

Effect of calcination temperature on the characteristics of MoV oxides prepared via reflux method

Abstract

In this study, MoV mixed oxides with a molar ratio of 10:3 were prepared by reflux method. The samples were subjected to various calcination temperatures in order to investigate the physicochemical properties of the oxide affected by the parameter. Samples were characterised by XRD, TG/DTA, BET surface area, SEM and TPR. By imposing various calcination temperatures, phase evolutions were observed. However, these changes do not significantly affect the morphology, surface area, particle size and reducibility of the oxide. Still, the best calcination temperature can be chosen to arrive at the effective catalyst necessary for the desired catalytic reaction.

Keyword: Mo-V-O catalysts, reflux, selective oxidation of propane, TPR