

Isothermal Vapor-Liquid Equilibrium Data for the Azeotropic Systems {Di-methyl carbonate (DMC) + methanol} and {2-propanol+ water} with [BMIM][BF₄] at 333.15 K

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Ionic liquids (ILs) are being extensively evaluated as environmentally friendly (or green solvents) alternatives to conventional organic solvents in a variety of industrial processes. The use of ionic liquids in chemistry and electrochemistry has been studied for some decades. Only recently, researchers have focused on the suitability of ILs as selective solvents in the field of separation technology. ILs represent suitable entrainers for the separation of azeotropic systems by means of extractive distillation. In present work, we report vapor-liquid equilibrium (VLE) data at 333.15K for the azeotropic systems {Di-methyl carbonate (DMC) + methanol} and {2-propanol+ water} with [BMIM][BF₄] determined by using headspace gas chromatography (HSGC). The influence of imidazolium-based ILs with respect to their entrainer efficiency in extractive distillation and as an extracting agent in solvent extraction is investigated. The experimental binary VLE data were correlated with using the NRTL and UNIQUAC equations.