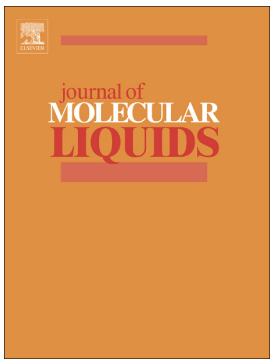

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Synthesis, Characterization and Applications of Some Novel DMAP-based Chiral Ionic Liquids

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Abstract

A convenient and efficient procedure for the synthesis of some novel chiral ionic liquids (CILs) from 4-dimethylaminopyridinium cation has been reported. The synthesis of the CILs includes the treatment of optically active (-)-menthyl ester with 4-dimethylaminopyridine and after that the anion exchange reactions in water. The synthesized ionic salts have been characterized using polarimetry, NMR spectroscopy and EI-MS techniques. The synthesized CIL was used in chiral recognition of Mosher's acid by ^{1}H NMR and also to induce the enantioselectivity in the sodium borohydride reduction of some prochiral ketones.

Keywords: Chiral Ionic Liquids; Asymmetric reduction; Enantiomeric excess; Chirality; Chiral recognition.