

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Partial hydrogenation of polyunsaturated FAMES of soybean biodiesel has been investigated on Pd/CX and Pd/SiO₂ catalysts. It was found that these catalysts provided good partial hydrogenation activity, resulting in an improvement of oxidative stability. Moreover, the pore size of the support had a significant effect on the activity of the catalyst and cis-monounsaturated composition. Although, silica support showed high activity on the oxidation stability improvement, Pd on the carbon xerogels support exhibited better cold flow property.

Recommendations

1. Other characterization techniques should be employed to confirm the remaining of silica in carbon xerogels and acidity of material.