

UNIVERSITY OF PAVIA

MASTER'S DEGREE THESIS

Dr. Bianchi's Thesis Template Explained

– directly on his template –

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A thesis submitted in fulfillment of the requirements for the

Master's Degree in Chemistry

in the

Department of Chemistry
Organic Chemistry Section

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Abstract

Give thanks to the mother Gaia, give thanks to the father sun; give thanks to the plants in the garden where the mother and father are one.

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1 Introduction

- 1.1 Background
- 1.2 Research aims and motivation
- 1.3 Objectives and scope
- 1.4 Thesis statement and hypothesis
- 1.5 Overview and structure of thesis

2 Literature Review

2.1 Overview

2.2 Methodologies for analysing the effect of land cover change

2.2.1 Approaches

2.2.2 Datasets and models

2.3 Observational findings and modelling results on changes in wind resource following land cover change

2.3.1 Recently observed decreases in near-surface wind speed ("global terrestrial stilling")

2.3.2 Conversion of agricultural land into urban

Rate of urbanisation and size of cities

Urban heating effects

Anomalies and the "urban wind island effect"

2.3.3 Conversion of natural forest into agricultural land

Roughness length changes

Teleconnections

2.3.4 Vegetation-atmosphere interactions and their possible mechanisms

Secondary organic aerosols

Convective cloud development

Surface and latent heat fluxes

Surface temperature and pressure

3 Methodology

3.1 Approach

3.1.1 Focus regions

3.1.2 Statistical metrics

3.2 Reproducibility

3.3 Datasets

3.4 Software

4 Results

- 4.1 Central America
- 4.2 South America
- 4.3 Western Australia

5 Discussion

- 5.1 Interpretation of results
- 5.2 Comparison with literature
- 5.3 Significance
- 5.4 Limitations and possible improvements
- 5.5 Future directions for research

6 Conclusions

A **Supplementary information and graphs**

A.1 Description of analysis functions

B Data, codebook and files

Probably, The Introduction

A cool citation is always an extra-point.

– Someone Important

Chapter Contents

A.1	Description of analysis functions	13
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A Little Overview

This template has been directly made by modifying the common \LaTeX 's `book` document-class. You can find the related code, with comments, in the `preamble.sty` file. The default font-family is `Liunx Libertine/Biolinum` in which the second one – Sans variant – is set as default, while math environments like this

$$x(t) = A \sin(\omega t + \phi)$$

use the Serif variant: nobody forbids you from using different fonts (like the ones already included in the preamble or completely different).

The Color Accent

The document possesses a color accent called '`reddy`' which is used for chapter titles, footnotes numbers,¹ bullets in lists, and others. You can recall it to color-up your stuff with `\color{reddy}` and modifying its RGB color definition in the preamble file also.

The `preamble.sty` File

The preamble file contains adjustments in margins, tables, headers and footers, and a lot of other stuff: the best piece of advice I can give you is... [go check-it-out!](#) Don't worry: it is all commented. The print format is on twosided pages, but it can be set as onside – but remember to correct headers and footers code lines!

¹Like this one.

Setting the Bibliography

For references management, I hardly recommend the usage of Bib \LaTeX instead of the more common Bib \TeX . In fact, Bib \LaTeX has got a lot less bugs and it is more easy and intuitive to compile. Furthermore, it only needs the classical .bib file in your working directory and it is also able to cite something directly as a footnote like this.² Notice that the citation is also reported in the bibliography section and that the default citation style set is *American Chemical Society*, but you can obviously change it, according to your needs, at the very beginning of this Thesis.tex document code.

Automatically Compile Bib \LaTeX through biber

Many \LaTeX editors do not have a specific shortcut for `biber`, the main Bib \LaTeX compiler. You can manually add a shortcut with the command

```
biber %
```

or, if you use \TeX Maker like me, you can go to `Options` → `Configure Texmaker` → `Commands` and put it in the Bib(la)tex box instead of `bibtex %.aux` (**Figure B.1**).

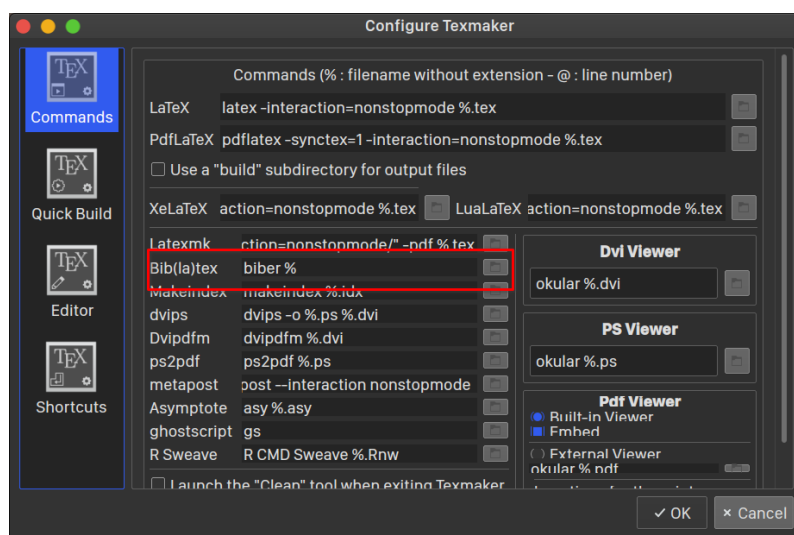


Figure B.1: \TeX Maker's dialogue window to change Bib(la)tex command for compiling a Bib \LaTeX bibliography.

²Wang2021.

Credits

This template was made by Dr. Alessio Bianchi (University of Pavia, Department of Chemistry, Organic Chemistry Section). For support, please contact me → [via mail](#) ← and go check-out my homepage at bianchiunipv.wordpress.com to find other interesting stuff.

I hope this will be useful and comfortable in usage! And... break a leg for you degree ;)

Empty Chapter

A cool citation is always an extra-point.
– Someone Important

Chapter Contents

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Hint

Just copy-paste this block for new chapters.

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Acknowledgements

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