I express my deep sense of gratitude to my revered teacher and research guide, Dr. K. P. Dubey, M.Sc., D.Phil., Reader in Inorganic Chemistry, Department of Chemistry, Kashmir University, for his constant supervision, guidance and encouragement during the course of present research. I would also like to acknowledge a special debt to late Prof. C. N. Kachru, then Professor and Head of the Department of Chemistry, University of Kashmir, for providing me the necessary facilities. My thanks are also due to Professor Asif-uz-Zaman, M.Sc., D.Phil., the present Head of the Chemistry Department, University of Kashmir, for the encouragement and valuable suggestions given to me for the completion of this work. I am also indebted to Dr. H. L. Girdhar, Reader, Department of Chemistry, for his sincere help during the course of this study.

The financial support (Junior and Senior Fellowships) granted to me by the Council of Scientific and Industrial Research (New Delhi) is gratefully acknowledged.

I remember well the interest, advices and helps of my research colleagues and staff members during compilation of this work. I would particularly thank to Dr. R. P. Matta, Mr. B. L. Wazir, Mr. M. K. Puri, Mr. G. N. Malik and Khurshid Malik for their help. I am thankful to Mr. Mohammad Sidiq Dar for typing this thesis.
It won't be out of place to mention that but for the blessings and cooperation of my parents, this work would have taken longer to complete. Finally, I confess that it would give me great satisfaction if I can ever repay even in part my parents and particularly my sister and brothers, who have shown extra patience in bearing with me during my student days and specially during the period of research and preparation of this thesis.

( Miss Shamah Parveen Beg)