

XIANGRUI WANG

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EDUCATION

Dalian University of Technology (DUT) , Dalian, China	09/2018-06/2021
Master of Engineering in Chemical Engineering (with concentration in Process System Engineering)	GPA: 83.71/100
Scholarship: Three Times DUT Postgraduate Scholarships for Academic Excellence	
Dalian University of Technology (DUT) , Dalian, China	09/2014-06/2018
Bachelor of Engineering in Chemical Engineering	GPA: 3.29/4.0 (DUT Grading System)
Scholarship: DUT Second-Grade Scholarship for Academic Excellence	

RESEARCH INTERESTS

- Systems Modeling
 - Operations Research
- Process Design & Process Optimization
 - Computer Aided Molecule Design

RESEARCH

Computer-Aided Extractant Design for Aromatics of Heavy Gasoline	02/2020-Present
<i>Individual Work, 25Hrs/Week</i>	
<ul style="list-style-type: none">• Generated possible molecule structures• Predicted properties of the generated molecules• Applied Python to solve the MINLP question to get suitable molecule structures• Applied skill: CAMD, Python, MINLP,	
High Value-added Solvent Oil Separation Process Development	09/2019-Present
<i>Individual Work, 25 Hrs/Week</i>	
<ul style="list-style-type: none">• Did process simulation to find out new extractant suitable for heavy aromatic• Designed process for separation of aromatics from non- aromatics by using extractive distillation method• Optimized the technological parameters of the process for solvent oil product• Applied skill: Aspen, process design	
Vibration Fault Diagnosis of Wax Oil Hydrogenation Heating Furnace	11/2019-02/2020
<i>Working with 1 Bachelor Student, 30Hrs/Week</i>	
<ul style="list-style-type: none">• Analyzed possible factors inside and outside the furnace tube that caused the vibration• Simulated the heat transfer and vibration condition outside the tube and conducted vibration analysis• Conducted stress analysis of tubes• Analyzed the gas-liquid two-phase flow inside the pipe and its impact on vibration• Put forward solution that adding supporting structures at the middle of the tubes and changing handling capacity• Applied skill: Aspen EDR, HTRI, CAESAR II, CFD	
A Simple and Fast Reduction Method Applied to the Large-scale Distillation Sequences Synthesis	
<i>Working with 1 Doctoral Student, 40 Hrs/Week</i>	05/2019-05/2019
<ul style="list-style-type: none">• Completed the algorithm and code for the dimensional reduction method• Supported to encapsulate algorithms into software• Awarded Best Poster Award in 5th International Conference on Sustainable Chemical Product and Process Engineering• Applied skill: MATLAB, dynamic programming algorithm	
Fault Diagnosis of Continuous Catalytic Reforming Unit	10/2018-12/2018
<i>Individual Work, 40 Hrs/Week</i>	
<ul style="list-style-type: none">• Modeled and analyzed aromatics extraction section• Analyzed the influence of key operating parameters towards separation effect of distillation column• Figured out the reason for extra amount of benzene in distilled raffinate oil• Got recognition from Honeywell UOP with the solution of increasing the reflux ratio of the distillation column• Applied skill: Aspen, process analysis and optimization	

COURSEWORKS

Part of Courses in Postgraduate Career in DUT	09/2018-06/2021
Chemical Reaction Engineering (89/100)	Mathematical Physical Equation (92/100)
Numerical Analysis of Chemical Process(CFD) (89/100)	Chemical System Engineering (Pass)
Part of Courses in Undergraduate Career in DUT	09/2014-06/2018
Advanced Mathematics A1 (93/100)	Linear Algebra A (93/100)
Physical Chemistry B2 (98/100)	Principles of Chemical Engineering A2 (93/100)

OTHERS

Awards
<ul style="list-style-type: none">• The First Prize in 1st Principles of Chemical Engineering Competition Finals for Students of Universities in Northeast China 2017• The Second Prize in Dalian Mathematical Competition 2015• The Successfully Participation of Mathematical Contest in Modeling (MCM) 2016
Certificate
<ul style="list-style-type: none">• 2D CAD Engineer Certificate• China National Computer Rank Examination Certificate of Level 2
Interests
Enjoy reading, swimming, cooking, movie