

PREPARATION AND CHARACTERIZATION OF $\text{Li}_{1.4}\text{Al}_{0.4}\text{Ti}_{1.6}(\text{PO}_4)_3$ CONDUCTING ELECTROLYTE

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ABSTRACT

The $\text{Li}_{1.4}\text{Al}_{0.4}\text{Ti}_{1.6}(\text{PO}_4)_3$ glass ceramic with NASICON-type phase has been synthesized. Ionic conductivity identification of the pelletized powder was carried out by electrochemical impedance spectrometer (EIS). The highest ionic conductivity obtained for $\text{Li}_{1.4}\text{Al}_{0.4}\text{Ti}_{1.6}(\text{PO}_4)_3$ is $1.22 \times 10^{-5} \text{ S cm}^{-1}$ after being annealed at 800°C for 3 hours in air.

Keywords: LATP; sol-gel method; EIS; XRD; FESEM

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