

ACKNOWLEDGEMENTS

It gives me immense pleasure to acknowledge my great sense of indebtedness to my considerate teacher and guide Dr. A. U. Malik, Ph.D.(Alig), Ph.D.(Liverpool), D.Sc.(Alig), Reader in Materials Science, Z. H. College of Engg. & Tech., A. M. U., Aligarh. It was only his learned guidance and supervision that made the work possible

My most sincere thanks are due to Prof. Mohsin Qureshi, Ph.D. (Louisiana), Chairman, Chemistry Section, Z. H. College of Engg. & Tech., A.M.U., Aligarh, for providing research facilities. He has always been kind to me during the entire course of this work.

I am highly obliged to my research colleagues especially, Dr. Sherif Ahmad, for their constant encouragement and help. I am grateful to my elder brothers, Mr. Ansar Ahmad and Mr. Afzal Ahmad who have been constant source of inspiration and hope throughout. I am thankful to all my well wishers who always boosted my morale for completion of this work.

Thanks are also due to Coal India Limited for generous supply of coal samples, and to the Council of Scientific and Industrial Research, New Delhi, for providing financial assistance.

Mr. Ziaul Hasan deserves mention for neatly typing and bringing the manuscript of the thesis in the present form.

*S. Ahmad*  
( SULTAN AHMAD ).