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亚临界和超临界状态下甲苯-多环芳香烃体系的气液相平衡

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摘要 The phase behaviors of toluene/polycyclic aromatic hydrocarbon mixture systems were investigated with a continuous-flow type apparatus at 573.2, 598.2, 623.2 and 648.2 K, while the pressure changed from 1 to 5 MPa. The pseudo-binary phase behaviors were predicted with the Peng-Robinson equation of state with interaction parameters between toluene and pseudo

-components considered. The phase diagrams of the system have been classified following the category of phase boundary diagram models. The extraction selectivity and efficiency of toluene as a solvent was discussed by comparing with that of hexane. The prediction model for selectivity was also suggested.

关键词 [vapor-liquid equilibrium](#) [polycyclic aromatic hydrocarbon mixtures](#) [supercritical fluid extraction](#) [selectivity](#)

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Vapor-Liquid Equilibrium of Toluene-Polycyclic Aromatic Hydrocarbon System in Sub-and Supercritical State

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Abstract The phase behaviors of toluene/polycyclic aromatic hydrocarbon mixture systems were investigated with a continuous-flow type apparatus at 573.2, 598.2, 623.2 and 648.2 K, while the pressure changed from 1 to 5 MPa. The pseudo-binary phase behaviors were predicted with the Peng-Robinson equation of state with interaction parameters between toluene and pseudo-components considered. The phase diagrams of the system have been classified following the category of phase boundary diagram models. The extraction selectivity and efficiency of toluene as a solvent was discussed by comparing with that of hexane. The prediction model for selectivity was also suggested.

Key words [vapor-liquid equilibrium](#); [polycyclic aromatic hydrocarbon mixtures](#); [supercritical fluid extraction](#); [selectivity](#)

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