촉매에 의한 PGE와 이산화탄소의 반응속도론해석

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The system for a synthesis of a five-membered cyclic carbonate by the reaction of phenyl glycidyl ether with carbon dioxide was selected as a gas-liquid heterogeneous system to observe the reaction kinetics such as reaction rate constants of the elementary reactions by using the mass transfer mechanism accompanied by the pseudo-first-order reaction. The elementary reaction rate constants were used to obtain an empirical correlation formula between the elementary reaction rate constants and the solubility parameters of solvents such as toluene, NMP and DMSO, and to get the activation energy of the reaction between carbon dioxide and PGE using catalysts.