This thesis is end of my journey in obtaining Ph D. This thesis would not complete without the support and encouragement of numerous people including my well wishers, my friends, colleagues and various institutions. At the end of my thesis I would like to thank all those people who contributed in many ways to success of this study. It is pleasant task to express my thanks to all of them.

First of all I would like to thank to my guide Dr. S. D. Rathod, Dept Of Chemistry, Millind College of Science, Aurangabad. This work would not have been possible without their guidance, support and encouragement.

Then I would like to express my gratitude towards Dr. D. R. Mane, Registrar Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, for providing necessary resources to accomplish my research work.

This work could not have been possible without continued interest and stimulation provided by Dr. Ramkrishna H. Kadam, Asst. Professor, Dept. Of Physics, Shrikrishna College Gunjoti, Tq. Omarga, Dist. Osmanabad. His ideas and encouragement paved the direction to the work reported here. I shall remain grateful to him forever. I am also thankful to Dr. Sagar Shirsith, Vivekanand College, Aurangabad, for their support throughout the work.

I would like to thank Millind College of Science, Aurangabad and Shrikrishna College Gunjoti, Tq. Omarga, Dist Osmanabad. For providing me well established research laboratory. I sincerely acknowledge Dr Babasaheb Ambedkar Marathwada University Aurangabad, IIT Pawai, Savitribai Phule University of Pune, for examining different properties of my newly prepared samples.

I shall fail in my duties if I do not acknowledge the help and encouragement my colleagues Swati Patil, Annapure sir and many others.

I am also thankful the teaching and nonteaching staff members of both Milind college of Science Aurangabad and Shrikrishna Mahavidyalaya, Gunjoti for their constant support during the Ph.D. work.
Last but not least I would like to pay high regards to my family, mostly my father Panditrao Patil, and my husband Vaibhav Kajale, for his support all the time in all phases of my research work. My sister Rajani Deshmukh is always a stress buster for me and also all my family members uncles, aunts and cousins and all my friends having solid support for me. Besides this several people have knowingly and unknowingly helped me in the successful completion of this thesis.

Miss. Padmaja Patil