Acknowledgement

I would like to take this opportunity to thank those people who spent their time and shared their knowledge for helping me to complete my thesis with the best possible result. Apart from the efforts of me, the success of any work depends largely on the encouragement and guidelines of many others. First and foremost, I would like to express my sincere gratitude to my guide Prof. P. W. Khirade, Professor & Head, Department of Physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for the unflinching encouragement and guidelines of my research work, for his patience, motivation, enthusiasm and immense knowledge. I would like to extend thanks to Mrs. Khirade for her hospitality and support during this period.

At the same time, I convey special acknowledgement to Dr. S. C. Mehrotra, former Professor and Head, Department of Computer Science and Information Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, for his broad knowledge of research in dielectric properties of liquids.

I would like to express my humble gratitude to Dr. S. S. Patil for his valuable guidance for research work, where I needed. I would like to express my deep and sincere thank to Dr. B. R. Sharma, Dr. P. B. Undre and Dr. G. M. Dharne for great discussion. I always remember pleasant moment of great discussion related to research work with them.

I greatly appreciate and wish to thank Dr. R. G. Kanitkar (former lecturer) and Mr. R. M. Borade, Govt. College of arts and science, Aurangabad for their support in various ways during this work.

It’s my fortune to gratefully acknowledge the support of some special individuals. Words fail me to express my appreciation to Shri Sudhakar Kathar, Shri R. B. Jaiwal, Shri Bhart Mahadik and their family for their support, generous care and the homely feeling at Aurangabad. They were always beside me during the happy and hard moments to push and motivate me.
I would like heartily thanks to many other people who have taught me physics. Specially, Prof. M. N. Patil, Balwant College, Vita, who changed my attitude and think positively for learning the science.

I would like to thank Prof. K. M. Jadhav, Prof. M. D. Shirsat, Dr. V. V. Nawarkhele, Dr. R. P. Sharma, Dr. S. S. Deshpande, Dr. B. N. Dole, Dr. Smt. A. G. Murugkar, and Dr. Smt. P. P. Pawar for their kind suggestions whenever it was required.

I am extremely indebted to my many research colleagues for providing a stimulating and joyful environment in which to learn, work and grow. I am especially grateful to Dr. S. P. Kamble, Dr. A. L. Tidar, Ms. A. P. Maharolkar, Mr. S. S. Dubal, Dr. Shafi Sayyad and Dr. P. T. Sonwane. Many new friends are made during research work. I would like to extend my thanks to Mr. Vishwanath Mote, Mr. Vishnu Huse, Mr. Pramod Gulgule and many other who help to complete my research work.

Where would I be without my family? My parents deserve special thanks for their inseparable support and prayers. Words fail me to express my appreciation to my father Shivaji Sudake, first person who put the fundament my learning character, showing me the joy of intellectual pursuit ever since I was a child. He was always gives freedom to learn without any stress. My mother, Kamal Sudake is the one who sincerely raised me with her caring and gently love. Brother Suresh, uncle Bhagwan Sudake and other family members thanks for being supportive and caring siblings.

Finally, I would like to thank everybody who was important to the successful realization of thesis, as well as expressing my apology that I could not mention personally one by one.