
Academic Interests

Mechanical Engineering, Heat and Mass Transfer, Micro and Nano Scale, Multiphase Flow

Education Background

Yangzhou University, P. R. China 2015.09-2019.06

B.Eng in *Energy and Power Engineering, Department of Thermal Engineering, School of Hydraulic, Energy and Power Engineering* (Note: renamed as *School of Electrical, Energy and Power Engineering* since 2019)

GPA: 3.89/4.00 or 93.5/100

Ranked 1st in *Department of Thermal Engineering*

Scholarships

- Chinese National Scholarship (2018, ~0.15% of the whole university)
- Zhu Jingwen Scholarship (2016 & 2017, ~0.65% of the whole university)
- University President's Scholarship (2016 & 2017, 5% of the whole university)

Coursework of Engineering Thermal Physics

Engineering Thermodynamics, Heat Transfer, Material Mechanics, Engineering Fluid Mechanics, Combustion Theory, Heat Transfer Enhancement, Principle and Equipment of Heat-Mass Exchanging, Refrigeration & Air-conditioning Technique, etc.

Coursework of Power Generation Technology

Thermal Power Plant, Principles of Boiler, Principles of Steam Turbine, Heating Engineering, Fluid Machinery, Electrical Motor, etc.

Portfolios:

- Y.F. Qi (Advisor), **Z.P. Zhang**, M.T. Wang, Y.B. Song, X.W. Shan, P.L. Ge, J. Wu, *Characterization and Reuse Investigation on Scrapped V_2O_5 - WO_3 / TiO_2 Catalysts Operated in Various Industrial Flue Gases for NH_3 -SCR Reactions*. Waste and Biomass Valorization, 2020. (Doi: 10.1007/s12649-020-01158-3)
- Y.F. Qi (Advisor), M.T. Wang, P.L. Ge, **Z.P. Zhang**, Device and method for quantitatively evaluating decoking efficiency, 2018. (Publication No. CN107942009A)
- J.B. Sun, **Z.P. Zhang**, C.E. Zhou, X.Y. Zhu, X.C. Li (Advisor), A kind of device for exercising fingers for tempering finger coordination, 2018. (Publication No. CN207137257U)

Work Experience:

SP Chemicals (Taixing) Co Ltd, Singapore-Pudong Chemicals Pte Ltd. 2019.07-2019.12

Cogeneration Plant Engineer in the *2nd Thermal Engineering Office* of the *Utility Department*.

- to check the security of equipment in boiler and turbine systems
- to regulate equipment with the instruction of the Control Room
- to manage outsourced workers

Undergraduate thesis

Research on algorithms of fractal dimension of porous media based on MATLAB 2019.03-2019.06

(Advisor: Prof. XiaoChuan Li)

- Writing three widely used box-counting methods for calculating fractal dimension in MATLAB.
- Proposing a modified algorithm based on existing box-counting methods.
- Designing a user interface for fractal dimension calculation by MATLAB APP Designer.

Research Experiences

Reuse of scrapped SCR catalysts (Advisor: Prof. YongFeng Qi) 2017.12-2019.02

- Carrying out Micro-Characterizations of SCR catalysts.
- Helping to design NH₃-SCR experiments.
- Analyzing the results of NH₃-SCR experiments and Micro-Characterizations.
- Writing the paper with the instruction of Prof. Qi.

Decoking technology in the boiler system (Advisor: Prof. YongFeng Qi) 2017.06-2017.12

- Design the valuation index system for quantitative decoking efficiency.
- Helping to make the device for quantitative decoking efficiency evaluation.
- Writing the patent application for the innovative design.

Standardized Tests

➤ **TOFEL** (Total Score **91**, Reading 26, Listening 18, Speaking 22, Writing 25)

Date of Issue: 2018/08/25

➤ **GRE** (Total Score **322**, Verbal Reasoning 154, Quantitative Reasoning 168, Analytical Writing 3.0)

Date of Issue: 2018/12/22

➤ **JLPT-N2** (Total Score **157**, Language Knowledge 52, Reading 60, Listening 45)

Date of Issue: 2017/01/22

Skills

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|-----------|--------------|
| ➤ MATLAB | ➤ COMSOL |
| ➤ AutoCAD | ➤ SolidWorks |

Extracurricular Experiences

Leader of Class Committee (i.e. Class President) 2015.09-2017.10

- Organizing Class activities including study sessions, meetings and traveling, etc.
- Enhancing communications between students and instructors.

Member of Training Project for Computer-Aided Design Skills (Sponsored by Prof. XiaoChuan Li)

2016.10-2017.04

- Studying how to use AutoCAD and SolidWorks.
- Studying how to write patent applications.
- Designing simple innovative devices based on SolidWorks.
- Applying for 4 patents with collaboration (CN206761293U CN207137257U CN207024527U CN207023636U).

Team leader of Innovation and entrepreneurship training program for College Students (Sponsored by Prof. YongFeng Qi and the university)

2017.03-2017.06

- Organizing and leading a team for the project.
- Learning about the mechanism of slagging.
- Sieving the straw ash and coal ash by the automated and manual screening; And then blending them into samples of different straw ash-coal ash proportions.
- Carrying out the ash fusion test and observing the Deformation Temperatures (DTs), Softening Temperatures (STs), Hemispherical Temperatures (HTs) and Fluid Temperatures (FTs) of various samples.

Honors

- Outstanding Graduate, 2019, Yangzhou University.
- Outstanding Individual in Social Work, 2017 & 2018, Yangzhou University.
- Excellent Youth League Member, 2016, Yangzhou University.

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