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## The Solubility of Styrene from Polystyrene in Supercritical CO<sub>2</sub>

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**摘要** The solubility of styrene from polystyrene in supercritical carbon dioxide is measured at 323 K, 333 K, and 343 K in the pressure range from 12 to 28 MPa. Based on the association concept and the theory of dense gas sorption in polymers, a displacement and association mechanism on supercritical fluid extraction of the monomer from the polymer is proposed. And, a novel mathematical model for correlating the solubility data obtained from the experiments is also proposed in the paper.

**关键词** [supercritical fluid extraction](#) [supercritical carbon dioxide](#) [equilibrium solubility](#) [polymer purification](#) [styrene](#)

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### The Solubility of Styrene from Polystyrene in Supercritical CO<sub>2</sub>

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**Key words** [supercritical fluid extraction](#); [supercritical carbon dioxide](#); [equilibrium solubility](#); [polymer purification](#) [styrene](#)

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