Corrected Abstract:

Abstract:

Densities, viscosities and ultrasonic velocities have been measured for the two ternary mixtures containing morpholine (1) +1,4-dioxane (2) + nitrobenzene (3) and + toluene (3) at 308.15K over the entire range of mole fractions. Thermodynamic parameters like excess volume (VE), deviations in adiabatic compressibility (ΔKs), free length (ΔLF), isothermal compressibility (ΔβT), free volume (ΔVF ), viscosity (Δlnɳ) were calculated and applied to Redlich − Kister polynomial equation to determine the appropriate coefficients. The deviations of the ternary liquid mixtures from their ideal behaviour are determined from the measured and calculated thermodynamic properties. Also an insight in to the molecular structure and possible interactions for the investigated mixtures is attempted.