Electronic Supplementary Information for

High ion conducting solid polymer electrolytes based on blending hybrids derived from monoamine and diamine polyethers for lithium solid state batteries

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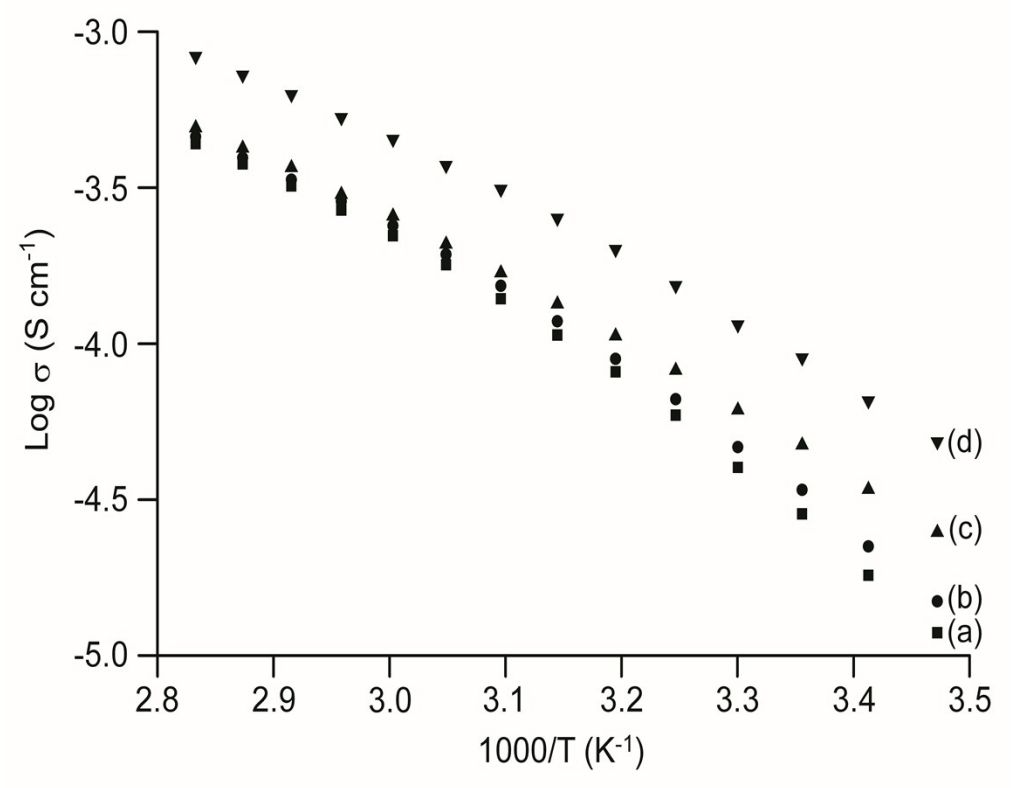

Fig. S1. Temperature dependence of ionic conductivity of MP(x:y)-16 solid hybrid electrolytes with x:y = (a) 0:100 (b) 30:70 (c) 50:50, and (d) 70:30.

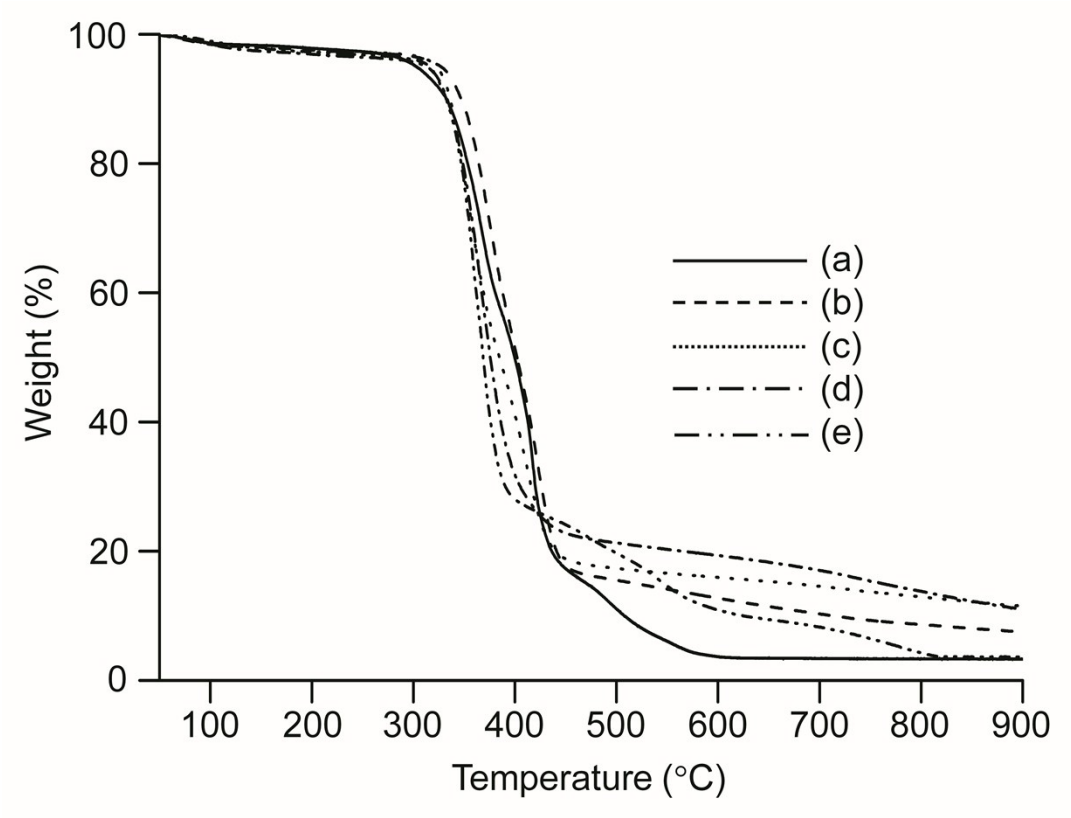

Fig. S2. TGA curves of MP(70:30)-Z blend hybrid SPEs, with Z = (a) 32, (b) 24, (c) 16, (d) 12, and (e) 8.

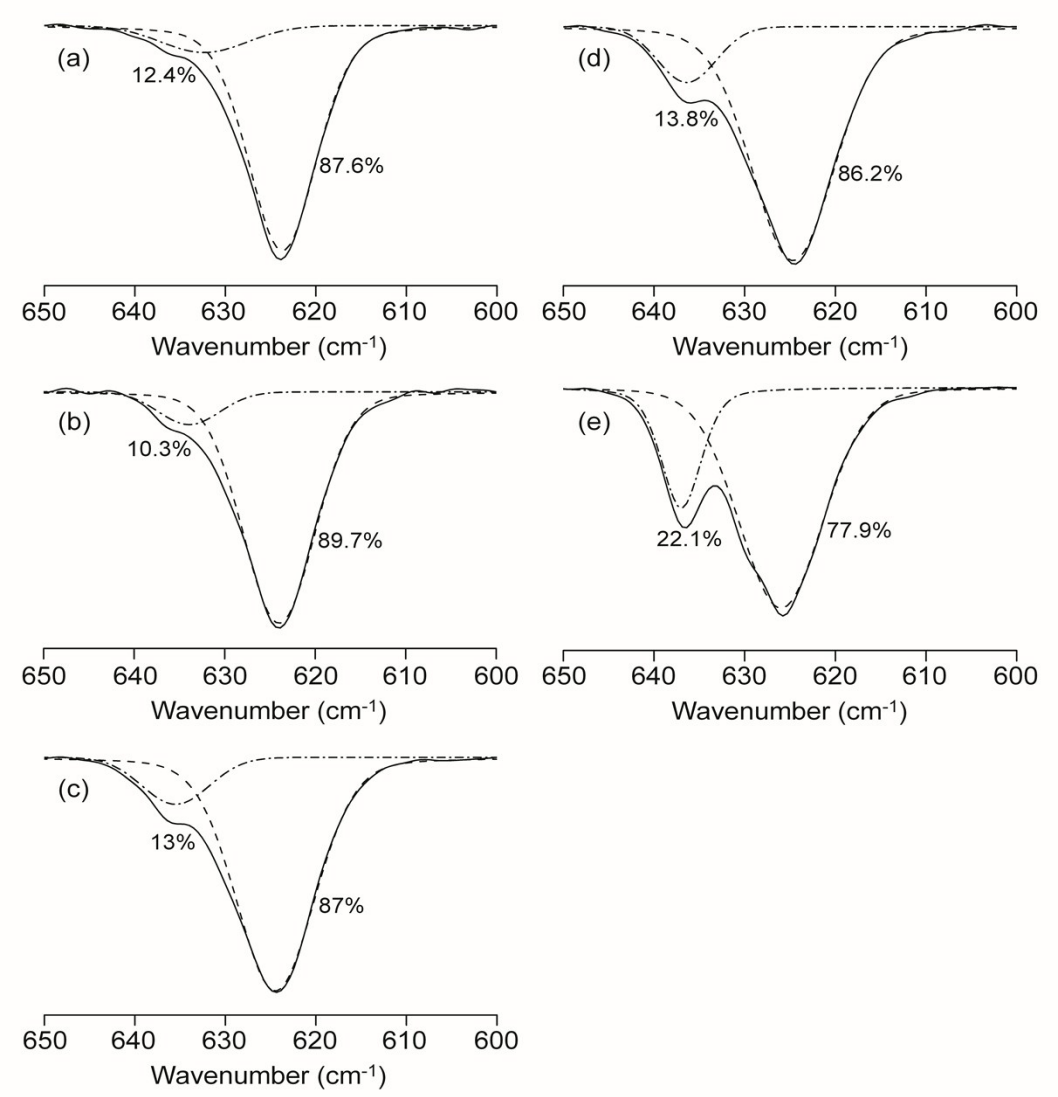

Fig. S3. Deconvoluted FTIR spectra of MP(70:30)-Z blend hybrid SPEs, with Z = (a) 32, (b) 24, (c) 16, (d) 12, and (e) 8.

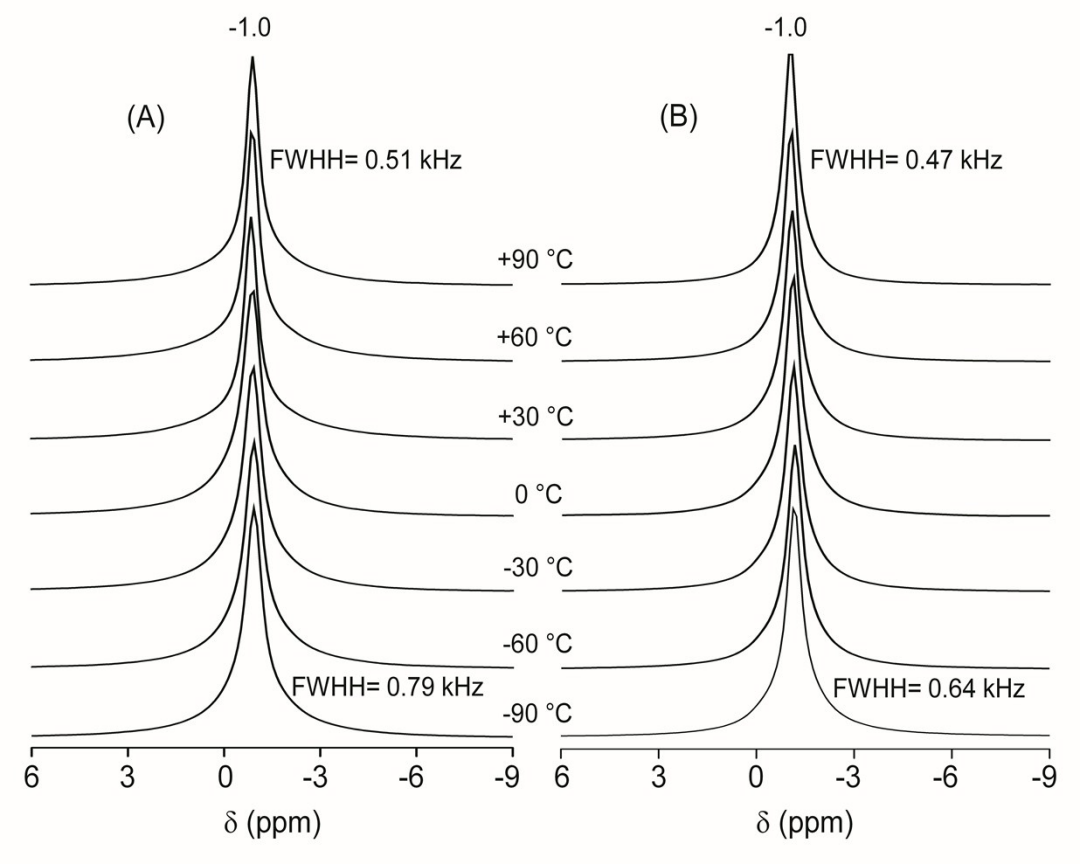

Fig. S4. ^{7}Li-{^{1}H} MAS NMR spectra of (A) MP(70:30)-32 and (B) MP(70:30)-16 blend hybrid SPEs, acquired at a spinning speed of 3 kHz.

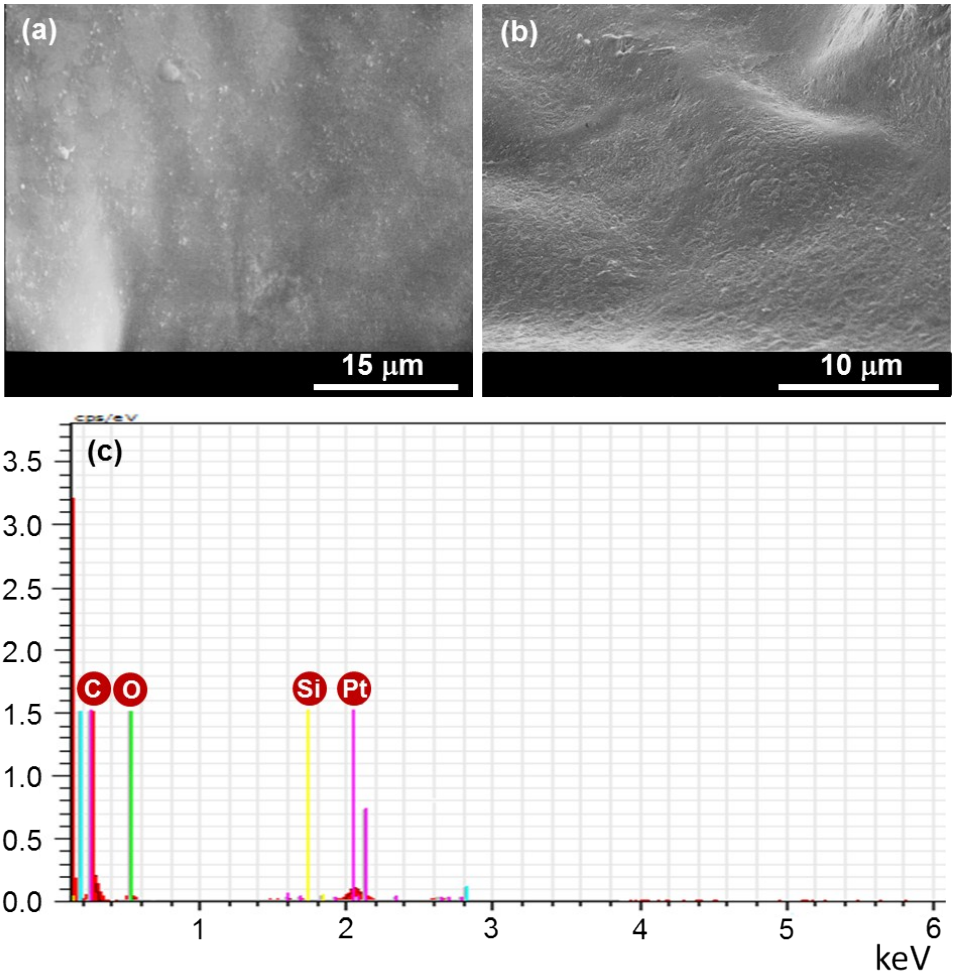

Fig. S5. SEM images of MP(70:30)-16 blend hybrid SPE (a) before and (b) after charge-discharge cycle testing. (c) EDS spectrum shows the presence of silicate (Si) particles. Platinum is observed due to the Pt coating on the membrane.