

## Design and Analysis of the Electrical Properties of a Solid-State Lithium-Boron-Phosphate Electrolyte

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**Abstract.** In this article, we report on the fabrication of a solid-state lithium-boron-phosphate electrolyte and the study of the dependence of its electrical properties on electrode materials and heat treatment. Impedance spectroscopy was used to analyze the solid-state electrolyte. The values of conductivity of samples heat-treated at 850 °C and 900 °C have been found as  $2.02 \cdot 10^{-4} \text{ S} \cdot \text{cm}^{-1}$  and  $4.28 \cdot 10^{-4} \text{ S} \cdot \text{cm}^{-1}$ , respectively.

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