Poster Presentation P48

IONIC LIQUIDS AS NOVEL ENVIRONMENT FRIENDLY SOLVENTS FOR ORGANIC SYNTHESIS

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An important component of every organic reaction is the solvent. Most organic reactions have been traditionally carried out in volatile organic solvents which are a major source of air pollution. In addition, many of these solvents are flammable and also pose respiratory hazards. Hence the search for alternative solvents has assumed significant importance. Of the various solvents, ionic liquids seem to be the most promising. The advantages of ionic liquids are their non-flammability and practically zero vapor pressure. The rearrangement of epoxides to carbonyl compounds and the one-pot synthesis of homoallyl ethers from aldehydes have been accomplished in the ionic liquid, 1-butyl-3-methyl imidazolium triflate, using trimethylsilyl triflate, TMSOTf (0.1-1.0 mol %) as the catalyst. The results of these studies will be presented.

$$H_3C^{-N} \xrightarrow{\text{\tiny (1-butyl-3-methyl imidazolium triflate)}} \bigcirc O \xrightarrow{\text{\tiny (1-butyl-3-methyl imidazolium triflate)}} \bigcirc O \xrightarrow{\text{\tiny (1-butyl-3-methyl imidazolium triflate)}}$$