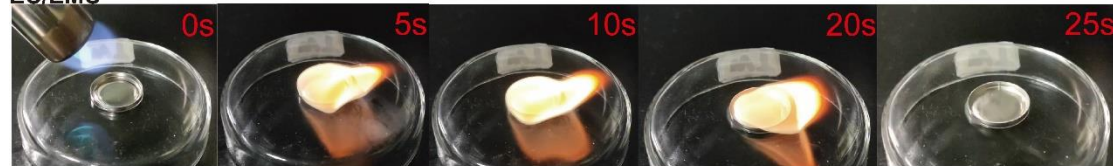


Fig S1 Cycling performance of Cu||NCM811 batteries using ethyl propionate electrolyte systems with varying degrees of fluorination.

Flammable

EC/EMC



FEC/EP



Non-flammable

FEC/ETFP



FEC/ETFP+DFOB



Fig S2 Photographs of the self-extinguishing experiments with different electrolytes.

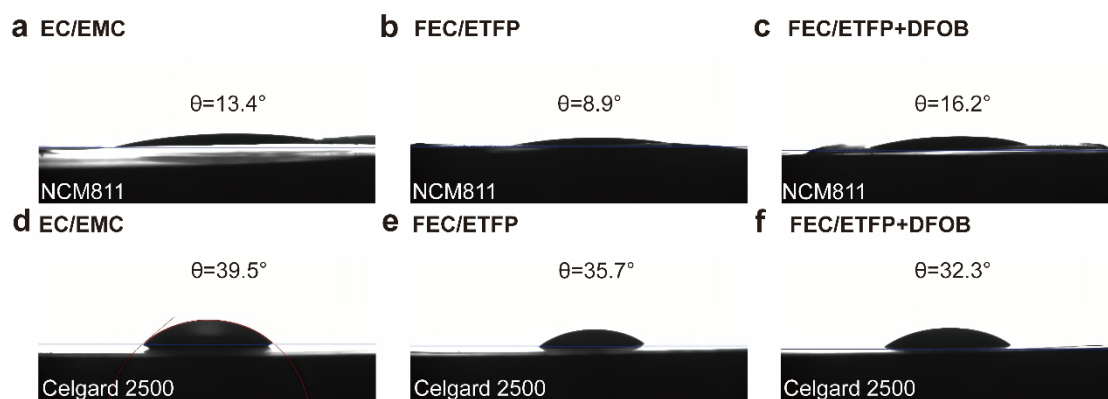


Fig S3 Contact angle measurements of three electrolytes: EC/EMC, FEC/ETFP, and FEC/ETFP+DFOB.

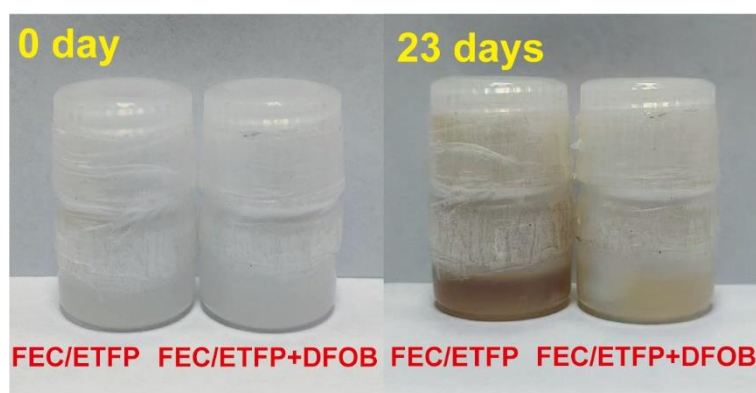


Fig S4 Color changes of FEC/ETFP and FEC/ETFP+DFOB electrolytes after 23 days of storage.

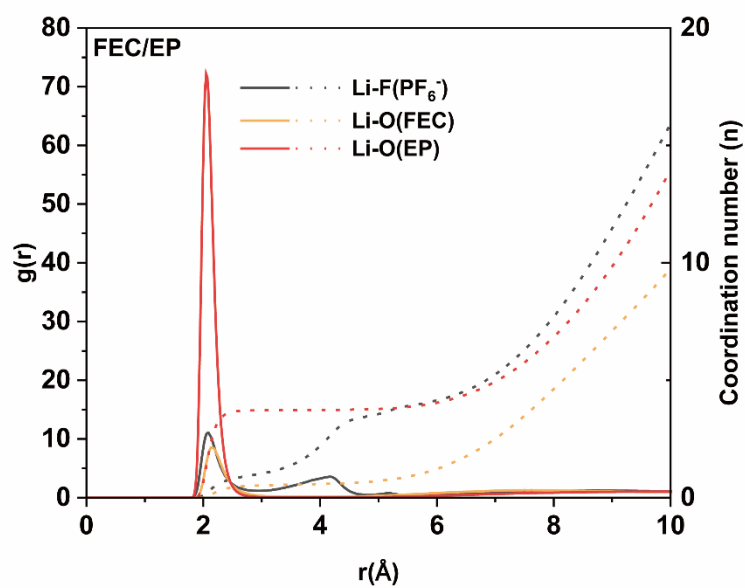


Fig S5 RDF and CN of FEC/EP.

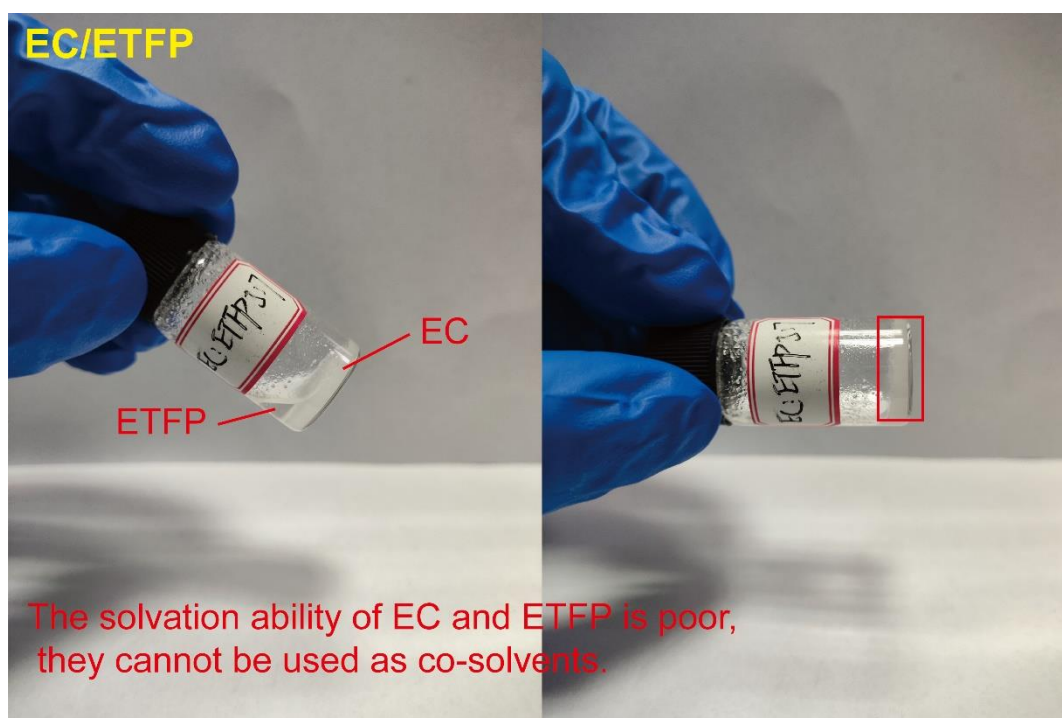


Fig S6 Photograph of the EC/ETFP.

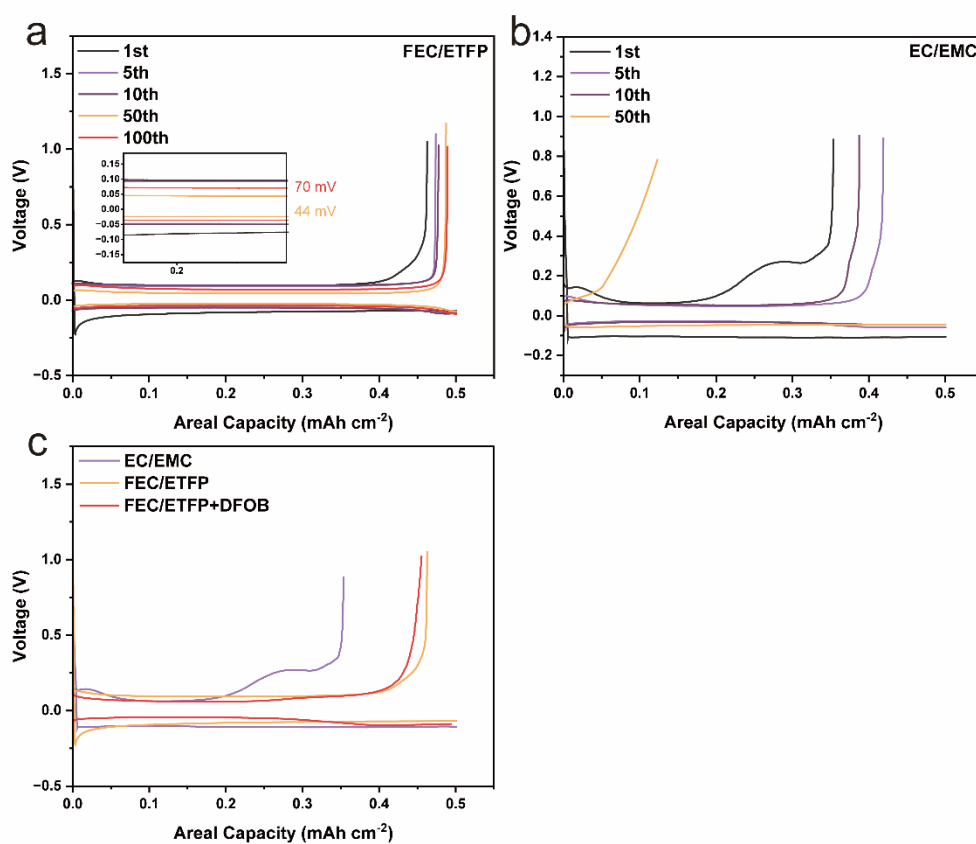


Fig S7 Deposition/stripping curves of Li||Cu batteries using FEC/ETFP (a) and EC/EMC (b). (c)

Comparison of polarization voltages during the first cycle.

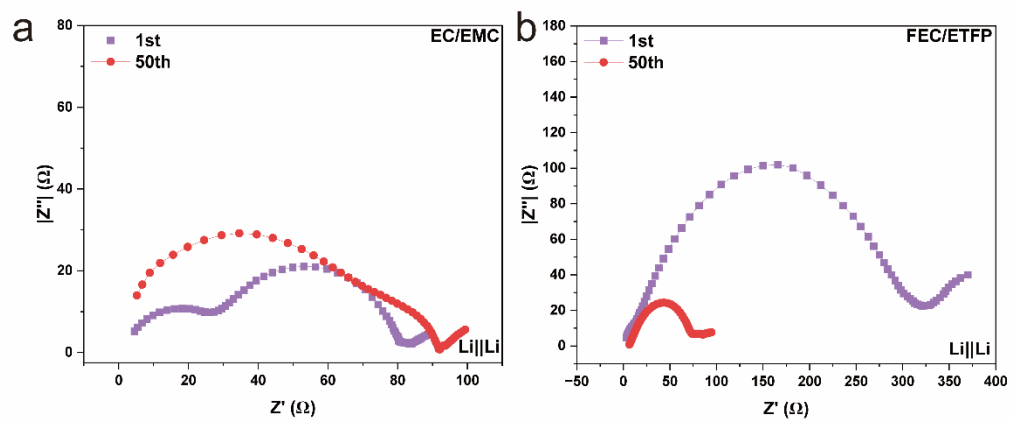


Fig S8 EIS curves of Li||Li batteries with EC/EMC (a) and FEC/ETFP (b).