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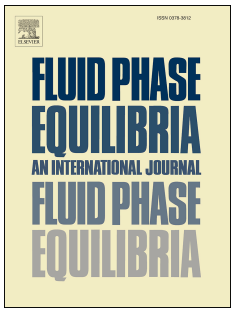

Relationship between the two-component system 1-Br-adamantane + 1-Cl-adamantane and the high-pressure properties of the pure components

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Relationship between the two-component system 1-Br-adamantane + 1-Cl-adamantane and the high-pressure properties of the pure components

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Abstract

The temperature-composition phase diagram of the two-component system 1-Br-adamantane and 1-Cl-adamantane has been determined by means of thermal analysis techniques and X-ray powder diffraction from the low-temperature phase to the liquid state. The crossed isopolymorphism formalism has been applied to the two-component system to infer the normal pressure properties of the orthorhombic metastable phase of 1-Cl-adamantane at normal pressure. The experimental pressure-temperature phase diagrams for the involved compounds are related to the two-phase equilibria determined at normal pressure and inferences about the monotropic behavior of the aforementioned orthorhombic phase are discussed.