عنوان مقاله:

Modification of van der Waals Mixture Model By Chemical Theory

محل انتشار:

پنجمین کنگره بین المللی مهندسی شیمی (سال: 1386)

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خلاصه مقاله:

A new modification on van der Waals mixture model (van Laar equations) has been introduced for binary mixtures in which only one component (A) is an associating fluid. In this model, at first, pure fluids are taken to the ideal gas state, where molecular associations broken. Then pure fluids as monomer species are mixed and finally in the last step, mixture converted to real conditions where associations can be formed again. By using chemical theory of association the Gibbs free energy change of mixture due to molecular association is calculated. The presented theory is applied for VLE calculations of 8 highly non-ideal binary mixtures. Results show the modified model has significant improvement than the original model.

کلمات کلیدی:

Association, Chemical theory, van Laar, VLE, binary system

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