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RESEARCH PAPERS

芳香族羧酸溶解度的测定与关联

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摘要 Solubility of benzoic acid, terephthalic acid and 2,6-naphthalene dicarboxylic acid in water, acetic acid, N,N-dimethyfformamide, N,N-dimethylacetamide, dimethyl sulphoxide and N-methyl-2-ketopyrrolidine were measured by dynamic method. The solubilities were calculated by UNIFAC group contribution method, in which new groups, BCCOOH and NCCOOH,
were introduced to express the activity coefficients of aromatic acids and new interaction parameters of the new groups were expressed as the function of temperature, which were determined from the experimental data. The new interaction parameters provided good calculated result. The experimental data were also correlated with Wilson and λ-h models, and results were compared with present UNIFAC model.

关键词 solid-liquid equilibrium solubility UNIFAC group contribution method 2,6-naphthalene
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Determination and Correlation for Solubility of Aromatic Acids in Solvents

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Abstract Solubility of benzoic acid, terephthalic acid and 2,6-naphthalene dicarboxylic acid in water, acetic acid, N,N-dimethyfformamide, N,N-dimethylacetamide, dimethyl sulphoxide and N-methyl-2-ketopyrrolidine were measured by dynamic method. The solubilities were calculated by UNIFAC group contribution method, in which new groups, BCCOOH and NCCOOH, were introduced to express the activity coefficients of aromatic acids and new interaction parameters of the new groups were expressed as the function of temperature, which were determined from the experimental data. The new interaction parameters provided good calculated result. The experimental data were also correlated with Wilson and λ-h models, and results were compared with present UNIFAC model.

Key words solid-liquid equilibrium; solubility; UNIFAC group contribution method; 2 6-naphthalene dicarboxylic acid

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