

Solvatochromic Study on Binary Solvent Mixtures with Ionic Liquids

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Solvent effects on 2,6-dichloro-4-(2,4,6-triphenyl-pyridinium-1-yl)phenolate [$E_T(33)$ dye] and 7-diethylamino-3,4-benzophenoxazine-2-one (Nile Red) in binary mixtures of organic solvents (acetone, acetonitrile, propylene carbonate, methanol and ethane-1,2-diol) with 1,3-dialkyl imidazolium-based ionic liquids were studied by UV-visible spectroscopy. Highly nonlinear behaviour of mixtures of alcohols and ionic liquids was found. A preferential solvation model was applied to the data obtained on solvatochromic shifts over the entire mixing range. It is fitting the data well for alcohol mixtures and for other solvent mixtures with different ionic liquids.

Key words: Binary Solvent Mixtures; Solvent Effects; Solvatochromism; Pyridinium *N*-Phenolate Betaine Dyes; Nile Red; Ionic Liquids.