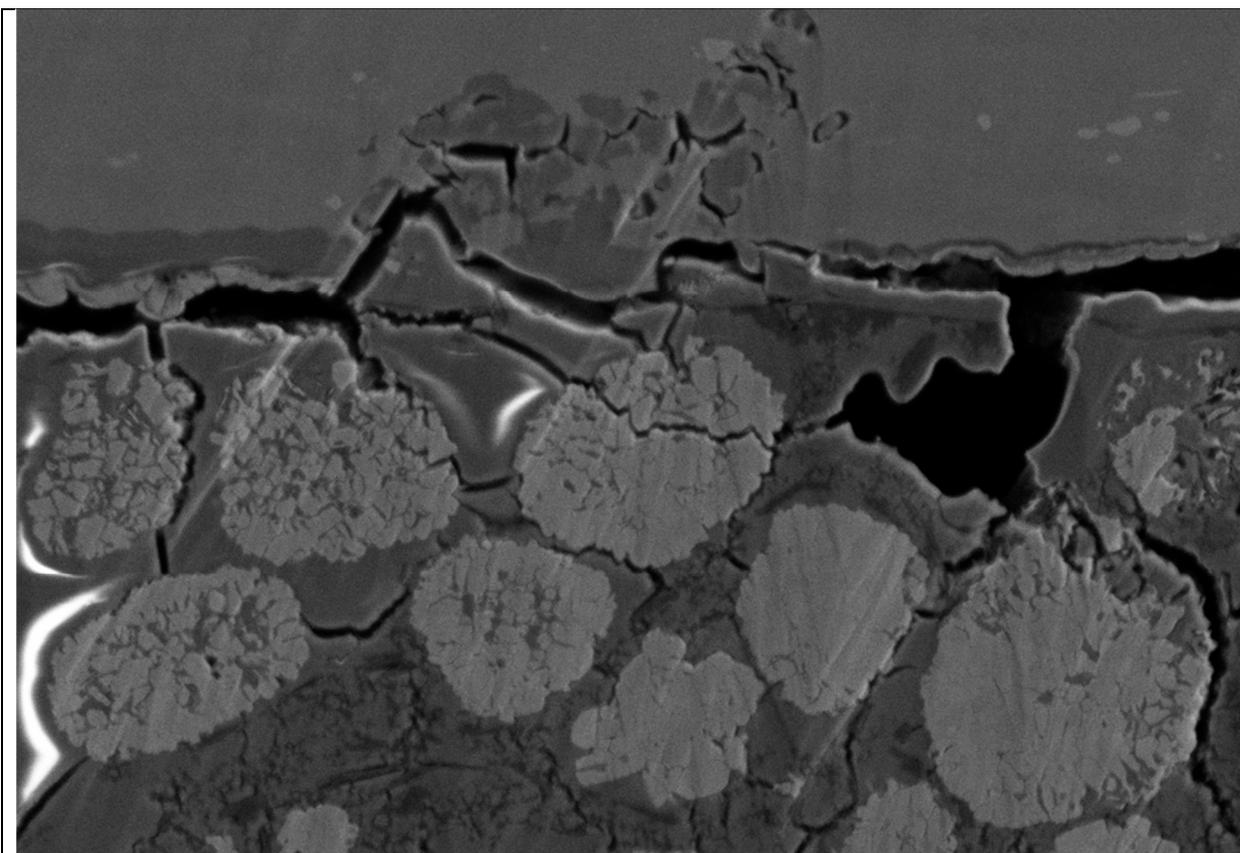
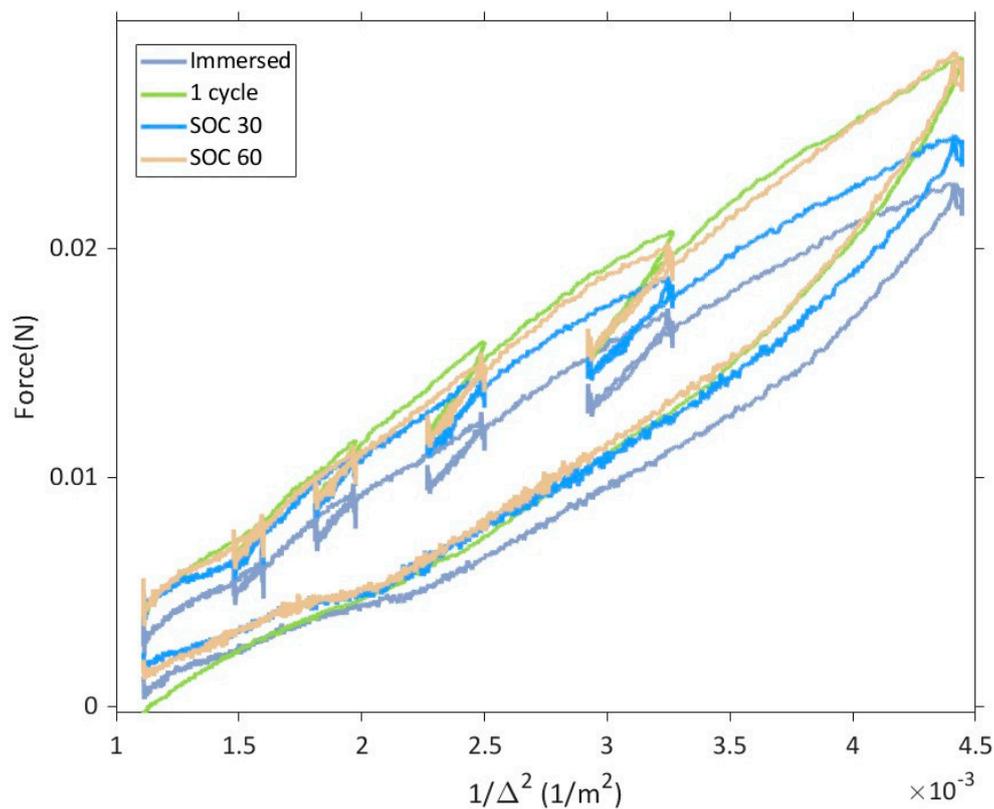


## Supplementary material



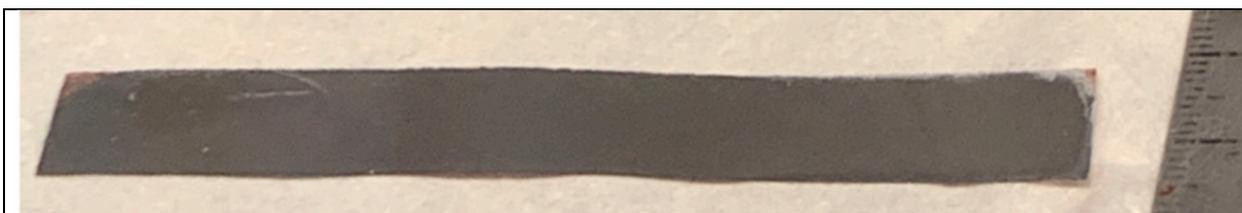
**Figure S1.** Current collector corrosion observed in earlier samples, promoting addition of electrolyte additive.



**Figure S2.** Force vs.  $1/\Delta^2$  plot for samples subjected to different state-of-charge after the first cycle.

Specification of samples	Measured thickness of the active layer( $\mu\text{m}$ ) (Average of 3 samples)
Samples harvested from cells subjected to SOC 30% and dried overnight	118
Samples harvested from cells subjected to SOC 60% and dried overnight	119





**Figure S4.** Image of the negative counter electrode after disassembly in the glovebox. No discoloration indicative of lithium plating was observed.