عنوان مقاله:

Prediction of alcohols saturated liquid densities using an artificial neural network

محل انتشار:

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خلاصه مقاله:

In this work, the saturated liquid densities of alcohols have been estimated using an artificial neural network (ANN). A total of ۶۲۳ data points of saturated liquid density at several temperatures have been used to train, validate and test the model. A Feed-forward back propagation neural network is proposed at a wide range of temperatures based on their critical temperature, critical pressure and acentric factor. Based on results, the best structure for neural network is tansig transfer function for hidden layer with ۶ neurons in this layer. This study shows that the ANN model represent an excellent alternative for the estimation of the saturated liquid density of alcohols with a good accuracy. A wide comparison between our results and those of obtained from some previous methods shows that this work can provide a simple procedure for prediction the saturated liquid density of different alcohols in a better accord with experimental .data

کلمات کلیدی:

Artificial Neural Network, Saturated liquid density, Alcohols, Transfer function