

## ACKNOWLEDGEMENTS

First and foremost, I would like to express my deepest gratitude to my advisor, Asst. Prof. Dr. Ring-Yi Lai, and my co-advisor, Assoc. Prof. Dr. Anyanee Kamkaew, for their invaluable guidance, patience, and help throughout this journey. They always had time for their student to discuss the results and provide the solution for solving the problems. Without them, my work would not have been as successful as it is now. I am also profoundly thankful to my co-author, Asst. Prof. Dr. Onnicha Khaikate who synthesized the substrates for this project. Even though we worked separately, she always gave positive energy and advised me to solve problems. I am appreciative to Prof. Dr. James R. Ketudat-Cairns for suggesting the approach of kinetic constant determination. I would like to acknowledge Assoc. Prof. Dr. Narin Lawan for contributing to the thesis-examining committee. To RYL and AK lab members, I would like to thank you for your help, for creating a positive atmosphere in the lab, and for teaching me about chemical techniques and how to use various instruments. Additionally, I would want to express my appreciation to Dr. Utumporn Ngivprom, whose kindness and expertise of research technique were invaluable to me as a newbie in the field. I'm grateful to all of my closest friends for boosting my spirits on terrible days. For the scholarship I received during my master's program, I would like to thank the Development and Promotion of Science and Technology Talents Project (DPST, Thailand). I also want to express my gratitude to all the instructors at Suranaree University of Technology's (SUT) School of Chemistry for teaching me about life and study. Finally, I want to thank my partner for his understanding, patience, and unwavering support, as well as my family for their unconditional support and love.

Tawanya Kamthong