

عنوان مقاله:

Generalized Electrolyte-UNIQUAC-NRF Model for Calculation Phase Diagram and Solubility of Mixed Electrolyte in Aqueous Solutions

محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

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خلاصه مقاله:

The Electrolyte-UNIQUAC-NRF model is modified and extended to represent the excess Gibbs energy function of multicomponent electrolyte solutions. Using the available experimental meanactivity coefficient of aqueous binary electrolyte systems in the extensive domain of temperature and molality, the adjustable temperature dependent parameters are obtained for several binary electrolyte systems. Thus, having the binary interaction parameters, the solubility of electrolytes in ternary aqueous electrolyte solutions are predicted at 298K and higher temperature so that the phase diagram of the salt solubility are obtained for several ternary aqueous salt systems. The results of the prediction of solubilities of salts, osmotic coefficient and vapor pressure of solvent using the present work demonstrate that the generalized Electrolyte-UNIQUAC-NRF model can be successfully applied for the ternary mixed electrolyte systems with very good accuracy.

کلمات کلیدی:

Electrolyte-UNIQUAC-NRF model, Multicomponent Electrolyte, Activity Coefficient, Osmotic Coefficient, Vapor Pressure, Solubility prediction

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