ACKNOWLEDGEMENTS

It is my greatest pleasure to express my gratitude towards the people who helped me in many ways and assisted me to reach at this stage. First, I take this opportunity to express my deep sense of gratitude towards my research supervisor Prof. A. Venkataraman, whose inspiration, encouragement, moral support and guidance during the course of this work has helped me to reach this stage. He is the person who initially excited me and brought me to the field of nanoscience and nanotechnology. He helped me to understand novel viewpoints and concepts in basic science as well as in nanoscience and nanobiotechnological research. He has made great efforts to introduce me to some of the leading experts in the research field and encouraged me to interact with them. His constant urge for knowledge, constructive criticism, hard work and patience will always remain a source of inspiration for me.

I am grateful to Chairman, Prof. M. V. N. Ambika Prasad, for his moral support, encouragement and for providing facilities to do this work. I also express indebtedness to Prof. R. L. Raibagkar and entire faculty of the department as well as non-teaching staff of Department of Materials Science, Gulbarga University, Gulbarga, for their help in academics and encouragement during my study.

I am grateful to Dr. Kamala Jayanthi, IIHR, Bangalore, Karnataka, India, for fruitful guidance during my stay at IIHR, Bangalore. She provided me facilities to perform Bioassay, Fluorescence, DNA, Protein nanoparticles interactions Studies.

I thank, Dr. Balal Pest Control Institute Bangalore, Karnataka, India. For his help in providing insect pest Helicoverpa armigera and I also thank, Prof. G.U. Kulkarni, Dr.Salvi Rajan and Dr. Basabavraj S., JNCSAR for providing FESEM and AFM facility.
My special thanks to my beloved seniors Drs. Arun Kumar Lagshetty, Vijayanand H, Govindraj, Vijay Hiremath, Balaji Sawle, Mahesh Bedre, H. M. P. Naveen Kumar, Raghunandan Deshpande, Swarupa Rani, Sridhar Pande, Sindhu Mulimani, in the department who were very kind and supportive throughout my research work.

I am extremely thankful to my friends Dr. Prakash Patange, Dr. Ravindra Aurade, Nishant Junnerkar, Rajnikant Raiyani, Bhaskar Badiger, Nagbasavanna Guragol, Jakeer Hussain, Chakradhar B., Shivlingayya M. and Dr. Shivanand for their friendly co-operation and encouragement.

I am very much thankful to my labmates Mr. Ravishankar Bhat, Tayyab Ali, Venugopal Joshi Venkatvishwanath, Smt. Parvati, Smt. Laxmidevi, and other research scholars of the department for their encouragement.

My Special thanks to Smt. Swati A. Venkataraman for encouragement and moral support throughout my research carrier which developed a great level of confidence in me.

I am indebted to my Parents, Smt. Jijabai Saware and Sri. Sheshrao Saware and my Uncle Sri. Wamanrao Saware, and Aunty Smt. Paragbai, Smt. Parvatibai, my elder brother Sri. Kondiram Saware, Sri. Kishor Saware and younger brother Sri. Kalidas Saware for their constant support. I shall be failing in my duties if I do not mention the sacrifices and forbearance of my wife Smt. Shubhangi Saware and my sisters Smt. Chaya bhosale, Smt. Supriya Kadam, Smt. Shailaja Jadhav and Smt. Saroja Saware for their moral support and inspiration during the course of research work.
I am grateful to my father-in-law Sri. Shivajirao Jadhav, Mother-in-law Smt. Anita Jadhav and Kum. Pooja, Kum. Laxmi and Mr. Balraj Jadhav for their constant encouragement and motivation.

I thank UGC Innovative Programme in Materials Chemistry, Gulbarga University, Gulbarga, for providing facilities.

Lastly, I thank everyone who helped me directly or indirectly during the course of my work and my apologies to all those who have helped me but are not acknowledged.

KANTRAO SAWARE