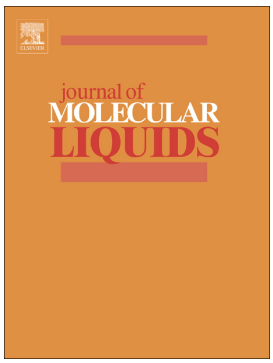

Physico-chemical properties of the system (LiF-NaF)eut-LaF3 – Phase equilibria, density and volume properties, electrical conductivity and surface tension

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Physico-chemical properties of the system $(LiF\text{-}NaF)_{eut}\text{-}LaF_3$ – phase equilibria, density and volume properties, electrical conductivity and surface tension

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Abstract

A detailed physico-chemical investigation of molten system $(LiF\text{-}NaF)_{eut}\text{-}LaF_3$ up to 15 mol% of LaF_3 has been done. The phase equilibria were measured by two independent methods (TA and DSC) and consequently Calphad modelling and calculation was performed in order to interpret obtained experimental data. Additional physico-chemical properties like density, electrical conductivity and surface tension were measured. It was found that all investigated properties reflect the ionic changes in the melt providing consistent data, i.e. the most significant changes in these properties are observed at ca 10 mol% LaF_3. The volume properties were calculated, as well, providing information about volume expansion. Also