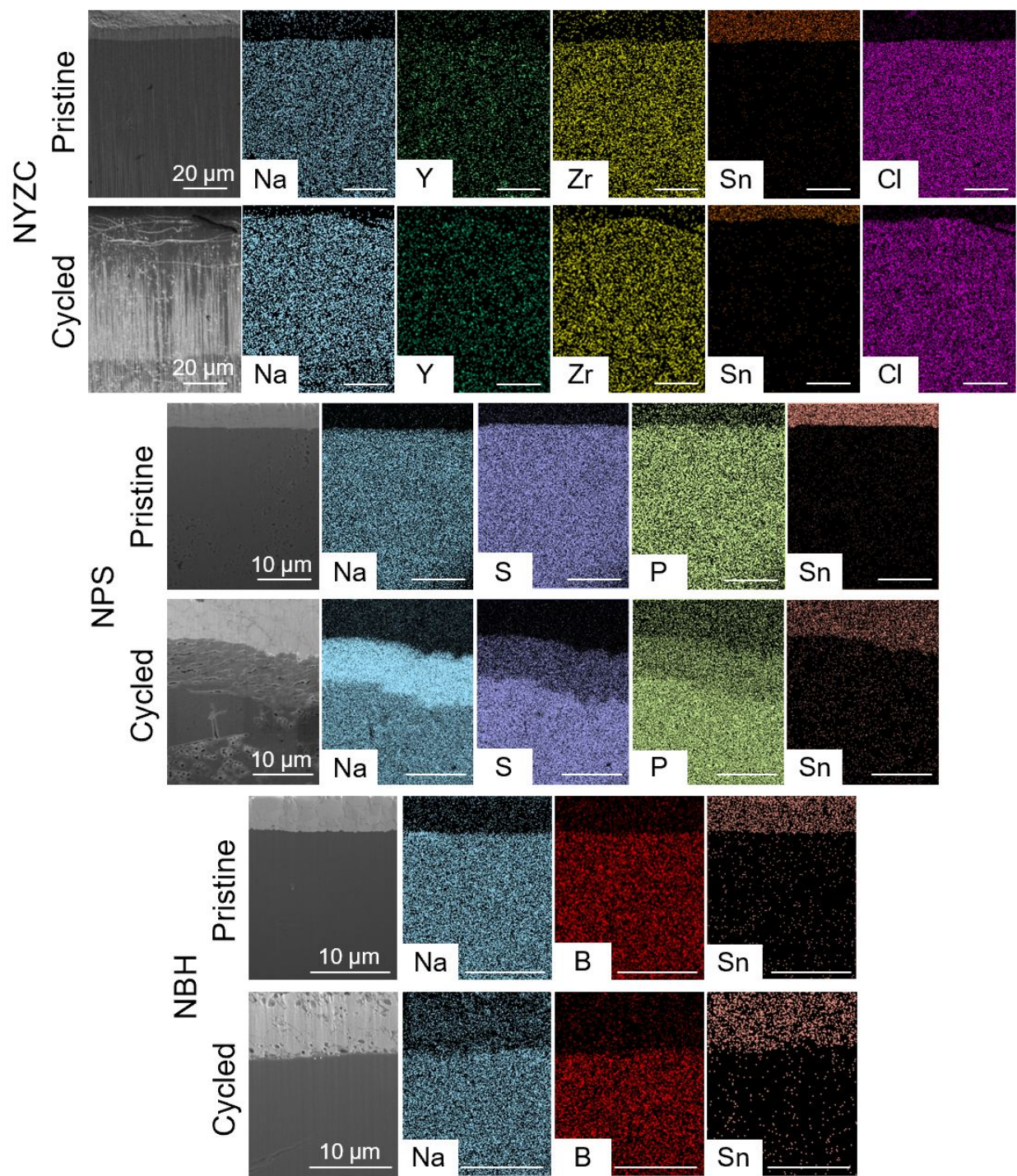
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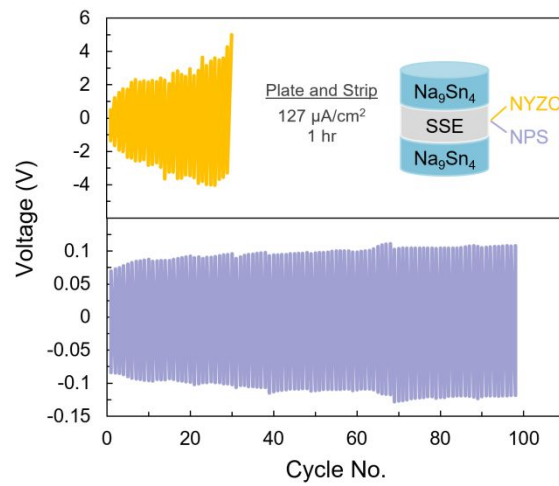
**Figure S1.** Linear sweep voltammograms for NYZC, NPS, and NBH.



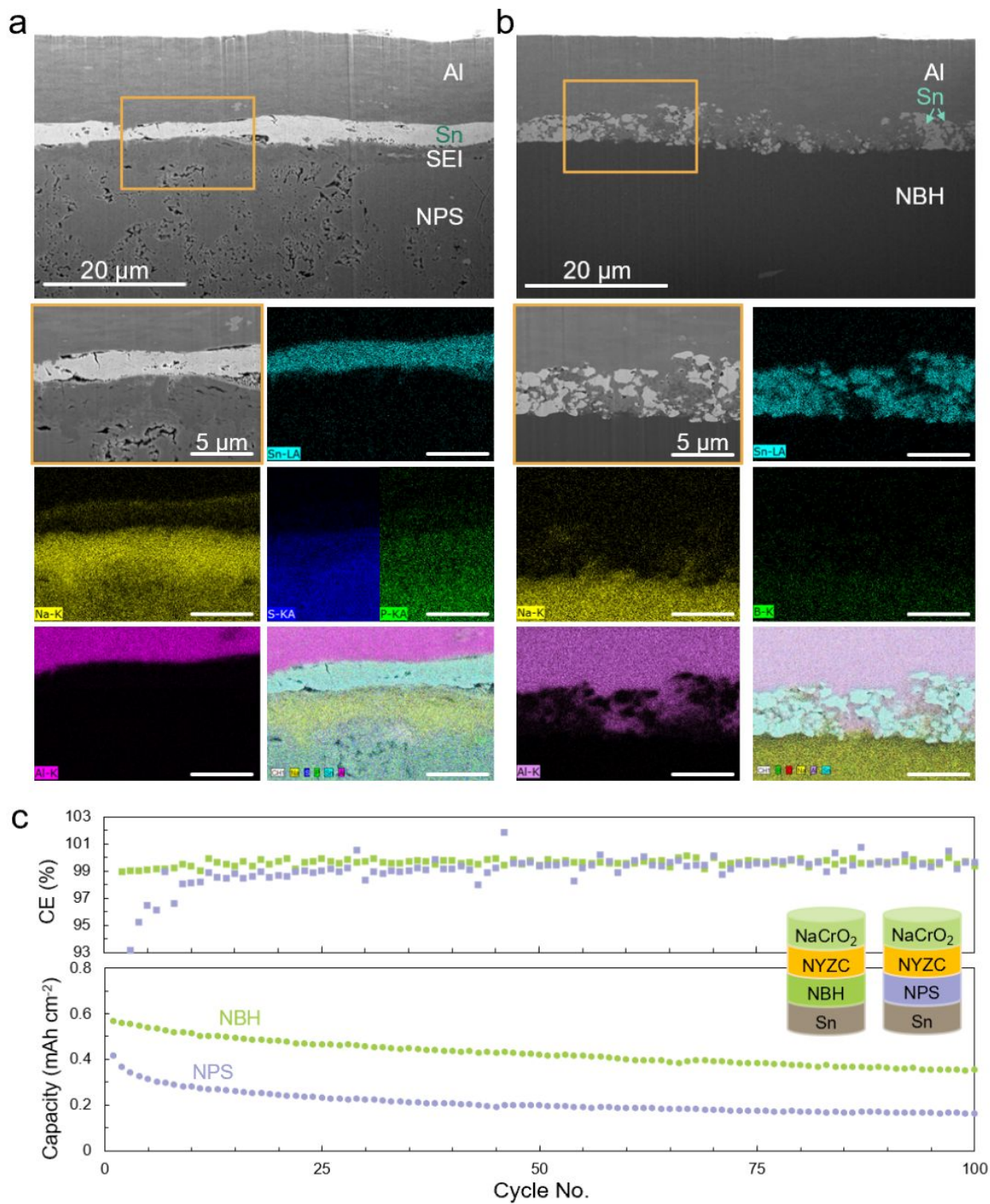
**Figure S2.** XRD patterns for mixtures of Sn with a) NYZC, b) NPS, and c) NBH after heating at 80  $^\circ\text{C}$  for 10 h.



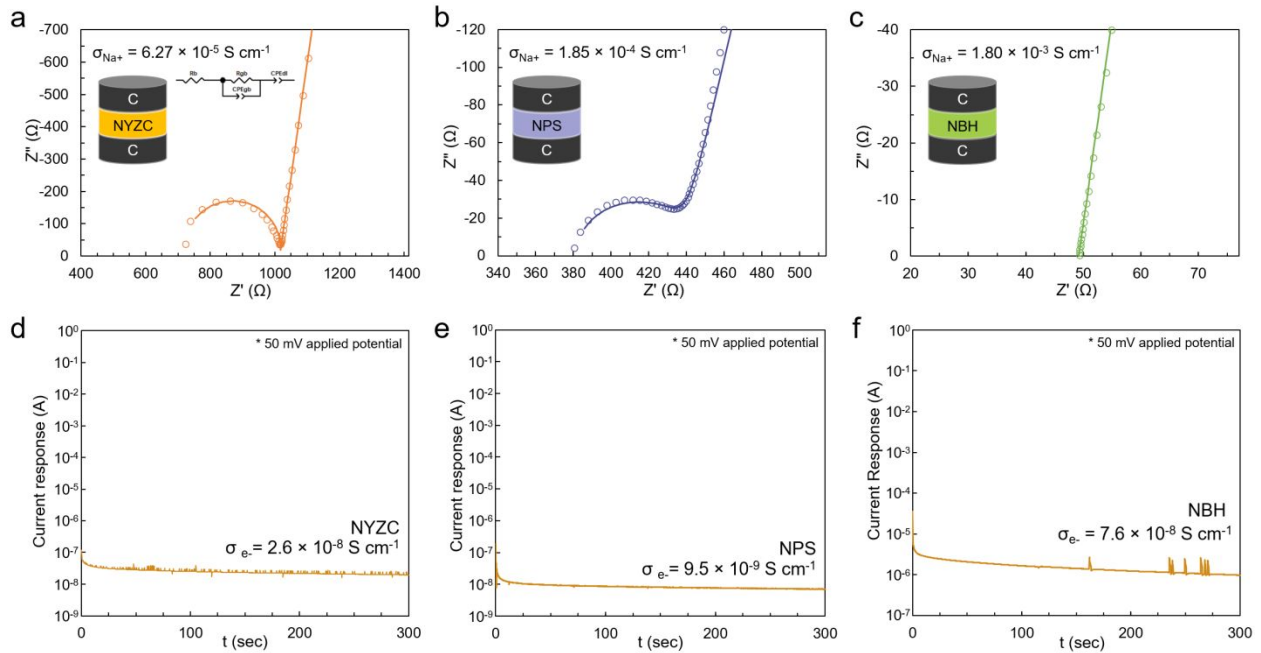
**Figure S3.** FIB-SEM with EDS mapping of Sn | SSE |  $\text{Na}_9\text{Sn}_4$  cells.



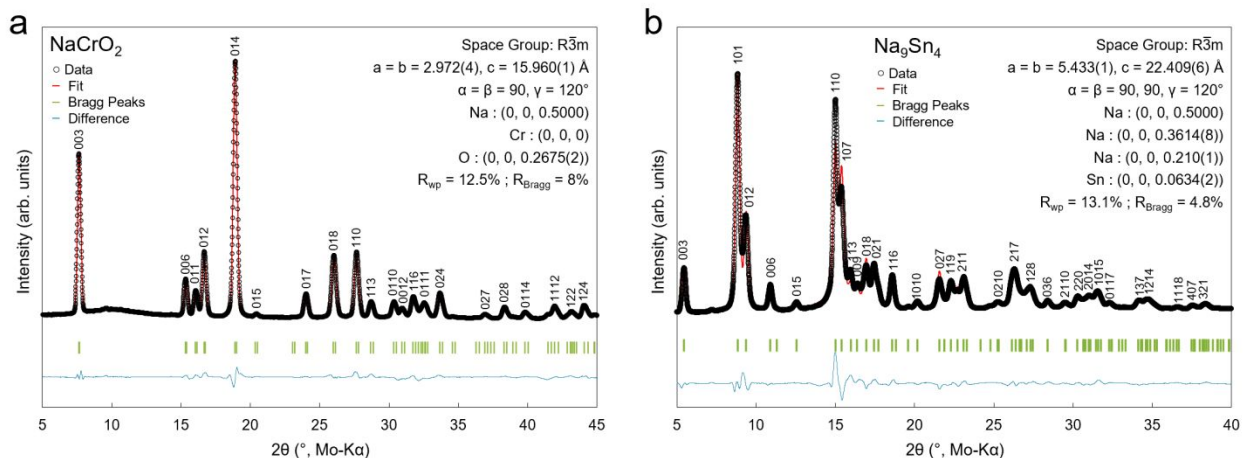
**Figure S4.** Symmetric cell evaluation using NYZC and NPS electrolytes.



**Figure S5.** FIB-SEM anode cross-section and EDS elemental mapping for (a) Sn | NPS | NYZC | NaCrO<sub>2</sub> and (b) Sn | NBH | NYZC | NaCrO<sub>2</sub> cells after cycling. (c) Electrochemical cycling data for both cells.



**Figure S6.** EIS measurements of (a) NYZC, (b) NPS, and (c) NBH showing  $\text{Na}^+$  conductivities of 0.0627, 0.185, and 1.8 mS/cm respectively. DC Polarization measurements of (d) NYZC, (e) NPS, and (f) NBH showing  $e^-$  conductivities of 26, 10, and 76 nS/cm respectively.



**Figure S7.** XRD refinement results of (a)  $\text{NaCrO}_2$  and (b)  $\text{Na}_9\text{Sn}_4$ .