

Capture of carbon dioxide using 1, 1, 3, 3-tetramethylguanidinium trifluoroacetate ionic liquid

박상욱*, 황병진
부산대학교 응용화학공학부
(swpark@pusan.ac.kr*)

Ionic liquid (IL) of 1,1,3,3-tetramethylguanidinium trifluoroacetate, which was synthesized by the reaction between 1,1,3,3-tetramethylguanidine and trifluoroacetic acid, was used as a catalyst of the reaction between carbon dioxide and glycidyl methacrylate (GMA). Absorption rate of carbon dioxide into GMA solutions containing IL, which was measured in a semi-batch stirred tank with a plane gas-liquid interface at 101.3 kPa, was used to obtain the reaction kinetics from analysis of the mass transfer mechanism accompanied by the elementary reactions based on the film theory.