

## عنوان مقاله:

Development and Application of an Improved Trebble-Bishnoi Cubic Equation of State by Proposing Proper Alpha Function

## محل انتشار:

هشتمین کنگره ملی مهندسی شیمی ایران (سال: 1382)

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## خلاصه مقاله:

Two generalized temperature and acentric factor dependent functions of alpha and beta, for the Trebble-Bishnoi (TB) cubic equation of state (1987) have been developed. The approach developed in this work makes the alpha and beta functions become a linear function of the acentric factor at a constant reduced temperature, not a fourth or sixth order function as suggested by soave and other researchers. The advantage of a linear function in the acentric factor is obvious in the extrapolation of the alpha and beta functions for heavy hydrocarbons and petroleum fractions (Twu et al., 1995). The generalized alpha and beta functions, when used with the TB cubic equation of state, allows the accurate prediction of the vapor pressure data from the triple point to the critical point for hydrocarbons. The TB cubic equation of state with new alpha and beta functions provides more reliable and accurate vapor pressure prediction than the SRK (soave, 1972) or Peng and Robinson (1976) equations for both light and heavy hydrocarbons.

## کلمات کلیدی:

theory; equation of state; cubic; hydrocarbons

## لینک ثابت مقاله در پایگاه سیویلیکا:

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