

RESEARCH PAPERS

顺丁烯二酸酐在单一溶剂和混合溶剂中的固液平衡研究

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**摘要** Solid-liquid equilibria (SLE) of three binary systems and seven ternary systems containing maleic anhydride(MA) are measured by visual method. The experimental data are compared with the calculated ones with modified universal quasichemical functional group activity coefficient(UNIFAC) method in which the interaction parameters between groups come from two sources, dortmund data bank(DDB), if there's any, and correlations based on our former presented experimental SLE data of twenty binary systems. New groups of MA, ACCOO group, COO group, >C=O group and cy-CH<sub>2</sub> group are defined and the SLE data of maleic anhydride in isopropyl acetate in literature are cited in order to assess the new interaction parameters, correlated with Wilson equation and the  $\lambda h$  equation. The modified UNIFAC method with these new regressed interaction parameters is also used to predict other three binary systems containing maleic anhydride.

**关键词** [maleic anhydride](#) [universal quasichemical functional group activity coefficient](#) [solid-liquid equilibrium](#)

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### Solid-Liquid Equilibria of Several Binary and Ternary Systems Containing Maleic Anhydride

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**Abstract** Solid-liquid equilibria (SLE) of three binary systems and seven ternary systems containing maleic anhydride(MA) are measured by visual method. The experimental data are compared with the calculated ones with modified universal quasichemical functional group activity coefficient(UNIFAC) method in which the interaction parameters between groups come from two sources, dortmund data bank(DDB), if there's any, and correlations based on our former presented experimental SLE data of twenty binary systems. New groups of MA, ACCOO group, COO group, >C=O group and cy-CH<sub>2</sub> group are defined and the SLE data of maleic anhydride in isopropyl acetate in literature are cited in order to assess the new interaction parameters, correlated with Wilson equation and the  $\lambda h$  equation. The modified UNIFAC method with these new regressed interaction parameters is also used to predict other three binary systems containing maleic anhydride.

**Key words** [maleic anhydride](#); [universal quasichemical functional group activity coefficient](#); [solid-liquid equilibrium](#)

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