Supplemental Information:
ALD and MLD on Lithium Metal – A Practical Approach Toward Enabling Safe, Long Lasting, High Energy Density Batteries

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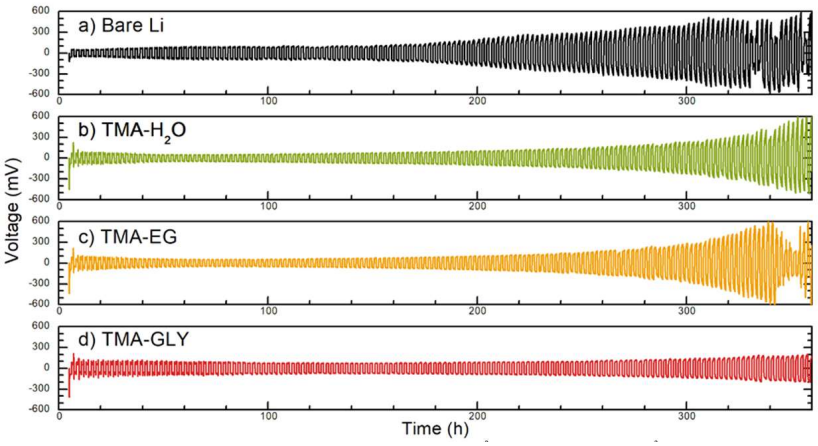

Figure 1. (a-d) Galvanostatic cycling of ALD and MLD coated Li-Li symmetric cells

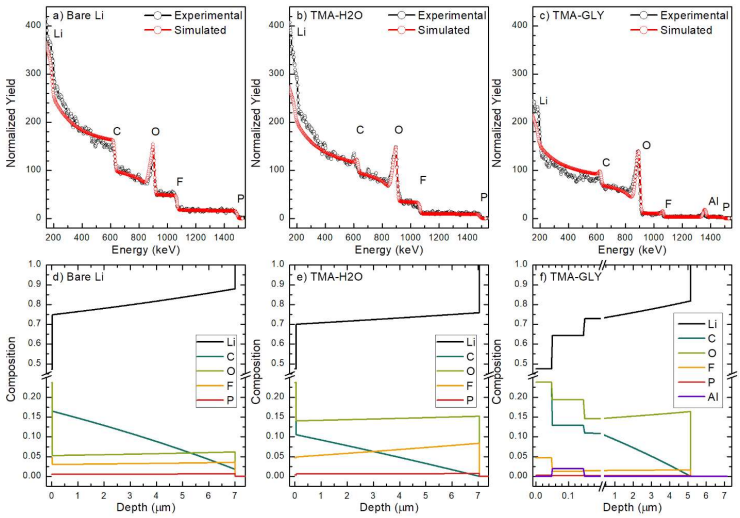

Figure 2. (a, d) Rutherford Back Scattering spectra and calculated depth profile for bare Li, (b, e) TMA-H_2O coated Li, and (c, f) TMA-GLY coated Li following galvanostatic cycling.

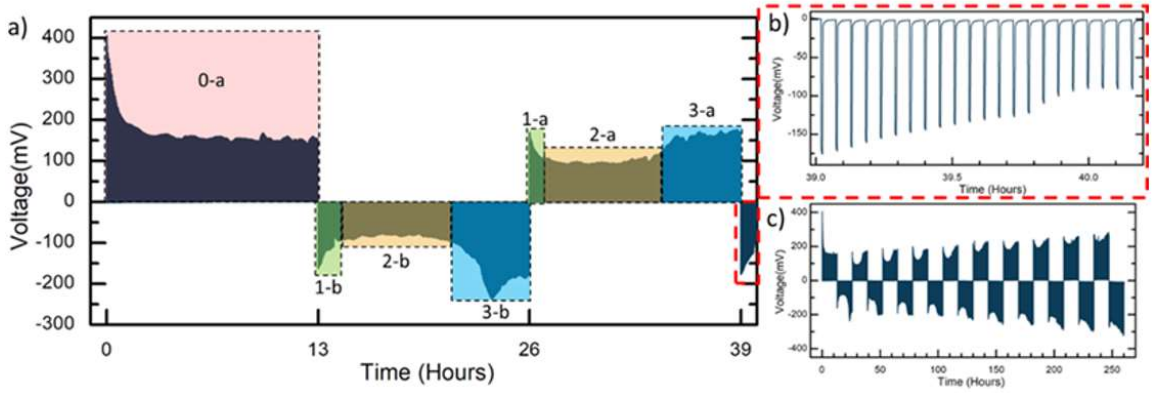

Figure 3. a) First few cycles of GITT data for bare Li outlining an envelope voltage pattern. b) Cells are cycled using a 15s current pulse at a density of 5 mA cm^{-2} followed by a rest period of 3 minutes until a capacity of 5 mAh cm^{-2} is attained.

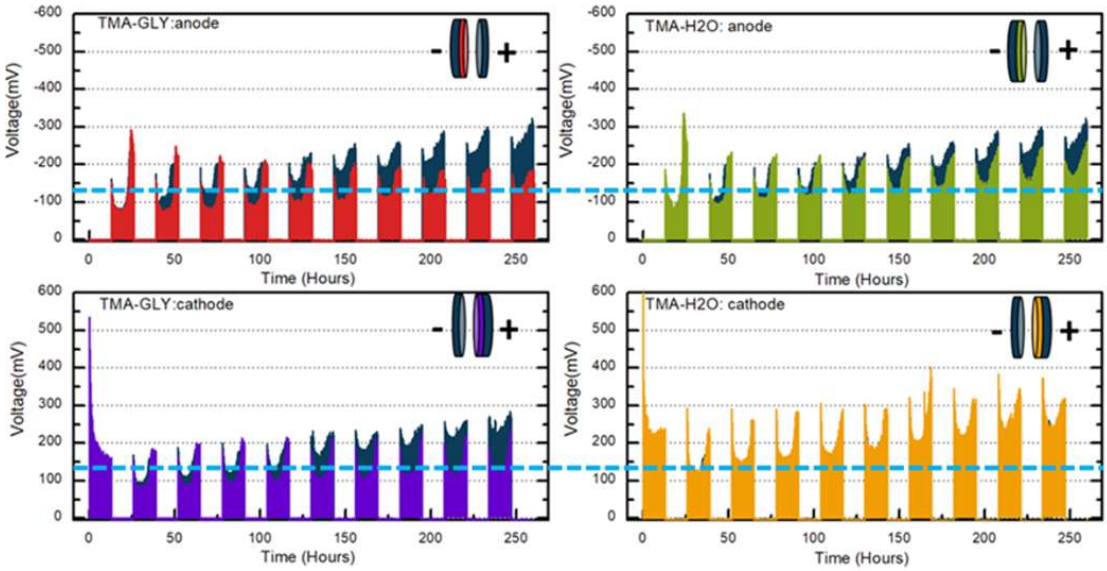

Figure 4. GITT experiments for half-cell configurations of TMA-GLY or TMA-H_2O as either anode and cathode compared with bare Li. Schematic outline for configuration employed can be found at the top right corner of each graph.