I thank Almighty Allah for having showered His choicest blessings upon me and also giving me more than I have ever wished for. I pray for His mercifulness and blessings always.

The feeling of satisfaction that I have finally accomplished my work is impossible to describe in words. Working with this thesis has been very challenging but also a very rewarding experience. This master thesis would not have been possible to complete without motivation, support and assistance of a number of people. I would like to take this opportunity to express my sincere gratitude to all those who made this effort possible.

I would first like to express the pride that I have in being a part of this prestigious institution, Aligarh Muslim University. This institution has given me knowledge, education and insight. It has also been greatly instrumental in making me what I am today as an individual both professionally and personally.

I would take this opportunity to express my heartfelt regard to my revered supervisor Dr. Rifaqat Ali Khan Rao, for accepting me as his research student and entrusting me to do justice with this topic. It has indeed been an honour and a privilege for me to work under his able and accomplished guidance. His vision and foresightedness made my thesis work most systematic and simple. I am short of words to express my gratitude for his supervision, immense knowledge and enthusiasm in directing my study. He has always been there to push me to work to the best of my potential and ability. It is
difficult not to overstate his role for guiding and at the same time inspiring and inculcating in me the urge to work beyond the set conventions in a disciplined environment.

I owe my deepest thankfulness to Professor Dr. Ali Mohommad, Chairman, Dept of Applied chemistry for his cooperation and providing a stimulating environment in the department for research work. I am equally thankful to all the Faculty Members, Department of Applied Chemistry for their valued support and encouragement.

I am indebted to my parents Mr. Mohd Ikram and Mrs. Zenaat Kausar for making me the person I am today. Their upbringing and guidance has inculcated in me the mental toughness and intellect to have pursued studies at the highest level. Their love, support and encouragement has made me felt most protected against all odds of life. I would like to say thanks to all my family members. I will always be indebted to my husband Mohammad Akram Khan for standing by me always.

Finally I would like to thank my colleagues for their ideas and support.

Shaista Ikram