



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Heterocyclic derivative of polymeric chain was prepared by using aza-methylene phenol as a spacer and adenine as a proton transferring part. The many reaction conditions insisted that the product as designed in each step was formed as confirmed from the FTIR, ^1H NMR, EA, and MS. The present work does not only give an important information about the reaction of functionalized heterocyclic molecules but also is a useful guideline to develop polymer for proton transferring in the future.

The present work was originally focused on a novel strategy to control the structure material for polymer electrolyte membrane. The polymerization and preparation of membrane is the extension of the present project (Part I and Part II). The polymer may be obtained from the polymerization adenine derivatives of aza-methylene phenol with diamine (Scheme II). The polyamide obtained should be prepared as a membrane by casting method. The basic properties of the membranes, for example, proton conductivity, gas permeability, thermal stability, mechanical properties and other related specific properties should be considered.

Scheme II

