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# Halide ion effect on the structure and properties of sodium aluminophosphate glass

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## Abstract

Glass-based sodium solid electrolyte materials have drawn sufficient attention to reducing cost and safety problems. However, getting a high ionic conductivity at low temperatures for glass materials is still challenging. Additional halides in oxide glass increase the ionicity of the glass and enhance the ionic conductivity. In this study, the F<sup>-</sup> and Cl<sup>-</sup> ions are introduced into the sodium aluminophosphate glass. The structure and properties are studied with Raman, FTIR, NMR and impedance spectroscopy.

**Keywords:** Sodium ion conductivity, halide ion, electrolyte materials

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