عنوان مقاله:

Effect of N4-Type-Schiff base on the solute-solvent interactions of ionic liquids in acetonitrile solutions at 298.15 K

محل انتشار:

همایش منطقه ای شیمی (سال: 1389)

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نویسندگان:

M. khoshalhan - *Department of Chemistry,University of Mohaghegh Ardabili, Ardabil, Iran*

H. Shekaari - *Department of Physical Chemistry,University of Tabriz, Tabriz Iran*

A. Bezaatpour - *Department of Chemistry,University of Mohaghegh Ardabili, Ardabil, Iran*

خلاصه مقاله:

In this work, we present our results on density measurements of 1- alkyl -3- methylimidazolium bromide ([RMIm]Br R = propyl(C3), pentyl(C5), hexyl(C6))+ N4-Type-Schiff base + acetonitrile ternary mixtures at atmospheric pressure. The standard partial molar volumes the studied mixtures have been calculated using these experimental data and used to interpretation of various solute-solvent interactions occurring between components of solution. The experimental density, d, values as function of ionic liquid concentration, m, for mixtures, [RMIm]Br + N4-Type-Schiff base + acetonitrile ternary mixtures at T = 298.15K. The apparent molar volumes, V of [RMIm]Br were calculated from the densities of the solutions using the following equation (فرمول در متن اصلی مقاله): where m is molality of [RMIm]Br in N4-Type-Schiff base+ acetonitrile solutions, d and d are densities of the solutions and pure solvent, respectively, M is molar mass of [RMIm]Br. The standard partial molar volumes of the [RMIm]Br,V 0 (فرمول در متن) were calculated by the least-squares method through the fitting of the following equation [3] The results show that the values of V0 for [RMIm]Br increase with increasing alkyl chain (اصلی مقاله) length of ionic liquids. These results suggest that addition chain length of ionic liquids in MeCN solutions implies that more stronger interaction between solute-solvent (MeCN and [RMIm]Br) and leads to more release of solvent molecules to the bulk.

کلمات کلیدی:

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