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Degree of
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CALIFORNIA INSTITUTE OF TECHNOLOGY
Pasadena, California

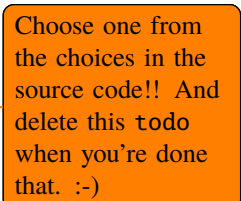
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ABSTRACT

[This abstract must provide a succinct and informative condensation of your work. Candidates are welcome to prepare a lengthier abstract for inclusion in the dissertation, and provide a shorter one in the CaltechTHESIS record.]

PUBLISHED CONTENT AND CONTRIBUTIONS

[Include a bibliography of published articles or other material that are included as part of the thesis. Describe your role with the each article and its contents. Citations must include DOIs or publisher URLs if available electronically.]

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Cahn, J. K. B., A. Baumschlager, S. Brinkmann-Chen, and F. H. Arnold (2016). “Mutations in adenine-binding pockets enhance catalytic properties of NAD (P) H-dependent enzymes”. In: *Protein Engineering Design and Selection* 19.1, pp. 31–38. DOI: [10.1093/protein/gzv057](https://doi.org/10.1093/protein/gzv057).

J.K.B.C participated in the conception of the project, solved and analyzed the crystal structures, prepared the data, and participated in the writing of the manuscript.

Cahn, J. K. B., S. Brinkmann-Chen, T. Spatzal, J. A. Wiig, A. R. Buller, O. Einsle, Y. Hu, M. W. Ribbe, and Arnold F. H. (2015). “Cofactor specificity motifs and the induced fit mechanism in class I ketol-acid reductoisomerases”. In: *Biochemical Journal* 468.3, pp. 475–484. DOI: [10.1042/BJ20150183](https://doi.org/10.1042/BJ20150183).

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NOMENCLATURE

Asteroid. A very small planet ranging from 1,000 km to less than one km in diameter. Asteroids are found commonly around other larger planets.

Galaxy. A system of stars independent from all other systems.

Chapter 1

INTRODUCTION

Start off all chapters with `chapter`. `\extrachapter` will give you an unnumbered chapter that's added to the Table of Contents.

Here's an example of a citation (Goresky and MacPherson, 1981). Here's another (Parusiński and Pragacz, 1998). These will appear in the big bibliography at the end of the thesis.

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1.1 This is a Section

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Caltech

Figure 1.1: This is a figure

This is a subsection

Area	Count
North	100
South	200
East	80
West	140

Table 1.1: This is a table

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Here's an endnote.¹

1.2 This is Another Section

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Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

Chapter 2

THIS IS THE SECOND CHAPTER

If you'd like to have separate bibliographies at the end of each chapter, put a `refsection` around the material of each chapter, then cite as usual – e.g. (Goresky and MacPherson, 1981; Fulton, 1983). Then do a `\printbibliography` just before the `refsection` ends.

References

- Fulton, William (1983). “Introduction to intersection theory in algebraic geometry”.
In: *Regional Conference Series in Mathematics*. 54.
- Goresky, Mark and Robert MacPherson (1981). “On the topology of complex algebraic maps”. In: *Algebraic Geometry Proceedings, La Rábida, Lecture Notes in Mathematics*. 961.

Chapter 3

THIS IS THE THIRD CHAPTER

Cahn, J. K. B., S. Brinkmann-Chen, T. Spatzal, J. A. Wiig, A. R. Buller, O. Einsle, Y. Hu, M. W. Ribbe, and Arnold F. H. (2015). “Cofactor specificity motifs and the induced fit mechanism in class I ketol-acid reductoisomerases”. In: *Biochemical Journal* 468.3, pp. 475–484. DOI: 10.1042/BJ20150183.

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Chapter 4

THIS IS THE FOURTH CHAPTER

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THIS IS THE FIFTH CHAPTER

Chapter 6

THIS IS THE SIXTH CHAPTER

Chapter 7

THIS IS THE SEVENTH CHAPTER

Chapter 8

THIS IS THE EIGHTH CHAPTER

BIBLIOGRAPHY

- Goresky, Mark and Robert MacPherson (1981). “On the topology of complex algebraic maps”. In: *Algebraic Geometry Proceedings, La Rábida, Lecture Notes in Mathematics*. 961.
- Parusiński, Adam and Piotr Pragacz (1998). “Characteristic classes of hypersurfaces and characteristic cycles”. preprint.

Appendix A

QUESTIONNAIRE

Appendix B

CONSENT FORM

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¹Endnotes are notes that you can use to explain text in a document.

POCKET MATERIAL: MAP OF CASE STUDY SOLAR
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