Coexistence Curve for Molecular Liquids in the Vicinity of the Critical Point

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The extended equation of state of substances along the phase interface on the basis of the van der Waals model of a gas of fluctuations of the order parameter has been confirmed by experimental data along the coexistence curve of a wide class of molecular liquids both homogeneous and inhomogeneous under the Earth’s field of gravity. It has been shown that the parameters of the extended equation of the coexistence curve for homogeneous and spatially inhomogeneous molecular liquids are linear functions of the compressibility factor. It has allowed predictions of the parameters of the equation of state for molecular liquids for which experimental investigations are difficult.

References: