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Prediction of Thermodynamic Properties of N-Heptane in the Critical Region

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Abstract : In this work, we use the crossover model to formulate a comprehensive fundamental equation of state for the thermodynamic properties for several n-alkanes in the critical region that extends to the classical region. This equation of state is constructed on the basis of comparison of selected measurements of pressure-density-temperature data, isochoric and isobaric heat capacity. The model can be applied in a wide range of temperatures and densities around the critical point for n-heptane. It is found that the developed model represents most of the reliable experimental data accurately.

Keywords : crossover model, critical region, fundamental equation, n-heptane
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