– Supplementary materials –

Particle Size-Dependent Bulk and Grain-Boundary Contributions in $Li_2O–B_2O_3–Al_2O_3$ Solid Electrolytes

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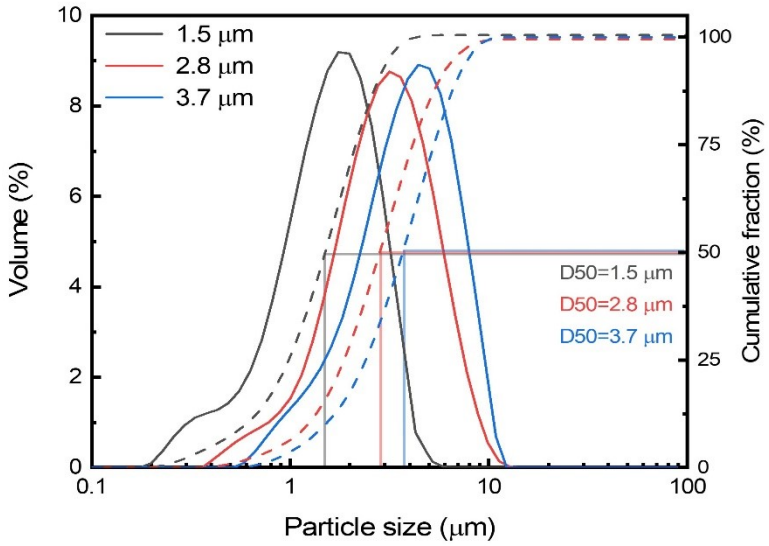

Figure S1. Particle size distributions of LBA powders with different D50 values (1.5, 2.8, and 3.7 μm), shown as volume and cumulative fraction curves.

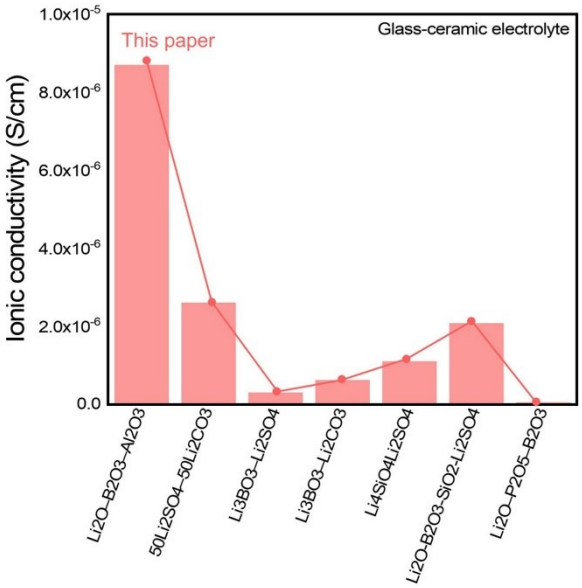

Figure S2. Comparison of room-temperature ionic conductivity among representative glass-ceramic electrolytes.

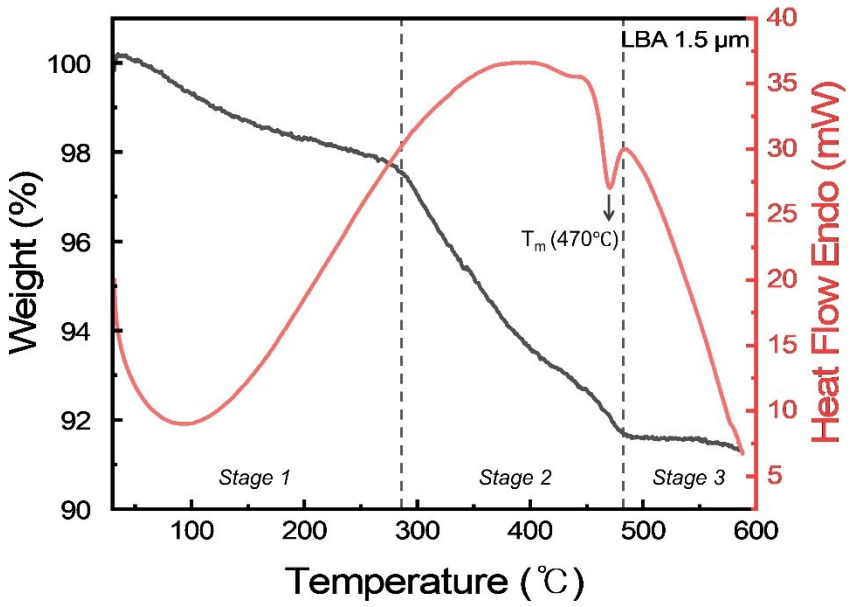

Figure S3. TGA–DSC curves of LBA glass powder.

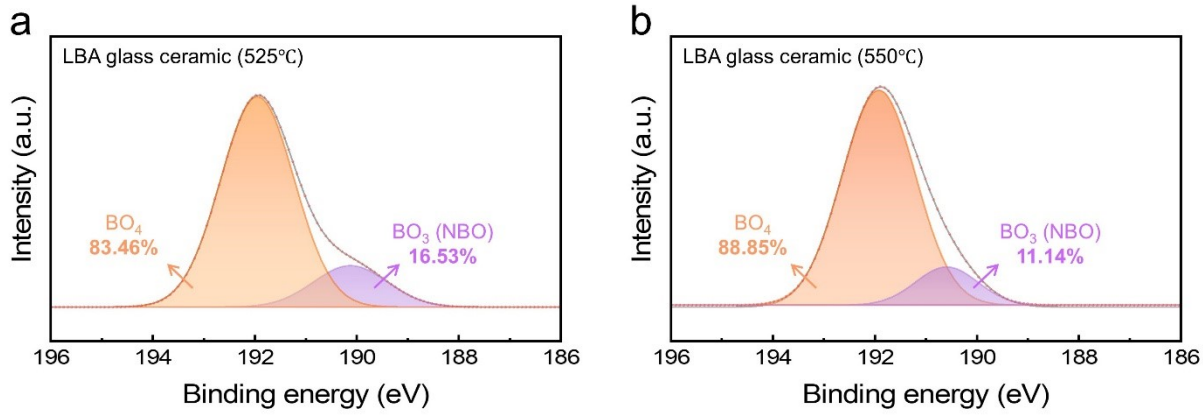

Figure S4. XPS B 1s spectra of LBA glass-ceramic samples sintered at a) 525ºC and b) 550ºC.

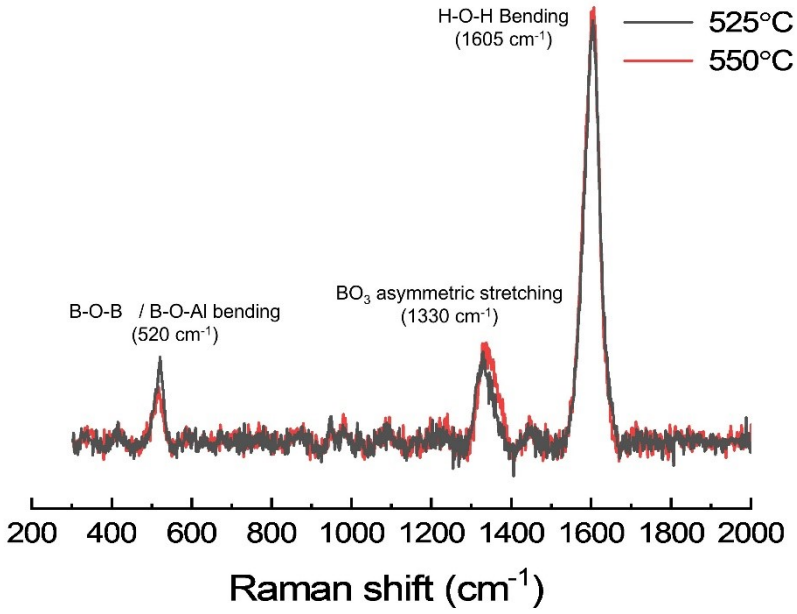

Figure S5. Raman spectra of LBA glass-ceramic samples sintered at 525ºC and 550º.

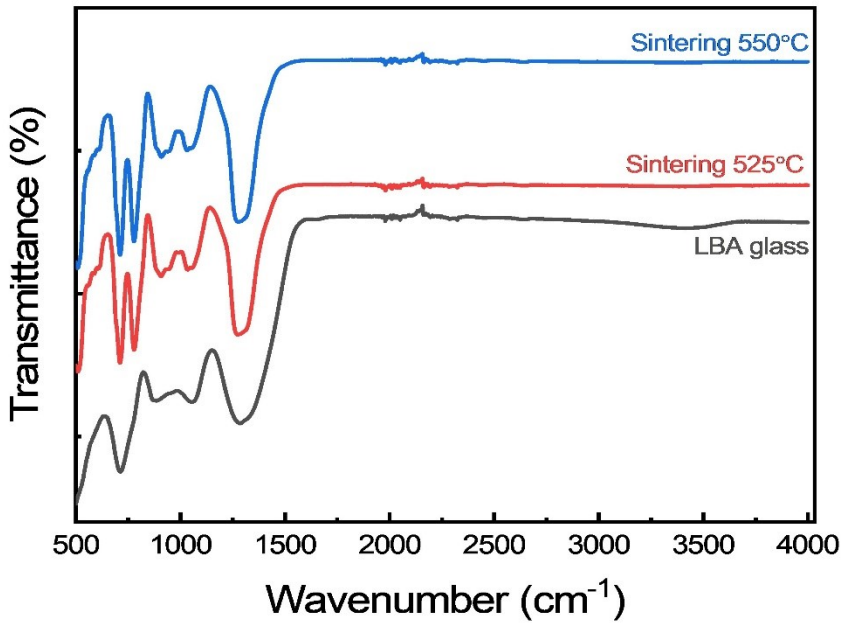

Figure S6. FT-IR spectra of LBA glass and glass-ceramic samples sintered at 525 and 550ºC.

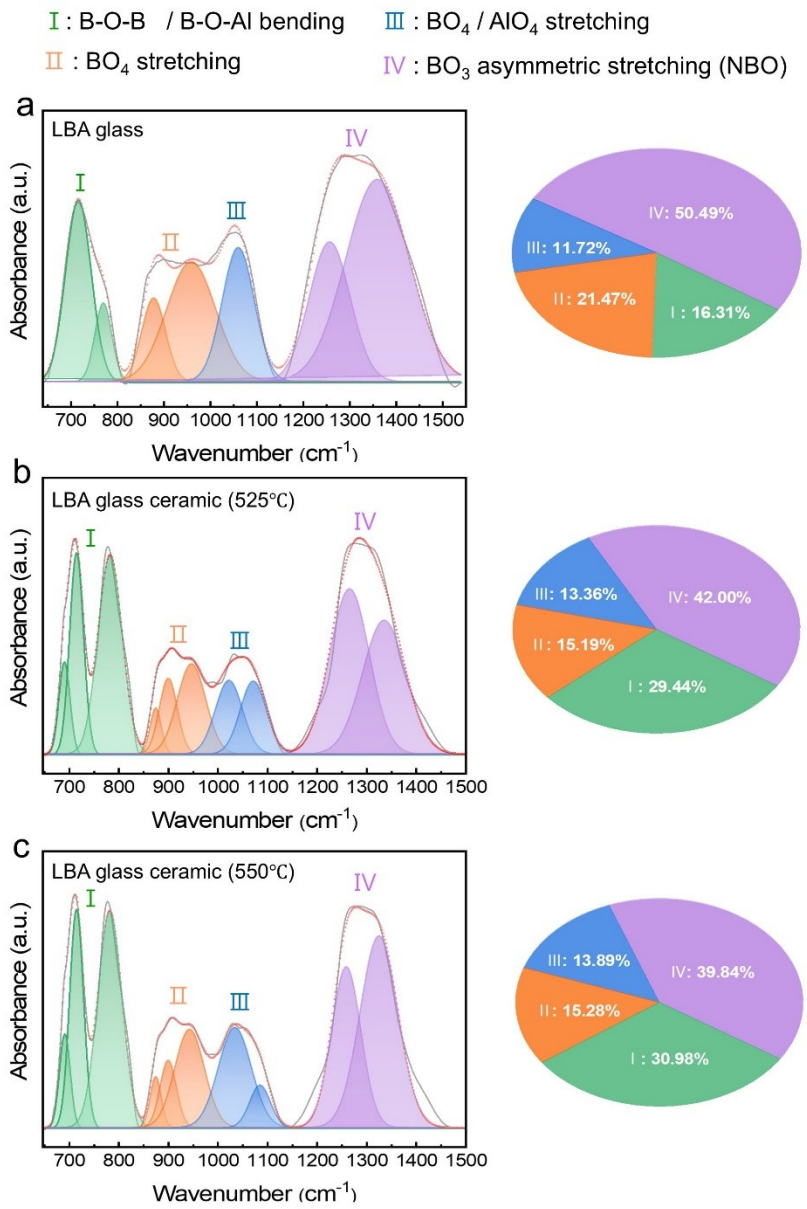

Figure S7. FT-IR deconvolution of LBA glass and glass-ceramic samples sintered at 525 and 550ºC.

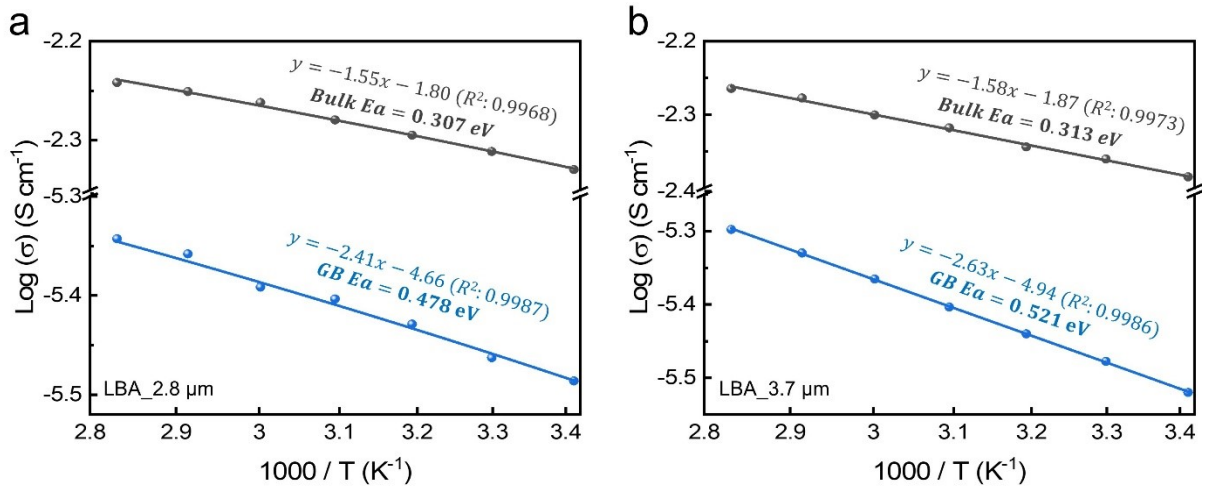

Figure S8. Arrhenius plots of bulk and grain boundary conductivities for the LBA_2.8 μm and LBA_3.7 μm.

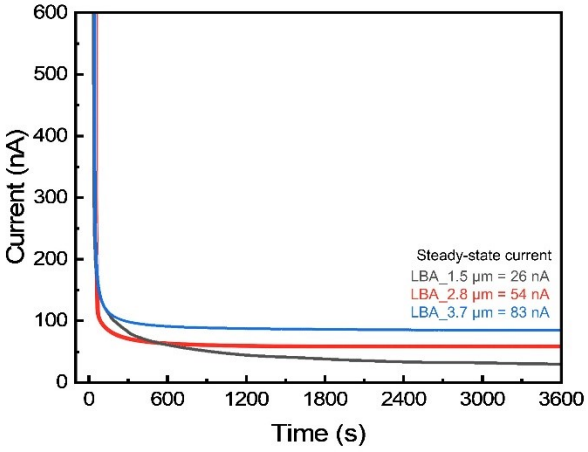

Figure S9. DC polarization curves for the LBA pellets with different particle sizes.