

CHAPTER VI

SUGGESTIONS FOR FUTURE WORK

The future work is recommended as followed:

1. Although the preparation of TiO_2 photocatalyst by sol-gel method possessed small crystallite size, it showed low phase transition temperature which may restrict its application to only moderate temperature. Therefore, the recommended future work is to find the way to bring it to higher temperature.
2. The presence of hydrolysis catalyst (HCl and HNO_3) in the sol-gel process was found to be corrosive, particularly to metallic oven and hood. Less corrosive recipe should be considered.
3. Since the efficiency of V-doped TiO_2 was found to be less active than pure TiO_2 , it would be very interesting to study more specific mechanism of the function of vanadium doping.
4. Although the immobilization of TiO_2 in the form of thin film provided an advantage over TiO_2 powder in terms of improving the recovery of the solid after the reaction, the photoactivities of these coatings were found to be lower than that of the powder. This drawback can be improved by increasing TiO_2 loading on the substrates.