

Supporting information

New nonflammable tributyl phosphate based localized high concentration electrolytes for lithium metal batteries

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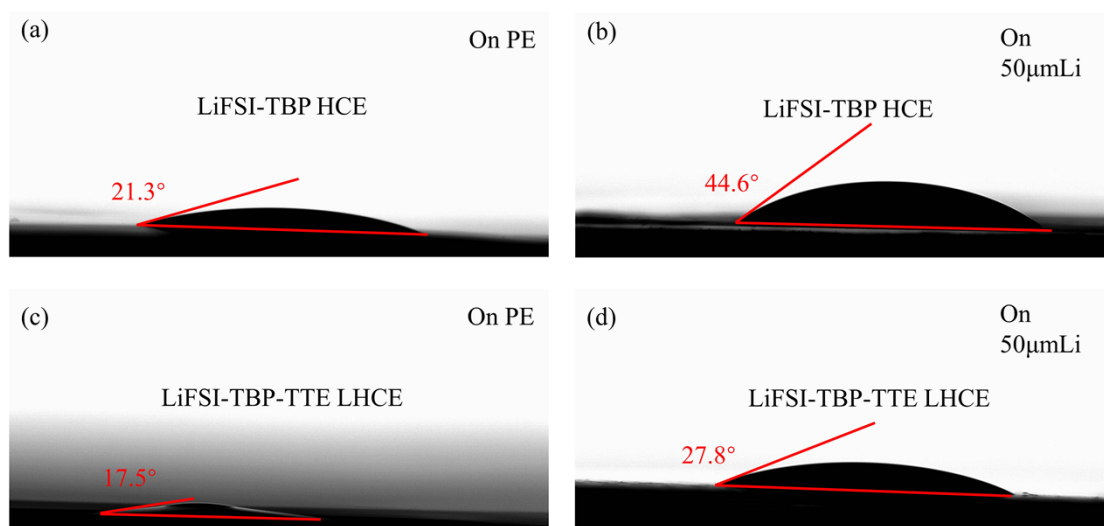


Fig. S1 Contact angle of different electrolytes on PE and 50 μm Li anode.

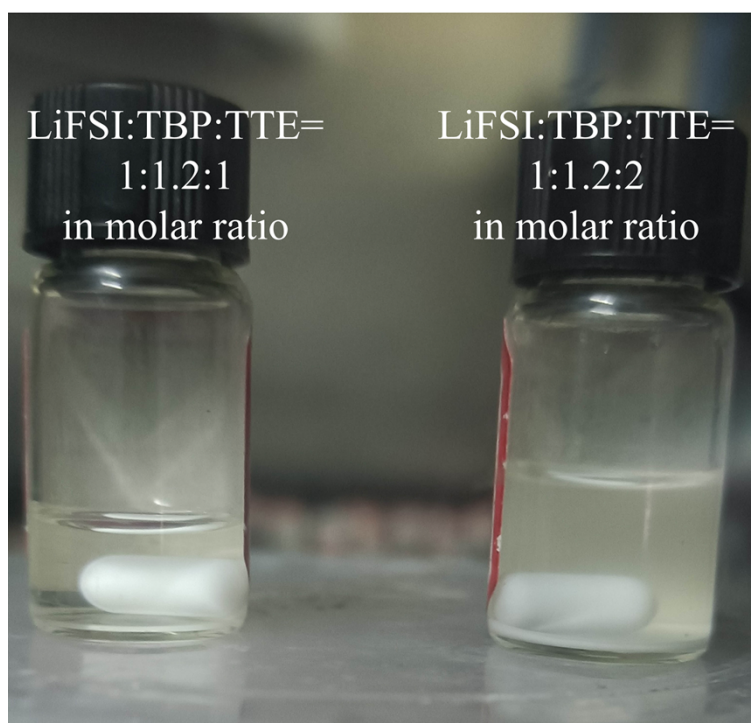


Fig. S2 Photographs of LiFSI-TBP HCE within different amounts of TTE.

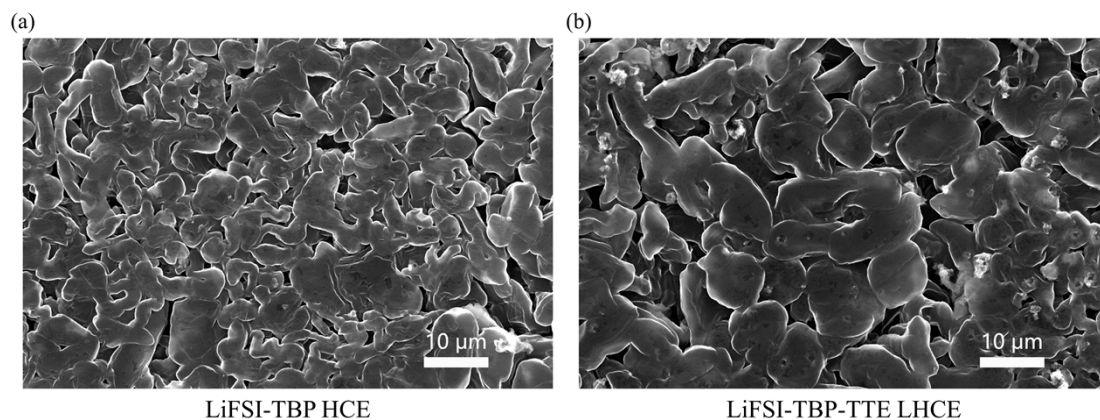


Fig. S3 SEM images of deposition morphologies in LiFSI-TBP HCE (a) and LiFSI-TBP-TTE LHCE (b).

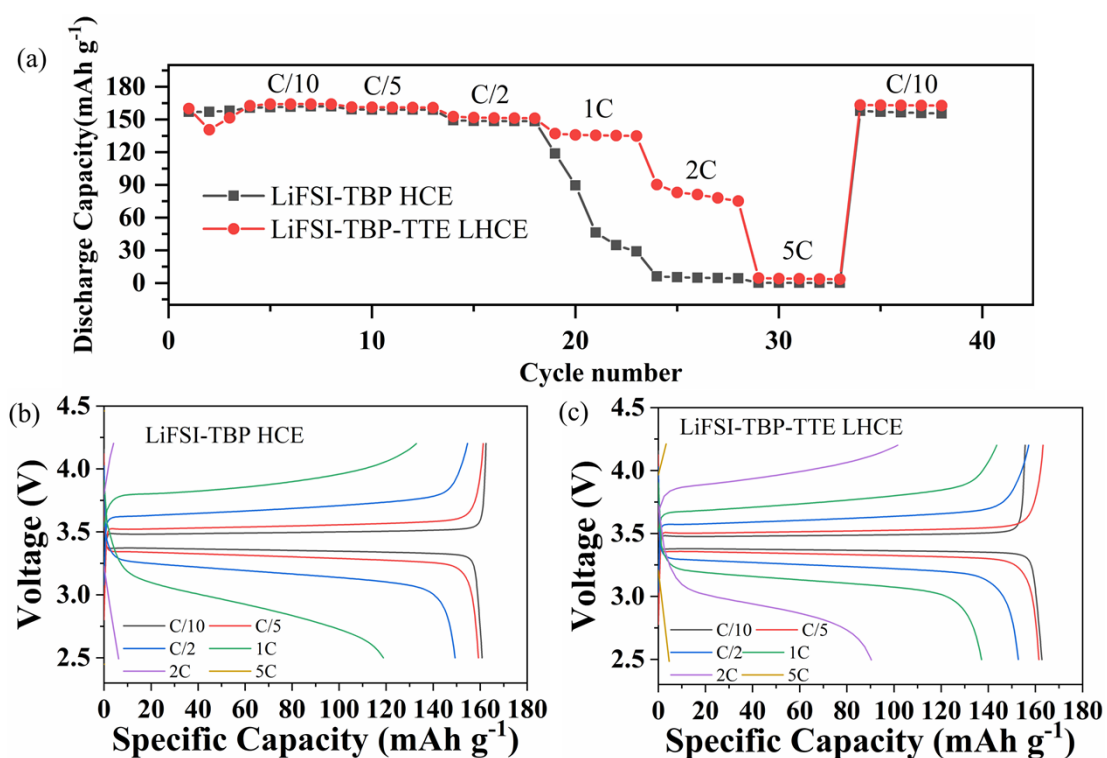


Fig. S4 (a) Rate capability of Li||LFP using the LiFSI-TBP HCE and LiFSI-TBP-TTE LHCE. (b) Voltage profiles of using LiFSI-TBP HCE. (c) Voltage profiles of using LiFSI-TBP-TTE LHCE.

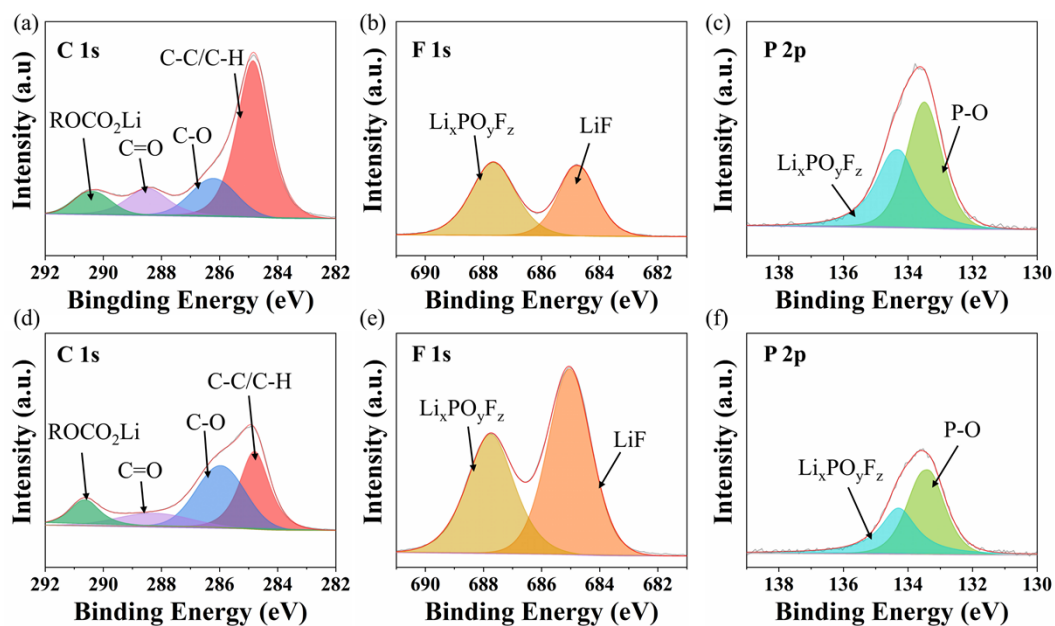


Fig. S5 XPS characterization of LFP cathode after 200 cycles in LiFSI-TBP HCE **(a-c)** and LiFSI-TBP-TTE LHCE **(d-f)**.