

Modeling of Glycerol Carbonate Production from Glycerol and Dimethyl Carbonate in a Slurry Reactor

Vergel Bungay, 송병호*, 이상득¹
군산대학교; ¹KIST
(bhsong@kunsan.ac.kr*)

The reaction between glycerol (GLY) and dimethyl carbonate (DMC) was simulated in a slurry reactor using COMSOL Multiphysics at 70°C. Using 2:1 molar ratio of GLY to DMC, about 70% conversion was predicted in a 90-min run. The model also showed the momentum transport occurring in the reactor as well as the effect of bubbling N₂ gas to provide agitation and as a stripping agent for the removal of the by-product methanol.