

ACKNOWLEDGEMENTS

It is a great pleasure to have the opportunity for expressing my deep sense of gratitude to my guide, Prof. S. Basu, Professor Department of Chemistry, The University of Burdwan and Dr. P. Chattopadhyay, Reader, Department of Chemistry, The University of Burdwan, who in this maiden venture fascinated my way to completion.

I am thankful to Prof. Mike G.B Drew, Department of Chemistry, Reading University, Reading RG 66AD, Berks, England. I express my deep sense of indebtedness to Dr. Abhijit Saha of DAE-UGC, Salt Lake, Kolkata for his kind help to avail of γ -radiation source, and also thanks Dr. Asutosh Ghosh, C.U. for thermal analysis.

I am grateful to The University of Burdwan, for giving me the permission of Ph.D work and the Department of Chemistry for providing me the necessary Laboratory facilities.

I wish to express my respect to all faculty members of this Department Prof. S. Laskar, Head, Department of Chemistry, B.U. and other faculty members of Chemistry Department, Prof. M. Banerjee, Prof. P. Ghoshal, Prof. A. K. Mukherjee, Prof. B. K. Ghosh and Dr. B. Mondal for their help and moral support through out the work. I also indebted to my teachers, Prof. A. K. Das, K.U.; Prof. S. Bagchi, IISc.; Prof. K. Bhattacharya, C.U.; and Prof. C. R. Sinha, J.U.

I would like to express my hearties thanks to my colleagues Dr. Pulak Kumar Dhara, Dr. Sadhan Pramanik, Mr Biswjit Das, Mr. Sandipan Sarkar, Mr. Sourav De, Mr. Animesh Patra, Dr. Samir Maji, Dr. Rajashri Ghosh, Dr. Madhusudan Mondal and all other research scholar for their instant co-operation and pleasant association which directly or indirectly helped me in both academic and non academic affairs.

I gratefully acknowledge the authority of Institute of Chhandra High School, Harinkhola, Hooghly and the authority of Santipur College, Santipur, Nadia, for their cooperation in doing my research work.

I am also thankful to my teacher Mr. Pabitra Ranjan Adak and I thank my father Sri Jagabandhu Dhara (Manik) and my uncle Sri Ratan Chandra Dhara for their encouragement and most effectively my wife Mrs. Bithika Dhara (Santra) for her

co-operation and great sacrifice for my research work. I also thank my little child Ms. Sneha Dhara for her great charming.

I consider this to be the best opportunity to express my heart felt gratitude to my Mother Smt. Sarala Dhara who, inspite of taking all the pains has struggled in my work throughout. I also thank my grandfather Mr. Sufal Chandra Dhara who helps me from my childhood and also in my research work.

Quintessance of life force was the memories of my only loving sister Kumary Kamala Dhara (Rinku), who help me any way by her heart. I still believe that she is somewhere here to watch my moments of joy.

Date: 11-11-2008.

Place: Department of Chemistry

The Universty of Burdwan.

Burdwan 713 104

Sanjoy Dhara .
Sanjoy Dhara.