



## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

Carbon xerogel membranes were successfully synthesized from bisphenol-A, formaldehyde and aniline. CX-800 showed the highest  $\text{CO}_2/\text{CH}_4$  selectivity when compared with CX-900 since the rearrangement of structure and the agglomeration of 3-D network particles causing lower surface area and larger average pore size CX-A, obtained from the carbonization of carbon xerogel under carbon dioxide atmosphere at  $900\text{ }^\circ\text{C}$  for 3 hours, showed the highest  $\text{CH}_4/\text{CO}_2$  selectivity when compared with polybenzoxazine xerogel due to the oxygen-containing functional groups on the carbon surface.

We should study the influence of difference type of a precursor especially amine derivative(Aromatic difunctional amine) as in order to adjust the physical properties such as pore size, surface area and so on.