

Microwave assisted synthesis of cyclic carbonate using immobilized ionic liquid on montmorillonite

김동균, 비네시 K.V., 박재룡, 박대원*
부산대학교
(dwpark@pusan.ac.kr*)

Carbon dioxide (CO₂) is a cheap, nontoxic, very useful carbon source which can be used as raw materials to synthesize very useful chemicals. In current study, microwave assisted rapid and selective synthesis of cyclic carbonate from AGE and CO₂ has been established using immobilized of ionic liquid on montmorillonite. The prepared catalysts were characterized by EA, XRD, BET, ¹³C NMR and FT-IR. The immobilized ionic liquids showed good catalytic performance with acceptable recycle ability. Long reaction time, high power and high CO₂ pressure were found to be favorable for high AGE conversion and selectivity. The main attribute of microwave assisted synthesis is the dramatic acceleration of chemical reactions than conventional heating methods.