

RESEARCH PAPERS

含盐聚电解质溶液的分子热力学模型

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摘要 A molecular thermodynamic model of polyelectrolyte developed previously was extended to polyelectrolyte solutions with added salts. Thermodynamic properties, such as activity coefficients of polyelectrolytes or added salts and osmotic coefficients of solvent, of a number of aqueous mixtures of polyelectrolytes and salts are analyzed with the proposed model. Successful correlation is obtained in the range of moderate or higher polyion concentration. For the same sample, thermodynamic properties of polyelectrolytes with and without simple electrolytes can be predicted mutually using parameters from regression data.

关键词 [polyelectrolyte solution](#) [molecular thermodynamic model](#) [activity coefficient](#) [osmotic coefficient](#)

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Molecular Thermodynamic Model for Polyelectrolyte Solutions with Added Salts

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Abstract A molecular thermodynamic model of polyelectrolyte developed previously was extended to polyelectrolyte solutions with added salts. Thermodynamic properties, such as activity coefficients of polyelectrolytes or added salts and osmotic coefficients of solvent, of a number of aqueous mixtures of polyelectrolytes and salts are analyzed with the proposed model. Successful correlation is obtained in the range of moderate or higher polyion concentration. For the same sample, thermodynamic properties of polyelectrolytes with and without simple electrolytes can be predicted mutually using parameters from regression data.

Key words [polyelectrolyte solution](#); [molecular thermodynamic model](#); [activity coefficient](#); [osmotic coefficient](#)

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