ACKNOWLEDGEMENTS

First and foremost, I would like to express my sincere gratitude and respect to my research supervisor, Prof. N. Rajmuhon Singh, for his invaluable guidance and constant encouragement during my research work. His benevolent heart and generosity has always been my source of inspiration. Thanks are also due to all my respected teachers of the Department of Chemistry for their precious suggestions, guidance and constant support. I am thankful to Dr. Raghumani Singh, BARC, Mumbai for his ideas and suggestions during the course of my research work.

I sincerely thank my parents, Shri K. Nabakumar Sharma and Smt. K. Gangarani Devi for their never ending love, care and support. Without their encouragement, I would not have been able to carry out my research work with ease and sound mind. I am also thankful to my elder brother, K. Rahul Dev Sharma, elder sister, K. Meenakshi Sharma and younger sister, K. Priyanka Sharma for their continuous emotional support throughout my studies. Further, I thank my husband, Mr. Thokchom Prasanta Singh for his careful and critical reading of the thesis; his views and comments have helped me immensely in preparing some of my research papers.

I also owe my gratitude to Naorem Shanta Singh, Physics Department, Nagaland University and S. Dhiren for their cooperation during my research work. Finally, I would like to express my gratefulness to all the non-teaching staff of the department, my seniors, U. Ibotomba, Romeo L., M. Niraj, Gangam P., Dr. Ch. Sumitra, Dr. Ch. Victory Devi, Dr. H. Bimola Devi, Dr. N. Ranjana Devi, Reena Okram, for their help and cooperation; my friends and juniors, L. Priyobarta, Ningthoujam Premananda, N. Goutam Singh, Th. Taru Taru and N. Premananda Singh for their cooperation and friendship.

Date: 28/12/2013
Place: Imphal, Manipur

(K. Gayatri Sharma)
This thesis is dedicated to my loving daughter Jayshree Thokchom