

## **DECLARATION**

I declare that the thesis entitled "**POLYDENTATE LIGANDS AND TRANSITION METAL COMPLEXES: PHOTOPHYSICS AND CATALYSIS**" has been prepared by me under the guidance of Dr. P. Bandyopadhyay, Associate Professor, Department of Chemistry, University of North Bengal & Dr. A. N. Biswas, Assistant Professor, Department of Chemistry, Siliguri College. No part of this thesis has formed the basis for the award of any degree or fellowship previously.

**ANAND PARIYAR,**  
Department of Chemistry,  
University of North Bengal,  
Darjeeling: 734013,  
West Bengal, India

DATE: 07<sup>th</sup> June 2013.

## CERTIFICATE

We certify that Mr. ANAND PARIYAR has prepared the thesis entitled **'POLYDENTATE LIGANDS AND TRANSITION METAL COMPLEXES: PHOTOPHYSICS AND CATALYSIS'** for the award of Ph. D. degree of the University of North Bengal, under our guidance. He has carried out the work at the Department of Chemistry, University of North Bengal.



**Dr. P. BANDYOPADHYAY**  
(Supervisor)  
Department of Chemistry  
University of North Bengal  
Raja Rammohunpur, Dt. Darjeeling  
West Bengal, 734013  
India



**Dr. A. N. BISWAS**  
(Co-supervisor)  
Department of Chemistry  
Siliguri College  
Siliguri, Dt. Darjeeling  
West Bengal, 734001  
India

DATE: 07<sup>th</sup> June, 2013.

## PREFACE

The work in this thesis entitled “POLYDENTATE LIGANDS AND TRANSITION METAL COMPLEXES: PHOTOPHYSICS AND CATALYSIS” was initiated in 2008 under the supervision of Dr. P. BANDYOPADHYAY and Dr. A. N. BISWAS in the Department of Chemistry, University of North Bengal. This research was realized with financial support from CSIR, UGC and NBU.

The work is an attempt to extend our understanding of metal–ligand interaction. It’s an effort to understand the relationship between a metal and a ligand, their interaction, dynamics and their reactivity.

I was highly inspired by my listening and interacting with distinguished experts and scientists during the course of my research work through participation in several meets and seminars across the country. I was even fortunate enough to publish the works in the thesis in International Journals of repute.

In keeping with general practice of reporting scientific observation, due acknowledgement has been made whenever the work described was based on the finding of other investigators. I must take the responsibility of any unintentional oversights and errors, which might have crept in spite of precautions.

I hope that I will be given more challenges in my life so that the knowledge that I have earned during my work can be put into action in the future.

## ACKNOWLEDGEMENT

At the outset, I would like to express my deepest respect and love to my parents Smt. Shova Pariyar and Shri. Adhir Pariyar for their support and encouragement throughout my life. Thank you for believing in me more than I sometimes do myself.

I express my most sincere gratitude to my supervisors, Dr. P. Bandyopadhyay, Department of Chemistry, University of North Bengal and Dr. A. N. Biswas, Department of Chemistry, Siliguri College, Siliguri. I highly acknowledge their constant guidance, valuable suggestions, inspiration and constructive criticism throughout my research period. I am deeply indebted for their keen interest, strong motivation, constant encouragement and sympathetic considerations. Without their loving care, meticulous guidance and priceless supervision, the formulation of my work associated with my thesis in its present form could not have been possible. Thank you for endowing me excellent laboratory training and exercise. Their constant appreciation of my work was a source of inspiration and motivation to me.

I thank Dr. S. K. Sarkar, Centre for High Energy & Cosmic Ray, NBU for schooling me the analytical skill and the methods to solve any problem. He has been a mentor throughout my research.

The thesis would not been possible without scientific support from Dr. S. Pal, University of Hyderabad, Dr. D. Bandyopadhyay, IIT Delhi, Dr. R. N. Mukherjee, IIT Kanpur, Dr. M. Ray, IIT Guwahati, Dr. S. Barman, NISER Bhubaneswar and Dr. A. Choudhury, Missouri S & T, USA. The research exposure that I received in their laboratories or through their expertise has enriched my scientific aptitude.

I express my profound sense of gratitude to all my respected Teachers in the Department of Chemistry, University of North Bengal for their helpful assistance and continual inspiration. I am thankful to all the non-teaching staff of my Department for their cooperation and help.

My special thanks go to my past and present labmates Dr. A. Sarkar, Dr. Purak Das, Dr. Suvra Acharya, Dr. Satyadeep Singh Chhetri, Mr. Uday. S. Agarwalla, Mrs. Suranjana Bose, Ms. Ambika Kejriwal, Ms. Amritaa Mitra, Ms. Rituparna Dhar and Mr.

Kanak Roy for their valuable assistance and cooperation during my research work.

The inspiration, encouragement and whole-hearted cooperation that I received from my friends, is most elegantly acknowledged. Just to name a few, I would like to thank Mr. J. Debgupta, Mr. Shibaji Basak, Dr. Amit Singh, Mr. Raju Subba, Mr. Dhiraj Brahman, Ms. Rajani Dewan and Mr. Bivek Tamang. Their selfless support and belief made me see this day. I owe you all a lot.

I am constantly aware of what a huge debt I owe to the sources of the information required for my research work: the numerous books, monographs, articles, computer website, etc. I put on record some measure of my gratitude to those whose references I have cited in this thesis.

The financial support to our laboratory from DST and CSIR, which let me avail uninterrupted access to GC, HPLC, UV-visible spectrophotometer, CV, and ADF software, is highly acknowledged.

I take this opportunity to acknowledge SAIF-CDRI, Lucknow, AIRF-JNU and SAIF- NEHU, Shillong for providing paid instrumental facilities.

Finally, I would like to record my thankfulness to UGC (UGC-JRF), CSIR (SRF) and NBU (State Fellowship) for providing financial aid to continue my research work.

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