CHAPTER V
CONCLUSION AND SUGGESTION

The *n*-hexane conversion was studied over metal/mordenite catalysts. Some metals (Pt, Pd, Ga and Zn) were loaded over mordenite support by ion exchange and impregnation methods. The Pt-containing catalyst prepared by impregnation method gave 47% selectivity to isomerized products, which is higher than that of the Pd-containing catalyst. In the case of bimetallic catalysts, 1%Pt1%Ga/HM catalyst showed high isomerization selectivity at about 68.1% and high conversion at 93%. Both Ga and Zn containing catalysts improved the isomerization activity but Ga-containing catalysts were more efficient than the one with Zn. The study of potassium salts has shown the improvement of aromatization products. The order of aromatization selectivity of mixture is $MgO > ZrO_2 > Al_2O_3$ due to basicity of catalyst. MCM-41 mixed with 1%Pt1%Ga/HM improved aromatization reaction by shape selectivity of pore opening. Bent was a good clay mixture that mixed with 1%Pt1%Ga/HM compared with hydrotalcite.

Suggestion for the future work

From all aforementioned results and discussion, the future work for the improvement of the system should be focused on the following:

1. Change the substrate types from C_6 to C_4-C_7 alkane in order to generate various product types.
2. Change the carrier gas from N_2 to H_2-mixed gas in order to reduce coke formation.