

# Effect of High-Voltage Additives on Formation of Solid Electrolyte Interphases in Lithium-Ion Batteries

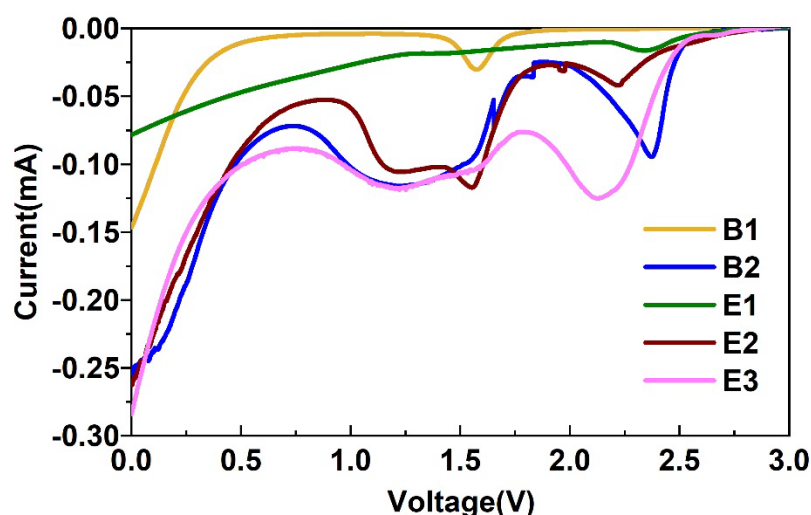
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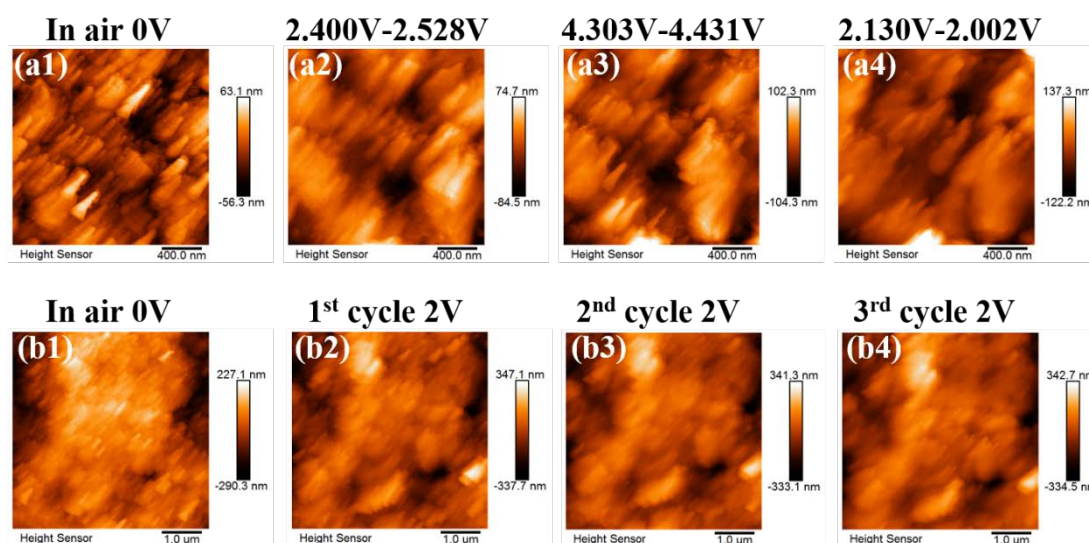
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**Figure S1.** CV curves of in-situ AFM tests of five electrolytes on graphite from 3 V to 0 V.



**Figure S2.** In-situ AFM images of the electrolyte E3 on the surface of LMR material. AFM images of 2  $\mu\text{m} \times 2 \mu\text{m}$  (a1–a4) during cycling and 5  $\mu\text{m} \times 5 \mu\text{m}$  (b1–b4) after each cycle.

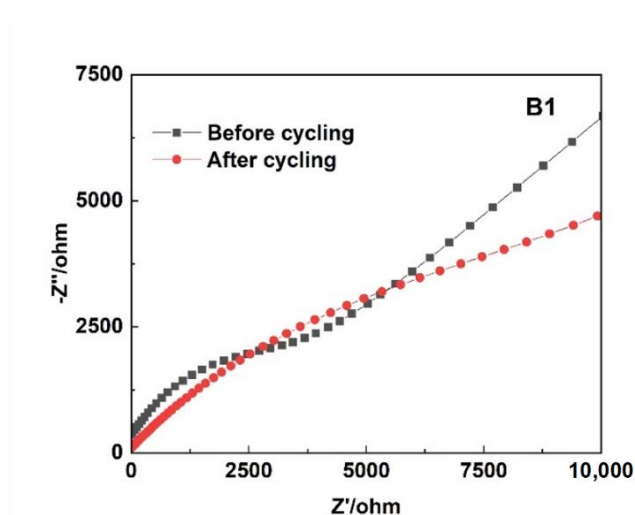


Figure S3. EIS analysis on graphite anode in the electrolyte B1.

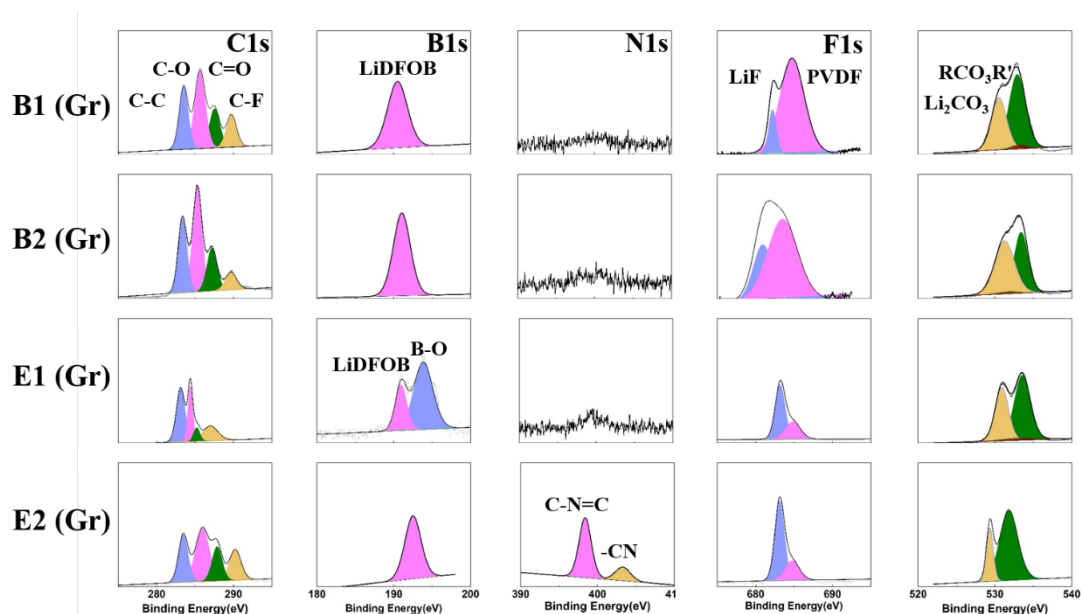


Figure S4. XPS analysis of different electrolytes on graphite anodes.

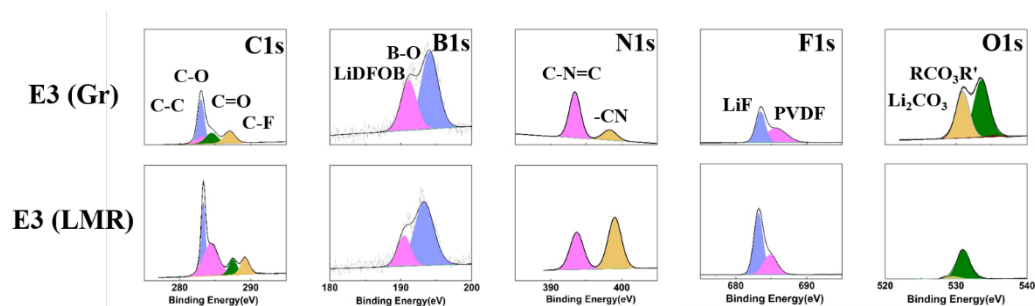


Figure S5. XPS analysis of the electrolyte E3 on graphite anode and LMR cathode.