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Simple and Easy Development of Equations of State

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Abstract

Equations of State can be viewed as solutions to a first-order partial differential equation that can be solved by the methods of characteristics. The characteristics in this case are isochores that appear to be straight lines. Based on this property of isochore linearity, a simple and very accurate equation of state is developed, which is based on correction terms to the van der Waals equation that depend on the molar volume only

Biography

Abraham (Avi) Marmur is a professor emeritus of chemical engineering at Technion – Israel Institute of Technology. He has worked and published in the field of interfacial phenomena for about forty-five years, has published extensively in this field and related research areas, and has been consulting for major companies. He has also participated in many international conferences and has been active in lecturing in universities and industrial sites in many countries. At technion, professor Marmur received awards for excellence in research and in teaching. In addition, he was an editor of Reviews in Chemical Engineering, and was on the advisory committee of Journal of Colloid and Interface Science and Journal of Adhesion Science and Technology, Advances in Colloid and Interface Science, and Colloids and surfaces A. In addition, he is on the editorial board of several other profession journals.

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