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甲基-酰基-萘在庚烷、辛烷和十二烷中溶解度的测定与关联

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摘要 The solubilities of 2-methyl-6-acetylnaphthalene (2,6-MAN) and 2-methyl-7-acetylnaphthalene (2,7-MAN) in n-heptane, n-octane, and n-dodecane were measured, respectively, from 273.15 to 319.15K using an analytical method. On the basis of the thermodynamics theory of solid-liquid equilibrium, a model was derived to relate the solubilities with temperature. Using the least square method, the parameters of the model, the fusion enthalpies ΔfusH and the Margules equation coefficients A12 and A21 of 2,6-MAN and 2,7-MAN in n-heptane, n-octane, and n-dodecane—were obtained by regressing the experimental data. The average deviation of the model was 1.70%.

关键词 2-methyl-6-acetylnaphthalene 2-methyl-7-acetylnaphthalene solubility analytical method

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Experimental measurement and correlation of the solubility of methyl-acetyl-naphthalene in n-heptane, n-octane, and n-dodecane

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Abstract The solubilities of 2-methyl-6-acetylnaphthalene (2,6-MAN) and 2-methyl-7-acetylnaphthalene (2,7-MAN) in n-heptane, n-octane, and n-dodecane were measured, respectively, from 273.15 to 319.15K using an analytical method. On the basis of the thermodynamics theory of solid-liquid equilibrium, a model was derived to relate the solubilities with temperature. Using the least square method, the parameters of the model, the fusion enthalpies ΔfusH and the Margules equation coefficients A12 and A21 of 2,6-MAN and 2,7-MAN in n-heptane, n-octane, and n-dodecane—were obtained by regressing the experimental data. The average deviation of the model was 1.70%.

Key words 2-methyl-6-acetylnaphthalene; 2-methyl-7-acetylnaphthalene; solubility; analytical method

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