ACKNOWLEDGEMENT

This thesis is the end of my long journey in obtaining my degree in Ferroelectrics. I have not traveled in a vacuum in this journey. There are several people without whom this thesis would not have been at all possible and whom I need to thank: I believe no words I could write which could fully encompass the amount of gratitude and respect me have for Prof. (Dr) R. Nath and Prof. (Dr) Jasbir S. Hundal. For their easy-going attitude yet thorough professionalism, I thank Prof. Nath and Prof. Hundal, not only for his supervision and scientific expertise provided during this period, but also for imparting wisdom that has inspired me to be a lifelong learner. Their perpetual energy and enthusiasm in research had motivated all his advisees, including me. I appreciate their many useful comments on this work, but even more so, I appreciate their advice, comments, and willingness to discuss any questions or ideas that I have had. I am also very much thankful to Dr. Tara Kaura and Mrs. Hundal for their blessings. I would also like to show my genuine appreciation to the other members of my PhD committee who monitored my work and took effort in reading and providing me with valuable comments on earlier presentations of this work: Prof. (Dr) J.K Quamra, Prof. (Dr) K.K Raina and Prof. Anil Kumar. I thank you all. Sincere thanks to late Dr. S. K. Barathwal for the design and development of the spray setup. I also would like to thank my colleagues and lab mates for their support and positive input, in particular Dr. Koppole Chandra Sekhar and Dr. Arvind Nautiyal whose cheerful attitude gave me lots of encouragement. Eventually, I deeply thank my family, friends and a number of relatives for their support throughout the time. My deepest gratitude goes to my parents, who taught me the value of hard work by their own example. They never complained in spite of all the hardships in his life. I have no suitable word that can fully describe their everlasting love to me. I thank all my teachers from whom I learned many things. It is due to their contribution and affection that makes me to reach at this level. Last, but not least, I thank my wife Poonam, who always encouraged me even in the deepest of turbulent time. Without her support and motivation, this work would have been incomplete. In conclusion, it
is gratefully acknowledged the financial support from the **Department of Science and Technology (DST)** and **All India Council of Technical Education (AICTE), New Delhi** for providing the travel grant to attend the Materials Science and Technology (international conference) at Pittsburg (PA), USA during 2009 and at Houston (Tx), USA during 2010 respectively. It is a manifestly inadequate acknowledgement, but I am extremely grateful to these funding agencies for their support and consideration.

*(Navneet Dabra)*