

Acknowledgement

At this outset, I want to convey my heart-felt gratitude to my supervisors, Dr. P. Bandyopadhyay and Professor P.K. Mandal, whose constant encouragement and supervision helped me to pursue my research work during last five years.

I take this opportunity to offer my deep sense of gratitude to all the teachers of our department for their valuable suggestion.

I sincerely acknowledge Council of Scientific and Industrial Research (CSIR), India for providing me fellowships (JRF for the first two years and SRF onwards) during this work. Their financial support for research expenses is also gratefully acknowledged.

A large debt of gratitude is owed to Dr. A. Choudhury, Colorado State University, USA, whose valuable suggestions have helped me in various ways throughout the course of this work.

I also express my sincere thanks to Prof. A. Ramanan, IIT, Delhi for X-ray crystallographic analysis. Thanks are also due to Mr. S. Upreti, Mr. A. Agarwalla and Mr. V. Bagchi of the same institute for their helpful assistance and kind cooperation.

I must not forget to thank and acknowledge Dr. S. Burman, IISc, Bangalore for helping me in number of ways. I also like to express my sincere gratitude to Prof. S. Pal, Miss. A. Sarkar, Mr. A. Mukhopadhyay and Mr. S. Das, University of Hyderabad for their valuable suggestions regarding X-ray crystallography.

I wish to thank SAP for providing our department with DSC, which has benefited me a lot.

I am especially grateful to Dr. R. Bhawmick, St. Joseph's College, Darjeeling and Dr. D.N. Neogi for their unfailing encouragement and helpful assistance from the very beginning of my research work.

I also like to thank Mr. S. Sengupta, Mr. S.S. Chhetri, Mr. A. Sarkar, Mr. A. Saha, Mrs. S. Sengupta and Mr. S. Pal for their valuable help and kind cooperation.

I must not forget to thank and acknowledge Mr. S. Halder, Department of Physics, University of North Bengal and Mrs. S. Biswas for their kind cooperation and helpful assistance.

Special thanks are due to my present lab mates Mr. A. N. Biswas, Mrs. S. Acharya and Mr. U. S. Agarwalla for always being there whenever I sought their help.

I wish to thank Dr. A. Choudhury and all co-research workers of our department for their assistance and encouragement.

I am thankful to all the staffs of Chemistry Department & Physics Department for their friendly cooperation.

Facilities obtained from SAIF (CDRI, Lucknow) regarding CHN analysis and FAB MASS is gratefully acknowledged.

Finally I like to express my sincere gratitude towards my parents, sisters, Miss. T. Das, Miss. D. Das and Miss. S. Das for their love, encouragements and keeping me aloof of the family responsibilities. Encouragement and good wishes from relatives also deserve mention. Carrying out my research work would have been quite impossible without the non-professional but nonetheless essential participation of them.

Purak Das,

(Purak Das)