Supporting Information

Uncovering the Relationship between Diameter and Height of Electrodeposited Lithium Protrusions in a Rigid Electrolyte

Alec S. Ho\textsuperscript{a,b}, Pallab Barai\textsuperscript{c}, Jacqueline A. Maslyn\textsuperscript{a,b}, Louise Frenck\textsuperscript{a}, Whitney S. Loo\textsuperscript{a}, Dilworth Y. Parkinson\textsuperscript{d}, Venkat Srinivasan\textsuperscript{c}, Nitash P. Balsara\textsuperscript{a,b,e,*}

\textsuperscript{a} Department of Chemical and Biomolecular Engineering, University of California, Berkeley, California 94720, USA

\textsuperscript{b} Materials Sciences Division, Lawrence Berkeley National Laboratory, Berkeley, California, 94720, USA

\textsuperscript{c} Argonne National Laboratory, Lemont, Illinois 60439, USA

\textsuperscript{d} Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

\textsuperscript{e} Energy Technologies Area, Lawrence Berkeley National Laboratory, Berkeley, California 94720, USA

* Corresponding author. E-mail: nbalsara@berkeley.edu, Phone: 1-510-642-8973.
Figure S1. The voltage versus time profiles of galvanostatically polarized lithium-SEO-lithium symmetric cells, taken from the cell with electrolyte thickness, (a) $L = 33 \, \mu m$, (b) $L = 41 \, \mu m$, (c) $L = 49 \, \mu m$, (d) $L = 51 \, \mu m$, (e) $L = 54 \, \mu m$, (f) $L = 77 \, \mu m$, (g) $L = 80 \, \mu m$, and (h) $L = 86 \, \mu m$. The
dashed line gives the applied current density, $i$, and the solid line gives the voltage response, $V$. Cells were occasionally paused during polarization for practical reasons such as removing a failed cell.