Óscar's wonderful end of master's thesis

Óscar Iglesias González March 2, 2020

Óscar's Room Editions

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Colophon

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The harmony of the world is made manifest in Form and Number, and the heart and soul and all the poetry of Natural Philosophy are embodied in the concept of mathematical beauty.

– D'Arcy Wentworth Thompson

Preface

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1.1 Introduction to marine toxins and saxitoxin (STX)

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1.2 The work up until now

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1.3 Pushing onwards

Computational methods and specifications

2

2.1 General techniques

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

2.2 Software

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

2.3 Hardware

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The sunflower molecules

3

3.1 Introduction and origin

Despite most people complain at the sight of a book full of equations, mathematics is an important part of many books. Here, we shall illustrate some of the possibilities. We believe that theorems, definitions, remarks and examples should be emphasised with a shaded background; however, the colour should not be to heavy on the eyes, so we have chosen a sort of light yellow.¹

3.2 Study of gometry

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3.2 Study of gometry 5
3.3 Study of aromaticity 6
Nucleus-Independent Chemical
Shift (NICS) 6
AICD 6
3.4 Spectroscopic characterization 6
Vibrational spectroscopy 6
Electronic spectroscopy 6 1: The boxes are all of the same colour here
because we did not want our document to
look like Harlequin

3.3 Study of aromaticity

Nucleus-Independent Chemical Shift (NICS)

The basics of NICS

A custom solution for non-planar molecules

AICD

The basics of AICD

Application and comparison of results

3.4 Spectroscopic characterization

Vibrational spectroscopy

Raman spectra

Decomposition of key modes

VEDA

Electronic spectroscopy

UV spectra

Sunflower-saxitoxin complexes

4.1	Study	of	ads	orp	tion
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Sampling and optimization

Maxwell-Boltzmann statistics

Basis Set Superposition Error correction

4.2 Study of non-covalent interactions

4.3 Study of UV behavior

General UV spectroscopy

Charge transfer analysis

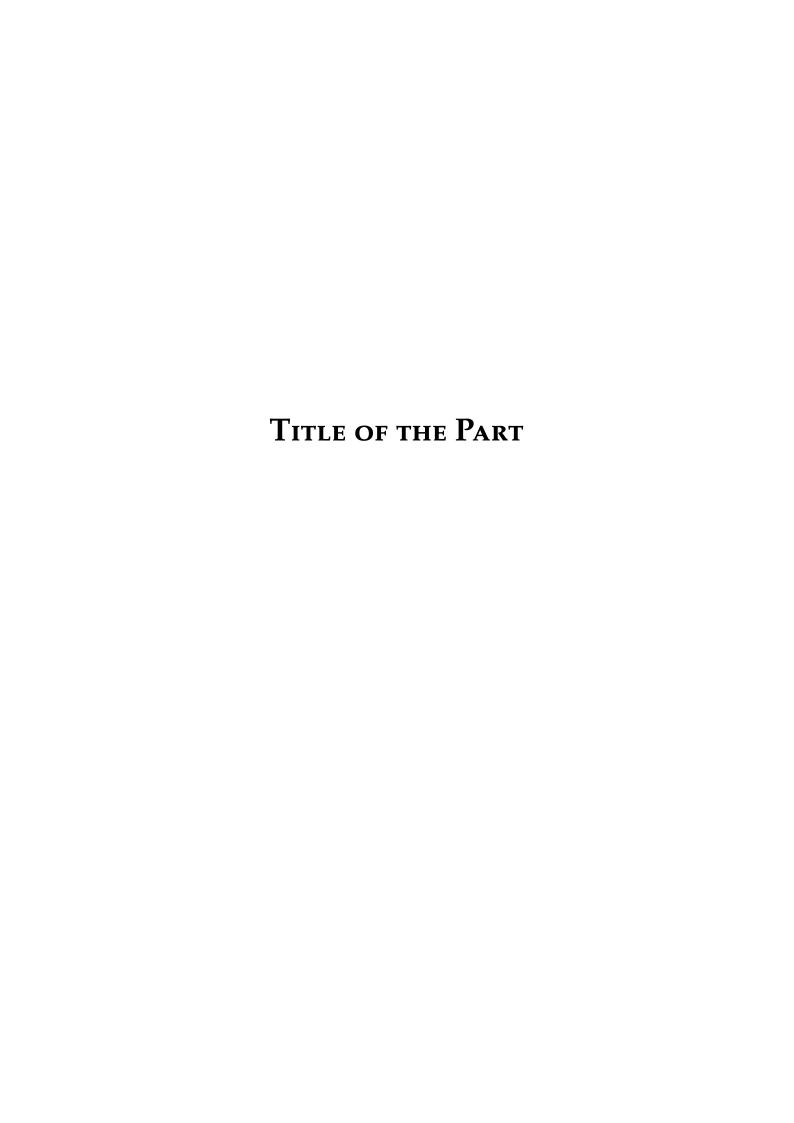
4.4 Resonance Raman

Generation and comparison of spectra

Combined resonance graphs

Final selection

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spectra	7
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Final coloction	7





Some more blindtext

A

Greek Letters with Pronounciation

Character	Name	Character	Name
α	alpha <i>AL-fuh</i>	ν	nu NEW
β	beta BAY-tuh	ξ , Ξ	xi KSIGH
γ, Γ	gamma GAM-muh	o	omicron OM-uh-CRON
δ , Δ	delta DEL-tuh	π , Π	pi <i>PIE</i>
ϵ	epsilon EP-suh-lon	ρ	rho ROW
ζ	zeta ZAY-tuh	σ, Σ	sigma SIG-muh
η	eta AY-tuh	τ	tau TOW (as in cow)
θ,Θ	theta THAY-tuh	v, Υ	upsilon OOP-suh-LON
ι	iota eye-OH-tuh	ϕ , Φ	phi FEE, or FI (as in hi)
κ	kappa <i>KAP-uh</i>	X	chi KI (as in hi)
λ , Λ	lambda <i>LAM-duh</i>	ψ , Ψ	psi SIGH, or PSIGH
μ	mu MEW	ω, Ω	omega oh-MAY-guh

Capitals shown are the ones that differ from Roman capitals.