Calculation of the melting diagram of the binary system *n*-geptadekan – *n*-tetrakozan and its experimental study

© **Alexander A. Shikov, Alexander V. Kolyado,**[1+] and **Ivan K. Garkushin**[2]*
Department of general and inorganic chemistry. Samara state technical university.
Molodogvardejsky St., 244. Samara, 443100. Russia.
Phone: +7 (846) 278-44-77. E-mail: [1] *kolyado@rambler.ru ,* [2] *baschem@samgtu.ru*

_____
*Supervising author; [+]Corresponding author

Abstract

Liquidus of binary system *n*-geptadekan – *n*-tetrakozan was calculated with the equation of Schroeder-Le Chatelier and using the method of UNIFAC. Comparative analysis of the forecasting accuracy for the of the liquidus melting diagram of the *n*-geptadekan – *n*-tetrakozan and the experimental data obtained using low-temperature differential thermal analysis has been carried out. Phase equilibria in the system were described and characteristics of the eutectic were obtained. For the eutectic composition of *n*-geptadekan – *n*-tetrakozan there were experimentally determined the values of enthalpy and entropy of fusion. Eutectic composition of the system can be used as the working body of heat accumulator.