

# CHEMISTRY (FOURTH YEAR)

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## Mandy Chimie

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### Summary Of Qualifications

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- 4th year BSc Chemistry (Honours)
- Seeking work term: 5
- Available for 8 or 12 months
- Organized, motivated and goal orientated
- WHMIS Certified

### Education

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Sep 2005 – Present *BSc. Honours Chemistry (Co-op)* University of Victoria (Expect to graduate in 2011)

### Awards

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2009	<i>Science Undergraduate Research Award</i>
2009	<i>NSERC Undergraduate Research Award</i>
2008	<i>Chemistry Co-op Report Prize</i>
2008	<i>Chemistry Students' Society 2002 Alumni Award</i>
2008	<i>The Hugh and Lilian Salmond Scholarships in Chemistry</i>
2008	<i>Ranked in top 10% in the Faculty of Science</i>
2006	<i>Ranked in top 10% in the Faculty of Science</i>
2005	<i>UVic President's Entrance Scholarship</i>

### Skills And Experience

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#### Synthetic Skills

- Able to work under inert atmospheres using Schlenk and glove box techniques
- Can effectively devise and perform multi-step syntheses to prepare complex products
- Capable of using distillation, recrystallization, sublimation and column chromatography to purify products

#### Instrumentation

- Experienced with structure elucidation and confirmation through NMR (1H, 13C, 31P, 11B), IR, mass spectrometry and elemental analysis
- Familiar with gas, liquid, ion and gel permeation chromatography
- FMS: a multi-sample purification system which employs HPLC and multiple columns to achieve extract clean-up

#### Communication and Interpersonal

- Able to learn new tasks easily and quickly
- Can work productively in an independent or a team environment
- Great organizational and problem solving skills

#### Computer Experience

- Able to produce reports and analyze data using Microsoft Office (Word, Excel and Powerpoint)
- familiar with Windows and Mac operating systems
- One year experience using SciFinder Scholar

## Work Experience

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Jan 2011 – Present

*NSERC Undergraduate Research Assistant*

University of Victoria – Rosenberg Research Group – Victoria, BC

- Probe the diastereoselectivity of a borane-catalyzed hydrosilylation reaction
- Conduct experiments to hydrolytically cleave the Si–O bonds to produce a compound whose diastereomers have unique and known signals
- Synthesize and handle compounds in an inert atmosphere utilizing Schlenk and glove box techniques
- Troubleshoot failed reactions and devise alternate ways to proceed
- Work independently to meet research goals

May 2010 – Aug 2010

*Undergraduate Research Assistant*

University of Toronto – Stephan Research Group – Toronto, Ontario

- Synthesized and characterized phosphinimine compounds focusing on exploiting a Si–Cl bond through the use of lithium and sodium reagents
- Successfully synthesized and handled compounds in air-free environments using Schlenk line techniques and IT glove boxes
- Characterized synthetic products through <sup>1</sup>H, <sup>13</sup>C, <sup>31</sup>P and <sup>11</sup>B NMR spectra as well as mass spectrometry and elemental analysis
- Some experience solving crystal diffraction studies with assistance

May 2009 – Aug 2009

*Analytical Research Assistant*

Institute of Ocean Sciences – Sidney, B.C.

- Prepared marine biota and sediment samples for GC/MS ultratrace analysis of PCBs, PBDEs, dioxin/furans and pesticides
- Rotary evaporation, nitrogen evaporation and quantitative transfers were performed to ensure minimal contamination between samples
- Added accurate internal and recovery standard amounts (in uL) to facilitate quantification
- Developed proficiency and working knowledge of a Fluid Management System: an HPLC system which used four columns (acidic silica, acid/base/neutral silica, alumina and carbon fibre) to selectively fraction the compounds of interest
- Developed safe working practices in a biohazardous environment

## References

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### **Dr. Leanne Rimes**

Supervisor/Professor  
University of Victoria  
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### **Dr. Dill Pickle**

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