



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Fe- and Cr-doped TNTs are successfully prepared by hydrothermal treatment. The absorption profiles of Fe and Cr doped TNTs are shifted to the visible light region. The nanotubes are hollow and open-ended, and their length is more than hundreds of nanometers. Most of the nanotubes keep their tubular texture with anatase phase after the calcination process. Pure TNTs gave the best photocatalytic activity, comparing to M-loaded TNTs. When compared to the metal-loaded TNTs, the pure TNTs resulted in photocatalytic activity while the best optimum dopant amount of Fe and Cr found are at 2 and 15%, respectively. However, Cr-TNT calcined at 500 °C possessed the best absorption in dark.

The future work should be focused on the improvement of the photocatalytic activity of TNTs using other active metals loaded TNTs.