Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics. This journal is © the Owner Societies 2017



Fig. S1 Ionic conductivity (a) and viscosity of Li*X*/TFEP solutions at 298 K as a function of the salt concentration.

~

CLi salt / mol dm-3









Fig. S2 ATR-IR spectra of LiX/TFEP solutions (a – c) and the area intensity of the "free" band as a function of the salt concentration for LiX/TFEP (d).



Fig. S3 LSV of the Pt electrode in LiX/TFEP+EC (4 M). Concentration of Li salt: 0.5 M. Potential sweep rate: 5 mV s⁻¹.