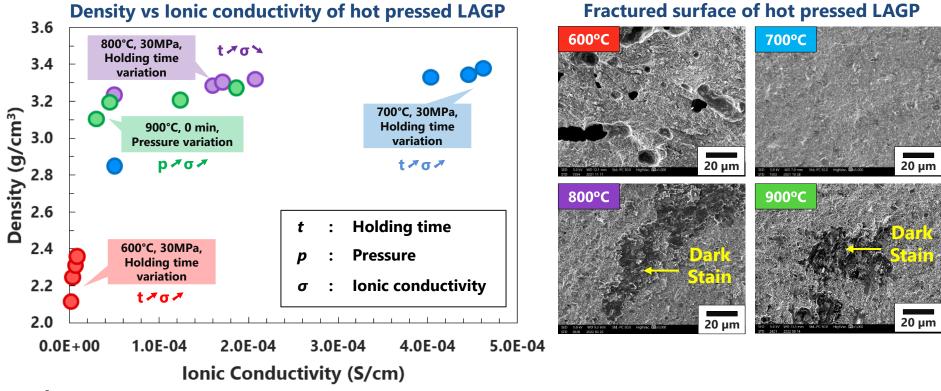
The Ceramic Society of Japan-The 35th Fall Meeting (2022.9.15)



Improvement in Ionic Conductivity of Li_{1.5}Al_{0.5}Ge_{1.5}(PO₄)₃ Solid Electrolyte by Hot Pressing

Purpose : Clarifying the relationship between microstructure & ionic conductivity of $Li_{1.5}Al_{0.5}Ge_{1.5}(PO_4)_3$ (LAGP) sintered by hot pressing.



Result:

- The increase of holding time & applied pressure tended to improve both density and ionic conductivity.
- The highest ionic conductivity of 4.6 x 10⁻⁴ S/cm was achieved at 700°C for 120 min with 30 MPa.
- Dark stain, which was supposed to deteriorate ionic conductivity, were observed in the sample sintered at higher temperature of 800°C and 900°C.