Supporting Information

## Synergic Effect of CaI<sub>2</sub> and LiI on Ionic Conductivity of Solution-based Synthesized Li<sub>7</sub>P<sub>3</sub>S<sub>11</sub> Solid Electrolyte

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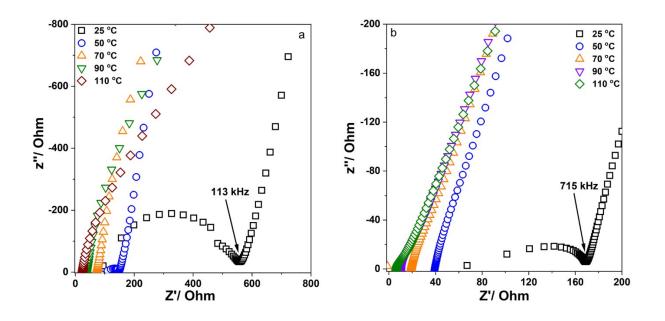


Figure S1: Electrochemical Impedance Spectra of the prepared (a) LPS and (b) 5CaI<sub>2</sub> solid electrolyte.

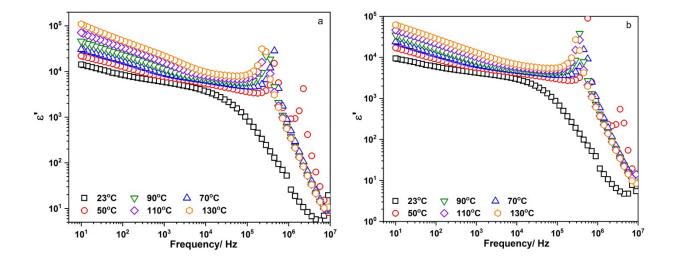


Figure S2: Frequency dependence of the real part of dielectric constant,  $\epsilon$ ', of (a) 5CaCl<sub>2</sub> and (b) 5CaBr<sub>2</sub>

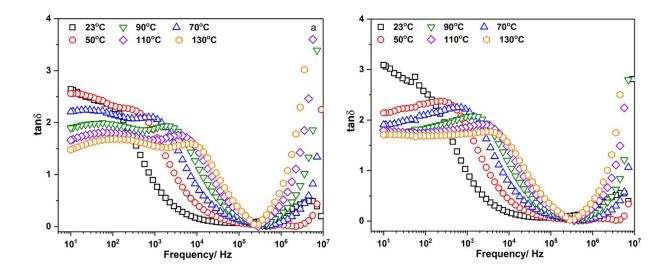


Figure S3: Frequency dependence of the real part of the loss factor, tand, of (a)  $5CaCl_2$  and (b)  $5CaBr_2$