

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

A new method of catalyst fixation design was challenged to enhance the activity of Pt in PEMFC by using supramolecule compounds embedded with the catalyst at the interface. To accomplish the goal, the possibility of platinum ion inclusion in the host channel was studied. The work clarified the inclusion compound of benzoxazine dimer, *N,N*-bis(2-hydroxy-3,5-dimethylbenzyl)methylamine with PtCl₄. The work extended to the preparation of *N*-(2-hydroxy-3-methoxy-5-allylbenzyl)-*N*-(2'-hydroxy-3',5'-dimethylbenzyl)cyclohexylamine which consists of allyl group for radical polymerization. The structural characterization clarified the successful monomer preparation. The future work should extend to the polymerization based on radical polymerization of this allyl group. In addition, the study on Pt inclusion in the host channel should also be carried out.