

ACKNOWLEDGEMENTS

This thesis owes its existence to the help, support and inspiration of several people. It is a pleasant opportunity for me to express my gratitude for all of them.

First and above all, I praise God, the almighty for providing me this opportunity and granting me the capability to proceed successfully.

*I would like to express my special appreciation and thanks to my guide **Prof. B. M. Trivedi** for her valuable and inspiring guidance throughout my research work. There are no adequate words to explain her keen interest, immense patience, kind advice, sustained encouragement, constant help and thought provoking discussions that I had with her throughout my research work. She always gave me freedom for my Research work. Every time when I came up with some new idea she always appreciated me a lot. She made me more confident and responsible.*

I would like to express my gratitude to Prof. N. D. Kulkarni, Head, Department of Chemistry, Faculty of Science, The M. S. University of Baroda, for providing me the necessary research and infrastructure facilities available in the department.

I wish to express my gratefulness to Prof. B. V. Kamath, former Head, Department of Chemistry, Faculty of Science, The M. S. University of Baroda, for his kind support during my research work and also for providing adequate research facilities.

I am thankful to Prof. Mazumdar, Department of Chemical Sciences, TIFR Mumbai for EPR analysis and Prof. Parimal Paul, CSMCRI Bhavnagar for his support during chiral GCMS and CD spectral analysis.

I would like to acknowledge Mr. Jatin Seth, Zyduş Cadila, Ahmedabad for recording NMR spectra and CHN analysis.

I am thankful to Prof. A. V. Bedekar for providing specific optical rotation of some of my research samples.

I sincerely thank all teaching and non-teaching staff members of Department of Chemistry for their valuable and timely help throughout my research work.

I acknowledge University Grant Commission (UGC) and Council of Scientific and Industrial Research (CSIR), Government of India for providing me with the necessary funding and fellowship.

I am sincerely thankful to my seniors, Dr. Angshuman Pal, Dr. Sachin Joshi, Dr. Harish Talele, Dr. Sunil Shah and Dr. Nikunj Bhatt. I appreciate the kind of help, co-operation and encouragement given to me by them.

I wish to thank my friends and research colleagues Dr. Nilesh Patel, Kanu Kataria, Ronak Bhatt, Rahul Bhatt, Prabaharan Dr. Tirth Thakar, Dr. Mahendrasinh Zala, Dr. Mayur Valodkar, , Ankita Solanki, Harsha Patel, Dr. Jigar N. Soni, Harnish Soni, Krupa Patel, Vishwanath, Dr. Soyeb Pathan, Nilesh Narkhede, Dr. Komal Vyas, Dr. Shilpi Kushwaha,

Dr. Ketan patel, Mehul Sadhu. Jigar Y. Soni, Mohini Sadhu, Ageetha. I had very useful discussions with them on both academic and non-academic matters and I had enjoyable time.

I am lucky to have Akshay Joshi and Vihang Bhandari as my best friends. I appreciate their inspiration, encouragement and motivation given to me throughout my research tenure and till date.

*It is impossible to mention everybody who had directly or indirectly supported me during this work however there are those whose spiritual support is even more important. I feel a deep sense of gratitude for my mother (**Bharatiben**), father (**Bharatbhai**), elder brother (**Jogen**), Bhabhi (**Roma**), my sweet little nephew **Darsh** and my very first childhood friend, my late sister (**Vaibhavi**), who formed part of my vision and taught me good things that really matter in life. I am also very much grateful to all my family members for their endless love, constant inspiration and encouragement.*

*I also would like to thank my better half **Khushbu** for her support during this work.*

Shardul B. Bhatt