

Effect of microwave irradiation on ionic liquid catalyzed transesterification of ethylene carbonate with methanol

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Microwave assisted high speed synthesis gained much attention for driving chemical reactions and selective preparation of chemicals of interest after the first report. It saves the reaction time significantly and improves the yield very often. Ionic liquids are proved to be efficient as catalysts as well as reaction medium for homogeneous catalysis. Dimethyl carbonate (DMC) synthesis by the transesterification of cyclic carbonates with alcohol is one of the important phosgene free processes. In this work we were successful in the coproduction of DMC and ethylene glycol from ethylene carbonate (EC) and methanol with the aid of microwaves and the influence of various reaction parameters such as reaction time, microwave power, different types of ionic liquid, EC to methanol ratio and comparison with conventional method has been studied.