

Engineering of Sn and pre-lithiated Sn as negative electrode materials coupled to garnet Ta-LLZO solid electrolyte for all-solid-state Li batteries

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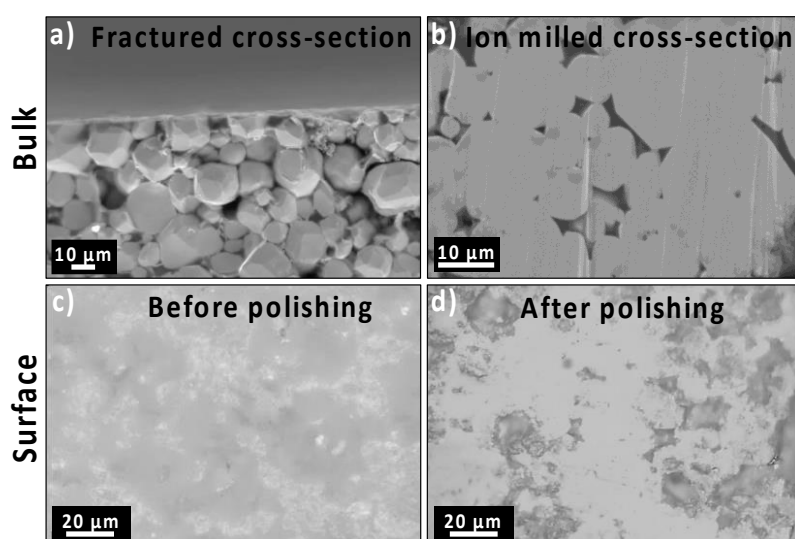


Figure S1. SEM images of LLZTa samples: a) manually “fractured” cross-section, b) “ion-milled” cross-section, c) surface of the LLZTa pellet before polishing, d) surface of the LLZTa pellet after polishing.

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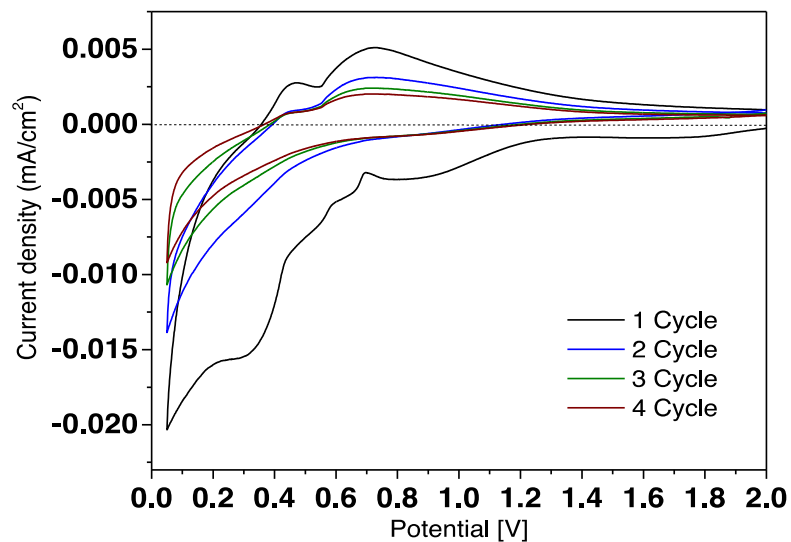


Figure S2. CV of a Sn composite electrode with 100 nm particles vs. Li metal at scan rate of 50 $\mu\text{V/s}$.

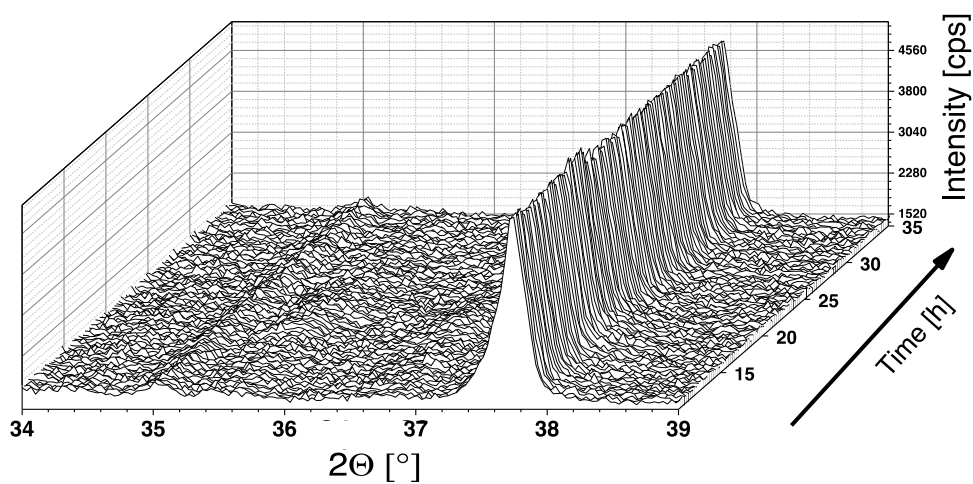


Figure S3. Waterfall representation of selected 40-140 scans (corresponding to 10-35 h) extracted from the *operando* XRD measurement of an Sn composite electrode coated on LLZTa and cycled vs. Li metal at 90°C in the potential range 0.2 – 1.6 V vs. Li^+/Li at C/50 rate