



CHAPTER V

CONCLUSIONS

In this study, CNFs and CNTs can be synthesized by catalytic decomposition of CO/H₂ over Fe/Al₂O₃ catalyst. The effects of reaction temperature, Fe loading and fraction of H₂ in feeding gas have been studied. For the reaction running from 500-900°C, the selectivity for CNTs increases if the reaction temperature is higher, while CNFs shows high yield at lower temperatures. It shows that the low order carbon grows at lower temperatures. Higher amount of iron loading catalysts gave larger-diameter CNTs and higher carbon yield. Furthermore, by increasing the fraction of hydrogen in the feed gas, the amount of deposited carbon and CNTs' diameter tends to increase.