

THIS IS THE TITLE OF THE THESIS

By

CANDIDATE NAME

Enrolment No

National Institute of Science Education and Research, Bhubaneswar

A thesis submitted to the

*Board of Studies in Chemical Sciences/ Engineering Sciences/ Medical
& Health Sciences Life Sciences/ Mathematical Sciences/ Physical Sciences
Applied Systems Analysis*

(as applicable)

In partial fulfillment of requirements

for the Degree of

DOCTOR OF PHILOSOPHY

of

HOMI BHABHA NATIONAL INSTITUTE



Month, year; for ex. February, 2020

Homi Bhaba National Institute

Recommendations of the Viva Voce Committee

As members of the Viva Voce Committee, we certify that we have read the dissertation prepared by <Candidate Name> entitled < " Thesis Title " > and recommend that it may be accepted as fulfilling the thesis requirement for the award of Degree of Doctor of Philosophy.

Chairman - Name & Signature with date

Guide / Convener - Name & Signature with date

Co-guide - Name & Signature with date (if any)

Examiner - Name & Signature with date

Member 1 - Name & Signature with date

Member 2 - Name & Signature with date

Member 3 - Name & Signature with date

Final approval and acceptance of this thesis is contingent upon the candidate's submission of the final copies of the thesis to HBNI.

I/We hereby certify that I/we have read this thesis prepared under my/our direction and recommend that it may be accepted as fulfilling the thesis requirement.

Date :

Place :

Signature

Co-guide (if any)

Signature

Guide

STATEMENT BY AUTHOR

This dissertation has been submitted in partial fulfillment of requirements for an advanced degree at Homi Bhabha National Institute (HBNI) and is deposited in the Library to be made available to borrowers under rules of the HBNI.

Brief quotations from this dissertation are allowable without special permission, provided that accurate acknowledgement of source is made. Requests for permission for extended quotation from or reproduction of this manuscript in whole or in part may be granted by the Competent Authority of HBNI when in his or her judgment the proposed use of the material is in the interests of scholarship. In all other instances, however, permission must be obtained from the author.

Name & Signature of the Student

DECLARATION

I hereby declare that I am the sole author of this thesis in partial fulfillment of the requirements for a postgraduate degree from National Institute of Science Education and Research (NISER). I authorize NISER to lend this thesis to other institutions or individuals for the purpose of scholarly research.

Name & Signature of the Student

List of Publications arising from the thesis

Journal

1. "Title", <All authors in the same order as appeared in the paper>, Journal, **Year**,
Vol., starting page-ending page.

2.

Chapters in books and lectures notes

1.

2.

Conferences

1.

2.

Others

1.

Name & Signature of the Student

DEDICATIONS

(Optional)

Maximum up to one Page Write up, Times New Roman, font 12, Double Spacing

ACKNOWLEDGEMENTS

(Optional)

Maximum up to one Page Write up, Times New Roman, font 12, Double Spacing

ABSTRACT

Contents

Summary	1
List of Figures	2
List of Tables	3
Chapter 1 Introduction	4
1.1 Inserting figures	4
Chapter 2 Methods	6
2.1 Chemistry equations and diagrams	6
Chapter 3 Results and Discussion	8
Chapter 4 Summary and Conclusions	9
References	10
References	13
Chapter A Appendix (Optional)	14

NOTE:

- Page numbering: Continuous
- Text Font Size (for all chapters): Times New Roman, 12, Double Spacing
- References: Sequence as appear in text with uniform format as given in the List of Publications.
- Printing should be done mostly on both sides of a sheet.
- It should be paperback binding. Please use white colour for cover pages of the thesis.

Author :

Subhankar Mishra

School of Computer Sciences

NISER , Bhubaneswar

Odisha - 752050

You may connect with me smishra@niser.ac.in

Comment this page once you are done with reading the notes.

Summary

(Minimum one page and maximum two pages on key findings of the research described in the thesis. Should not provide chapter wise descriptions as done in Synopsis)

List of Figures

1.1	A nice plot	4
1.2	A nice plot	5

List of Tables

Chapter 1

Introduction

You may insert figures

1.1 Inserting figures

Refer to https://www.overleaf.com/learn/latex/Inserting_Images

You may insert a *png* image Figure 1.1 using this.

```
\begin{figure}[h]
\centering
\includegraphics[width=0.25\textwidth]{images/chap1/mathematica.png}
\caption{A nice plot}
\label{fig:plotpng}
\end{figure}
```

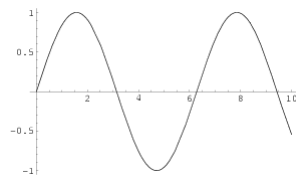


Figure 1.1: A nice plot

You may insert a *eps* image Figure 1.2 using this.

```
\begin{figure}[h]
\centering
\includegraphics[width=0.25\textwidth]{images/chap1/mathematica.eps}
```

```
\caption{A nice plot}
```

```
\label{fig:plotpng}
```

```
\end{figure}
```

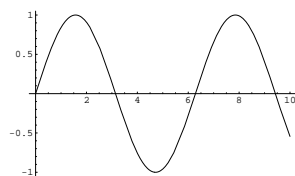


Figure 1.2: A nice plot

Chapter 2

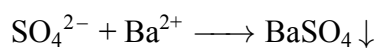
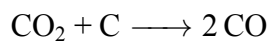
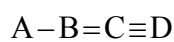
Methods

2.1 Chemistry equations and diagrams

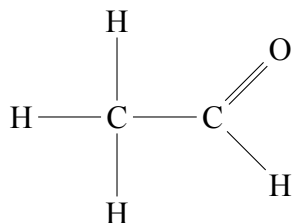
Refer to https://www.overleaf.com/learn/latex/Chemistry_formulae

Packages used are

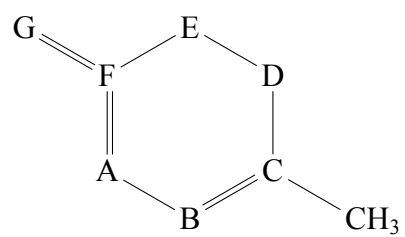
- `\usepackage[version=4]{mhchem}` For Formulae You may insert chemical equations using this:



- `\usepackage{chemfig}` For diagrams Branched molecule



Branched ring



Chapter 3

Results and Discussion

Chapter 4

Summary and Conclusions

References are each numbered, ordered sequentially as they appear in the text, methods summary, tables, boxes, figure legends, etc.

When cited in the text, reference numbers are **superscript**, not in brackets unless they are likely to be confused with a superscript number.

Creating the Reference List

For journal articles, list initials first for all authors, separated by a space: A. B. Opus, B. C. Hobbs. Do not use "and." Use *et al.* (italics) for more than five authors. Titles of cited articles should not be included (see samples). Journal titles are in italics; volume numbers follow, in boldface. Do not place a comma before the volume number or before any parentheses. You may give the full inclusive pages of the article. Journal years are in parentheses: (1996). End each listing with a period. Do not use *ibid.* or *op. cit.*

For whole books, monographs, memos, or reports, the style for author or editor names is as above; for edited books, insert "Ed.," or "Eds.," before the title. Italicize the book title and use initial caps. After the title, provide (in parentheses) the publisher name, publisher location, edition number (if any), and year. If these are unavailable, or if the work is unpublished, please provide all information needed for a reader to locate the work; this may include a URL or a Web or FTP address. For unpublished proceedings or symposia, supply the title of meeting, location, inclusive dates, and sponsoring organization. There is no need to supply the total page count. If the book is part of a series, indicate this after the title (e.g., vol. 23 of *Springer Series in Molecular Biology*).

For chapters in edited books, the style is as above, except that "in" appears before the title, and the names of the editors appear after the title. After the information in parentheses, provide the complete page number range (or chapter number) of the cited material.

Style Examples

Journals

1. N. Tang, *Atmos. Environ.* **14**, 819-834 (1980). [one author]
2. W. R. Harvey, S. Nedergaard, *Proc. Natl. Acad. Sci. U.S.A.* **51**, 731-735 (1964). [two or more authors]
3. F. H. Chaffee, Jr., *Sci. Am.* **243**, 60-68 (November 1980).

Books

1. M. Lister, *Fundamentals of Operating Systems* (Springer-Verlag, New York, ed. 3, 1984), pp. 7-11. [third edition]

2. J. B. Carroll, Ed., *Language, Thought and Reality, Selected Writings of Benjamin Lee Whorf* (MIT Press, Cambridge, MA, 1956).
3. R. Davis, J. King, in *Machine Intelligence*, E. Acock, D. Michie, Eds. (Wiley, New York, 1976), vol. 8, chap. 3. [use short form of publisher name, not "John Wiley & Sons"]
4. D. Curtis et al., in *Clinical Neurology of Development*, B. Walters, Ed. (Oxford Univ. Press, New York, 1983), pp. 60-73. [use "Univ."]
5. *Principles and Procedures for Evaluating the Toxicity of Household Substances* (National Academy of Sciences, Washington, DC, 1977). [organization as author and publisher]

Technical reports

1. G. B. Shaw, "Practical uses of litmus paper in Möbius strips" (Tech. Rep. CUCS-29-82, Columbia Univ., New York, 1982).
2. F. Press, "A report on the computational needs for physics" (National Science Foundation, Washington, DC, 1981). [unpublished or access by title]
3. "Assessment of the carcinogenicity and mutagenicity of chemicals," WHO Tech. Rep. Ser. No. 556 (1974). [no author]
4. U.S. Environmental Protection Agency, *The Environmental Protection Agency's White Paper on Bt Plant-Pesticide Resistance Management* (EPA Publication 739-S-98-001, 1998; www.epa.gov/pesticides/biopesticides/whiteo_bt.pdf). [the easiest access to this source is by Internet]

Paper presented at a meeting (not published)

1. M. Konishi, paper presented at the 14th Annual Meeting of the Society for Neuroscience, Anaheim, CA, 10 October 1984. [sponsoring organization should be mentioned if it is not part of the meeting name]

Theses and personal communications

1. B. Smith, thesis, Georgetown University (1973).
2. G. Reuter, personal communication. [Must be accompanied with a letter of permission and must not be used to support a central claim, result, or conclusion.]

To use bib files please use the following codes : See the latex file "reference.tex"
As you cite them, the references will pile up.

- Book [2]
- Book [5]
- Book [3]
- Article [1]
- Proceeding [4]

References

- [1] Donald E. Knuth. Literate programming. *The Computer Journal*, 27(2):97–111, 1984.
- [2] Donald E. Knuth. *The T_EX Book*. Addison-Wesley Professional, 1986.
- [3] Leslie Lamport. *L^AT_EX: a Document Preparation System*. Addison Wesley, Massachusetts, 2 edition, 1994.
- [4] Michael Lesk and Brian Kernighan. Computer typesetting of technical journals on UNIX. In *Proceedings of American Federation of Information Processing Societies: 1977 National Computer Conference*, pages 879–888, Dallas, Texas, 1977.
- [5] Frank Mittelbach, Michel Gossens, Johannes Braams, David Carlisle, and Chris Rowley. *The L^AT_EX Companion*. Addison-Wesley Professional, 2 edition, 2004.

Appendix A

(Optional)