

EDUCATION

Bachelor of Applied Science, University of Toronto

2013-2018

Major in Chemical Engineering

Relevant courses: Organic Chemistry, Process Engineering, Organizational Behavior and People Management, Process Control, Chemical Plant Design

TECHNICAL SKILL

- Microsoft Office: Word, PowerPoint, Excel, Outlook
- Analytical software: MATLAB, Simulink, Aspen Plus, AutoCAD, ALOHA
- Practical techniques in chemistry laboratory

PROFESSIONAL EXPERIENCE

R&D Intern

September 2016-August 2017

MAT/MTC/Functional Foils, AGFA Gevaert N.V. Septestraat 27, 2640 Mortsel, Belgium

- Conducted research on the enhancement of polymeric coating composition for photovoltaic backsheet, providing the guideline for the company's future products
- Produced laboratory scale coatings and performed the mechanical tests on adhesive properties for laminated samples under different weathering conditions
- Initiated the research on coating with polyurethane based thickener, providing the coating composition which met the desired adhesive property at enhanced viscosity
- Designed and customized the coating composition, based on the customer's requirement on specific coating thickness, peel strength and optical properties
- Analyzed the data from laboratory scale experiments to determine the composition for upscaling tests, ensuring the feasibility of the researched results at the industrial scale
- Initiated and monitored special tests on optical and rheological properties, ensuring the accuracy of testing results and created reports for future reference
- Presented updated research results during monthly department meetings, including the potential problems and areas of improvement on the company's future project
- Coordinated the patent process on the coatings with methylmethacrylate siloxane products, determining the most appropriate percentage composition for the new alternative coupling agent
- Conducted training and guided the work of the new member of the team

Laboratory Assistant

June 2015-August 2015

Dalian Institute of Chemical Physics, Chinese Academy of Science, Ionic Liquid Laboratory

- Optimized the production of Covalent Organic Framework (COF) material with given instructions, accelerating the research progress of master and PhD students
- Purified the intermediate products via various laboratory techniques, such as flash chromatography and extraction, enabling the better synthesis in later reactions
- Conducted the characterization of COF material by X-ray diffraction and infra-red spectroscopy, examining and evaluated the quality of finished product

Intern

June 2014-August 2014

Dalian Institute of Chemical Physics CAS, Department of Fuel Cell System and Engineering

- Cooperated in the construction and troubleshooting of the proton exchange membrane fuel cell (PEMFC) testing facility in a group of three technicians, ensuring the accuracy of characterization results
- Assembled and analyzed the performance of fuel cell under various conditions, recorded the gas flowrate and heating temperature and determined the combination for the best performance
- Attended the lectures offered on various topics of applied chemistry

Project Manager

January 2015-April 2015

Environmental Consulting Project, University of Toronto

- Led a team of 5 members to determine the extent of contamination over Hamilton's harbourfront district, and eventually selected the properties with highest value after redevelopment, with least costs for environmental remediation
- Cooperated with team members to ensure that the internal dealines and project milestones were met
- Conducted the weekly client meeting to discuss the project's progress, and further modified the proposal according to the client's feedback

Laboratory Student

2013-2016

University of Toronto

- Conducted weekly experiments in inorganic and organic synthesis, and tested the product with lab equipment such as IR spectroscopy and visible light spectrometry
- Performed experiments in unit operation and evaluated the performance of equipment by mathematical analysis
- Delivered presentations based on lab results by PowerPoint and white board, and provided detailed analysis in written technical reports

ADDITIONAL EXPERIENCE

Mandarin Tutor

September 2017-Present

Private Teacher, Toronto

- Conducted weekly tutorial for a Grade 2 student on Mandarin, addressing the confusion about the student's course and correcting pronunciation
- Communicated with the parent and discussed the learning progress of the student

Guest Speaker, Mentor

September 2014

University of Toronto

- Conducted a speech about university school life for first year students, providing guidance on their academic studies and social activities
- Communicated closely with three first year students, offering help in academic performance and daily life

Teaching Assistant

January-June 2013

Dalian Maple Leaf International School

- Lectured in review tutorials on Chemistry 12 materials, addressing the confusions about the lectures
- Assisted in marking, and created online quizzes for student's practice to perform better in exams
- Recorded videos on the lab practices, facilitated students' understanding of experiments

AWARD AND ACCOMPLISHMENTS

- *Patent in "Photovoltaic coating with Methylmethacrylate Siloxane Product"* **2017**
- *Dean's Honours List* with sessional GPA of 3.48 **2013**