

## Supporting Information

### **Multifunctional Lithium-Ion Exchanged Zeolite Coated Separator for Lithium-Ion Batteries**

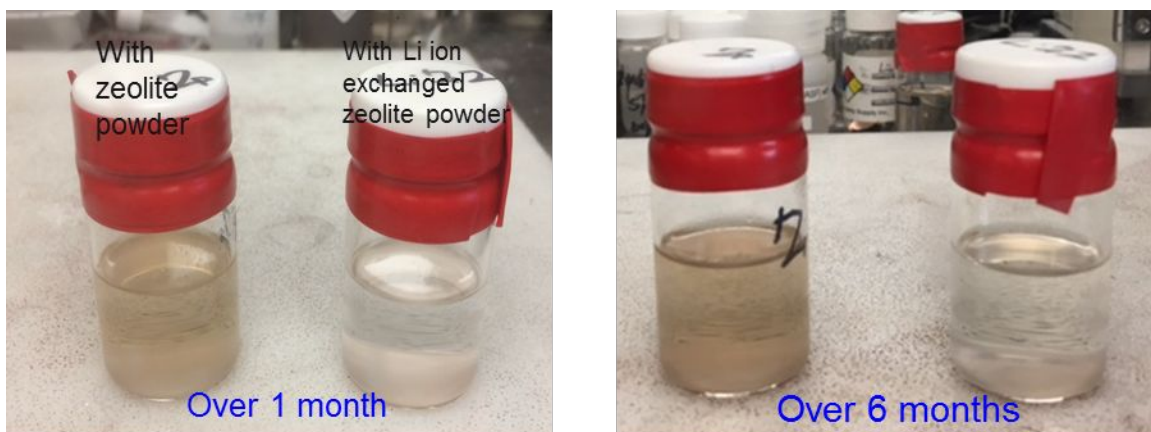
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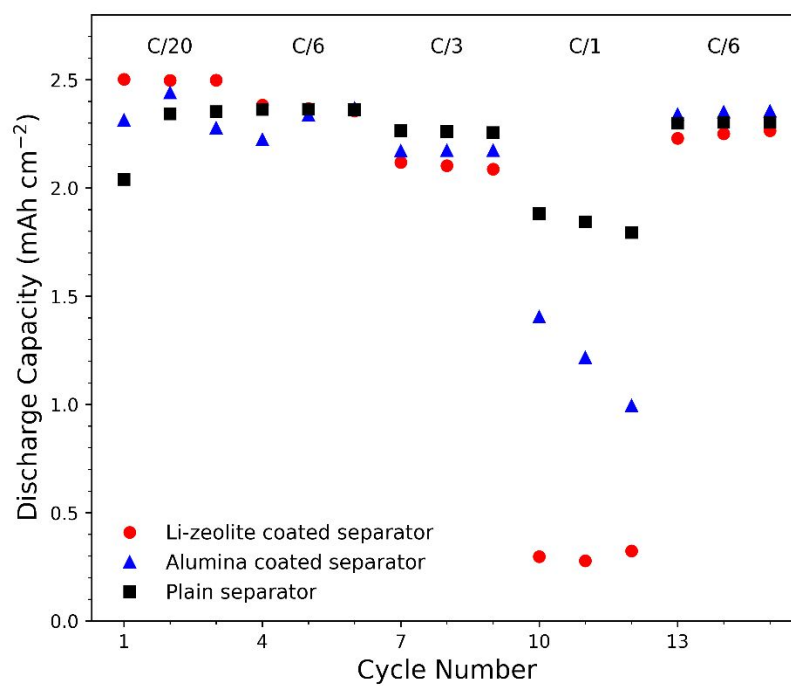
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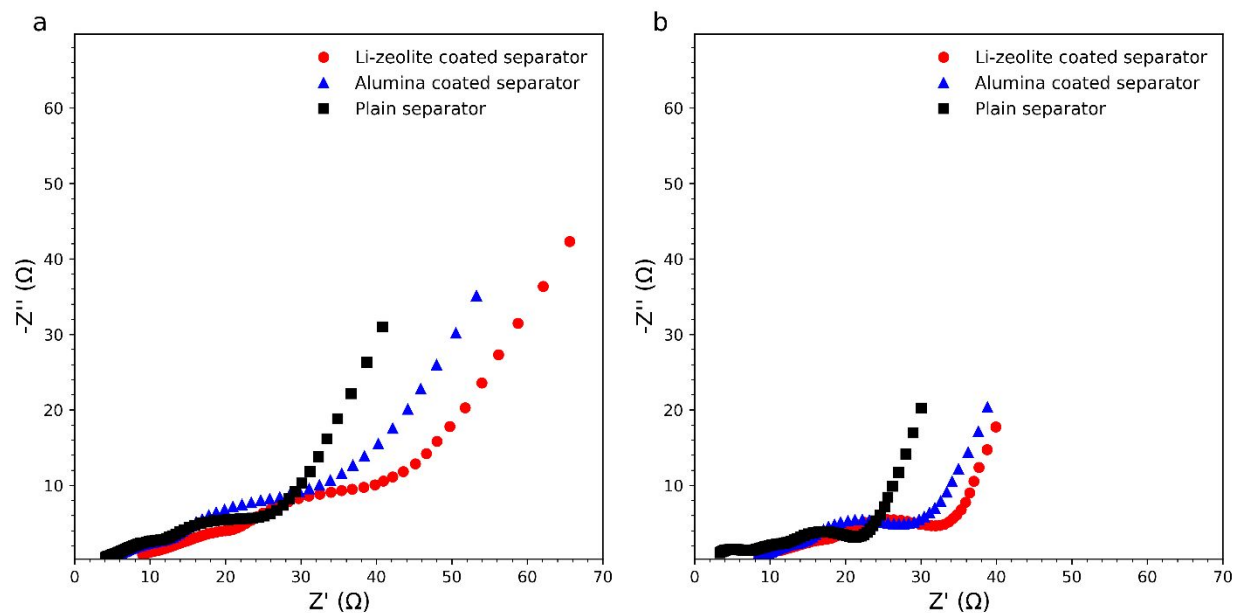
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**Figure S1.** Comparison of the electrolytes mixed with the typical zeolite without ion exchange and Li-zeolite stored in glass vials after 1 month (left) and 6 months (right).



**Figure S2.** C-rate performance of graphite-(NMC532+LMO) cells containing different separators at 25 °C.



**Figure S3.** Room temperature electrochemical impedance spectra of graphite-(NMC532+LMO) cells containing different separators obtained after formation cycling (a) and at the end of the C-rate test (b).