

Chijuan Hu

6th and Canton Ave, Lubbock, TX, 79409

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EDUCATION

M. ASc. Chemical Engineering, University of Toronto, Canada 2006-2008

B. Eng. Chemical Engineering, Nanjing University of Technology, China 2001-2005

PROFESSIONAL EXPERIENCE

Texas Tech University, Texas, the United of States

Assistant Professor of Practice, Department of Chemical Engineering 2014-Present

- Taught lab courses CHE 3232- Transport Lab and CHE 4232- Unit Operation Lab
- Provided students with lectures covering technical writing, statistics, oral presentation, theory overview of heat transfer, fluid mechanics, mass transfer etc.
- Designed bioreactor, fluidized bed, gas absorption experiments and implemented in Unit Operations Lab.
- Participated in the undergraduate teaching lab renovation project and review of the pilot scale of distillation system.

Departmental Safety Officer, Department of Chemical Engineering 2014-Present

- Performed regular safety inspection with departmental safety committee.
- Prepared safety inspection reports and followed up on safety issues.
- Provided safety seminars.

Chemical Hygiene Officer, Whitacre College of Engineering 2014-Present

- Periodically conducted lab safety walkthrough and follow-up inspections in the Whitacre College of Engineering.
- Initiated activities to develop safety culture such as SafeRaider award, Safety News Flash Letter, safety meetings with research groups etc.
- Organized safety events such as seminars/talks, safety webinars, CPR & AED First Aid training.
- Oversaw and coordinated fire drills and tornado drills in the college of engineering.

Mascoma Corporation, ON, Canada & NH, the United of States 2009-2013

Associate Application/Fermentation Scientist, Application Technology Group

- Coordinated and conducted scale down experiments to launch a new yeast product for the second largest ethanol producer Poet and several Valero ethanol fuel plants amounting to 400 million gallon per year ethanol production, .
- Designed bio-reactor process to mimic industrial production of cream yeast.
- Designed and conducted lab-scale process to produce DDGs (Dried Distillers Grains).
- Screened genetically modified yeast by conducting fermentations and identified the best strain based on metabolic performance.
- Progress updates and data analyses were provided in the form of reports, SOPs and presentations within the company as well as to the customers.
- Conducted quality assurance work for commercially produced yeast by Lallemand Inc.

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Associate Research Scientist, Analytical and Process Chemistry Group

- Developed physical characterization methods for cellulosic materials in order to design pretreatment process.
- Developed the quantitative saccharification (Quan-Sacc) procedure on the Mascoma unique C5 (Pentose stream) and C6 (Hexose stream) substrates by investigating NREL standard procedure and conducting experimental design. Establish the new protocol to reduce standard error by 5-10%.
- Developed standard excel templates for computing and calculating data obtained from Quan-Sacc utilizable by any user.
- Created Certificate of Analysis (COA) documents for tracking the quality of bulk material.
- Established a quality control system for the HPLC and compositional analysis (Quan-Sacc) procedure.

Research Engineer, Pilot Plant and Research Lab

- Involved in several semi-continuous pilot scale (500-1000L) trials with cellulosic material. The whole process included enzymatic hydrolysis, liquid-solid separation, disk refiner, fermentation, distillation.
- Prepared the technical section for a research proposal which resulted in a 5.5 Million (CAD) funding from Sustainable Development Technology Canada (SDTC).
- Optimized the liquid-solid separation process by utilizing filter press instead of centrifuge which reduced the solids content in the liquid fraction from 15% to 3%.
- Set up a lab scale ion-chromatographic separation to study different resins and identified a resin to separate and purify xylose for Xylitol Canada.
- Published a paper: "Large-scale, high-solids enzymatic hydrolysis of steam-exploded poplar" in Journal of Biofuels, Bioproducts and Biorefining.

Research Associate, University of Toronto, ON, Canada

2008-2009

Suncor Energy Inc. & Department of Chemical Engineering

- Identified conditions for converting petroleum coke and biomass into activated coke which is used for cleaning of wastewater resulting in a 15% reduction on energy consumption and cost.
- Led the project while collaborating with postdoc researchers, graduate students and professors from University of Toronto and University of Calgary.
- Designed and manufactured the specified glassware required for the experimental process.
- Prepared bi-weekly reports and presented at the progress update meeting in University of Toronto & University of Calgary.

HONORS AND AWARDS

Texas Tech University

2016 & 2017

- Recognized as the "**Most Influential Faculty Member**" on student's academic career

Mascoma Corporation

2013

- Received Mascoma Award For Excellence - In recognition of excellent personal commitment, dedication and performance

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University of Toronto

2006-2008

- University Scholarship (2006/2007/2008)
- Awarded the special teaching assistantship for a graduate level class due to excellent teaching performance

Nanjing University of Technology

2001-2005

- Graduated with honor degree in Chemical Engineering (Top 10 in 300 students)
- Awarded the 1st class University Scholarship every year (total four years)
- Won the 2nd prize in the “Jiangsu Province Technology Innovation Competition for Undergraduates”