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THERMODYNAMICS

立方型状态方程结合Eyring理论在液体混合物黏度计算中的应用

计伟荣[a], D. .A. .Lempe[b]
[a] College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou 310014, China
[b] Department of Engineering Science, Martin-Luther University of Halle-Wittenberg, D-06099, Halle, Germany

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摘要 Cubic equations of state (EOS) have been combined with the absolute rate theory of Eyring to calculate viscosities of liquid mixtures. A modified Huron Vidal gE-mixing rule is employed in the calculation and in comparison with the van Laar and the Redlich-Kister-type mixing rule. The EOS method gives an accurate correlation of liquid viscosities with an overall average deviation less than 1% for 67 binary systems including aqueous solutions. It is also successful in extrapolating viscosity data over a certain temperature range using parameters obtained from the isotherm at a given temperature and in predicting viscosities of ternary solutions from binary parameters for either polar or associated systems.

关键词 viscosity; equation of state; mixing rule; absolute rate theory;
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**Calculation of viscosities of liquid mixtures using Eyring's theory in combination with cubic equations of state**

JI , Weirong[a], D. , A. , Lempe[b]
[a] College of Chemical Engineering and Materials Science, Zhejiang University of Technology, Hangzhou 310014, China
[b] Department of Engineering Science, Martin-Luther University of Halle-Wittenberg, D-06099, Halle, Germany

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**Key words** viscosity; equation of state; mixing rule; absolute rate theory;

通讯作者:
计伟荣 weirong_ji@zjut.edu.cn
作者个人主页: 计伟荣*; D. A. Lempe[b]

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D.Lempe
Andrzej
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