

ACKNOWLEDGEMENTS

When years of earnest research finally translate into a written thesis, it is very easy to take all the credit and pat oneself on the back for thesis accomplished work. The truth remains, however, that no work of such magnitude can be achieved without a whole network of support system available to research scholar. I consider myself both fortunate and blessed to have been associated with people who were very helpful. Although words alone are not adequate, they are all I have to acknowledge to express my deep gratitude to all the people who help me during the research work. This thesis could not have been possible brought to a successful culmination without the blessing of Lord Shiva and Bajarang Bali.

First and foremost I offer my heartiest thanks and sincerest gratitude to my supervisor, Dr. Sundaram Singh, Department of chemistry, Indian institute of technology (BHU), Varanasi and my co-supervisor prof. Vandana Srivastava, Department of chemistry, Indian institute of technology (BHU), Varanasi for providing me an opportunity to work under their generative and positive supervision.

I would like to express profound gratitude to Prof R. B. Rastogi, Head, and Prof. M. A. Quraishi, Former Head, Department of Chemistry, Indian institute of technology (BHU), Varanasi, for providing me the laboratory and departmental facilities during my research work. I am also thankful to all my teachers in the Department of chemistry who helped me in many ways.

My sincere thanks to all departmental colleagues and friends Deepak, Prakash, Ashish, Arvind, Digvijay, Vinay, dileep, Madhu, Rajeev, Rakesh, Alka and Somaiah for their kind cooperation and friendly environment during the entire course of research.

Childhood friends are always special so I would like to express my sincere thanks to Ratnendra Bajpai and Aniruddha Dixit for their valuable support.

The realization of this investigation could be possible, only due to the constant inspiration, continuous encouragement, love and blessing to my parents, Shri Murli Dhar Bajpai and smt. Asha Bajpai. Their Love, affection, warmth and

optimism kept me in fine fettle during the years of research. I am really grateful to my sister Mrs. Shweta Tiwary and brothers Mr. Saumitra Bajpai and Siddharth Bajpai for their moral support and care during the research period. I have no worlds for my wife Mrs. Anjali Mishra Bajpai for her priceless support and care during my research work.

I am indebted to UGC- New Delhi and IIT (BHU) for providing the research fellowship during tenure of this work.

At last but not the least, I thank to large number of my well wishers whose names I may have failed to mention here unintentionally.

(SHIVAM BAJPAI)