

含醇溶液的热力学研究IV.超额Gibbs自由能

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收稿日期 修回日期 网络版发布日期 接受日期

**摘要** 利用先前提出的含醇溶液形成的热力学模型,以及释放和充入组分间引力势能的方法,建立了超额Gibbs自由能方程,它可以避开计及化学作用对超额Gibbs自由能的贡献,使方程的推导大为简化。这个模型能够联立地用来关联各种含醇溶液,包括含醇水溶液的超额焓、超额Gibbs自由能和超额熵。对17个有代表性的含醇溶液关联结果表明,与实验值的一致性是很令人满意的。

**关键词** [醇](#) [热力学模型](#) [自由能](#)

分类号 [0642](#)

## Study on Thermodynamics of Solutions Containing Alcohol IV. Excess Gibbs Free Energy

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**Abstract** To make use of the thermodynamic model of the formation of solutions containing alcohol and the approach to release and charge attractive potential energy between two components as we proposed in previous work, the equation of excess Gibbs free energy is also established, which can avoid calculating the contribution of chemical action to the excess Gibbs free energy and make the derivation much simpler. The model can simultaneously be used to correlate the excess enthalpy, excess Gibbs free energy and excess entropy for all kinds of alcoholic solutions including aqueous solutions of alcohol. The correlation results for 17 typical systems show that the consistency with experimental data is very satisfactory.

**Key words** [ALCOHOL](#) [THERMODYNAMICAL MODEL](#) [FREE ENERGY](#)

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