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Dielectric and physiochemical study of binary mixture of nitrobenzene with toluene 🛒

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This paper presents the study of binary mixture of Nitrobenzene (NB) with Toluene (TOL) for eleven different concentrations at room temperature. The determined Dielectric Constant (ε_0) Density (ρ) and Refractive index (n_D) values of binary mixture are used to calculate the excess properties i.e. Excess Dielectric Constant (ε_0^E), Excess Molar Volume (V_m^E), Excess Refractive Index (n_D^E) and Excess Molar Refraction (R_m^E) of mixture over the entire composition range and fitted to the Redlich-Kister equation. The Kirkwood Correlation Factor (g^{eff}) and other parameters were used to discuss the information about the orientation of dipoles and the solute-solvent interaction of binary mixture at molecular level over the entire range of concentration.

Topics

Dielectric properties, **Optical properties**, **Chemical compounds**

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