Acknowledgement

I take this opportunity to express my deep sense of gratitude and sincere thanks to Dr. D. C. Deba, Professor, Department of Chemistry, Sambati University, for his relentless and inspiring guidance throughout the period of my work. I am indebted to him for his enormous patience with me. He has been an enormous source of inspiration, motivation and encouragement.

I offer my humble thanks to Dr. B. G. Goswami, Professor and Head of the Department of Chemistry, Sambati University for allowing me to work in the Department of Chemistry and also for providing all the necessary facilities which made it possible to carry on this work.

I offer my deep sense of gratitude to Prof. S. K. Bhattacharjee, Prof. K. G. Bhattacharyya and Prof. P. J. Das of Department of Chemistry, Sambati University, for being source of encouragement and motivation.

I also take this opportunity to thank Dr. D. K. Das and Dr. P. Phukan, Senior Lecturers in the Department of Chemistry, Sambati University, for their kind support and encouragement.

I also take this opportunity to offer my profound respect and regards to all my teachers who are also faculty members of the Department of Chemistry, Sambati University.

I take this opportunity to express my gratitude to all my Colleagues at the Department of Chemistry, B. Borooah College for their support and constant encouragement.

I would like to acknowledge the helping attitude of all my lab mates, in particular, Maumita, Pankaj, Sukanya, Kripen da, Biswajit da and Hari Sankar Kakati da. Without the help of my lab mates this work would not have been possible.

I also gratefully acknowledge the help rendered by the laboratory and office staff in the Department of Chemistry, Sambati University.

I am indebted to Rajesh Chakraborty of Department of Chemistry, Sambati University, and Dr. Rupam J. Sarma and Ballau Moni Bara of IIT, Sambati, for their selfless support and immense help. Furthermore, it has always been an exhilarating experience to exchange views with Rupam.

Further, I would like to record my deep sense of appreciation to all my students, in particular, Sanjeev, Ranjit, Bipul, Mofidul, Mayur, Rup, Debajit, Rupam, Hariyoti, Tridib, Dip, and Rupam for their help in various stages of this work.

Special acknowledgement goes to CSIR for a fellowship in the initial two years of this work. Their financial support propelled me to start this work.

I am obliged to my mother, father, brother and sister for their constant support and affectionate encouragement.

Finally, I would like to offer my profound regard and gratitude to Mr. S. K. Borooah, Retired Lecturer, Department of Chemistry, B. Borooah College, for teaching me chemistry and imbidding in me the self belief and confidence.

Diganta Choudhury