

Ping Yang

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Education

Xi'an Jiaotong University (Member of C9 League in China)

Xi'an, CHINA

Master of Engineering (Mechanical Engineering)

2020/09-2023/06

Key Laboratory of Thermo-Fluid Science and Engineering, Ministry of Education. Advisor: Prof. Min Zeng

Selected Award: **National Scholarship; Scholar Star; Outstanding Graduate** Average: 88.89/100;

Course: Approaches for the Numerical Simulation of Two-Phase Flows, Gas-Liquid Two-Phase Flow and Boiling Heat Transfer, Numerical Heat Transfer et al.

Xi'an Jiaotong University (Member of C9 League in China)

Xi'an, CHINA

Bachelor of Engineering (Major) **AND** Finance (**Double degree**)

2016/09-2020/06

School of Energy and Power Engineering (**rank 1st in China**)

Selected Award: National Encouragement Scholarship; Outstanding college students

Average: 90.9/100

GPA: 3.90/4.3

Publication

Article

- [1] **Ping Yang**, Weihao Ling, Ke Tian, Min Zeng, Qiuwang Wang. *Flow Distribution and Heat Transfer Performance of Two-Phase Flow in Parallel Flow Heat Exchange System*. **Energy**. 2023 [**Published**]
- [2] **Ping Yang**, Weihao Ling, Ke Tian, Min Zeng, Qiuwang Wang. *Numerical Investigation on Flow Pattern, Heat Transfer and Pressure Drop Characteristics of Flow Boiling with Discrete Heat Sources*. **Heat transfer engineering**. 2023; 45(7-8). [**Published**]
- [3] **Ping Yang**, Bo Wu, Xuan Tong, Min Zeng, Qiuwang Wang, Zhilong Cheng. *Insight into the heat transfer process of graphene aerogel composite phase change material*. **Energy**. 2023 [**Published**]
- [4] **Ping Yang**, Xuan Tong, Min Zeng, Qiuwang Wang. *Numerical investigation on temperature control characteristics based on phase change temperature gradient arrangement*. **Journal of Engineering Thermophysics** (in Chinese). 2022; 43(6):1625-30. [**Published**]
- [5] **Ping Yang**, Ke Tian, Zicheng Tang, Nianqi Li, Min Zeng, Qiuwang Wang. *Flow Distribution and Heat Transfer Performance of Two-Phase Flow in Parallel Channels with Different Cross Section*. **Chemical Engineering Transactions**. 2022; 94:703-708. [**Published**] DOI:10.3303/CET2294117
- [6] Lianjie Zhang, **Ping Yang**, Wei Li, Jiri Jaromir Klemes, Min Zeng, Qiuwang Wang. *A new structure of PCHE with embedded PCM for attenuating temperature fluctuations and its performance analysis*. **Energy**. 2022; 254. [**Published**] DOI:10.1016/j.energy.2022.124462
- [7] Xuan Tong, **Ping Yang**, Min Zeng, Qiuwang Wang. *Confinement Effect of Graphene Interface on Phase Transition of n-Eicosane: Molecular Dynamics Simulations*. **Langmuir**. 2020; 36(29):8422-34. [**Published**] DOI: 10.1021/acs.langmuir.0c00811
- [8] Ke Tian, **Ping Yang**, Zicheng Tang, Jin Wang, Min Zeng, Qiuwang Wang. *Effect of pyrolytic reaction of supercritical aviation kerosene RP-3 on heat and mass transfer in the near-wall region*. **Applied Thermal Engineering**. 2021; 197. [**Published**] DOI: 10.1016/j.applthermaleng.2021.117401
- [9] Ke Tian, **Ping Yang**, Jiří Jaromír Klemes, Ting Ma, Min Zeng, Qiuwang Wang. *Effect of pressure on regenerative cooling process of endothermic hydrocarbon fuel at severe pyrolysis conditions*. **Aerospace Science and Technology**. 2023 [**Published**]
- [10] Weihao Ling, **Ping Yang**, Lapmou Tam, Min Zeng and Qiuwang Wang. *Numerical investigations on Ledinegg instability in single and parallel channels under localized heat source*. **Heat transfer engineering**. 2022. [**Accept**]

Article

- [11] Wei Li, Xinyi Luo, **Ping Yang**, Qiuwang Wang, Min Zeng, Christos N. Markides. *Solar-thermal energy conversion prediction of building envelope using thermochemical sorbent based on established reaction kinetics*. **Energy Conversion and Management**. 2022; 252. [Published] DOI: 10.1016/j.enconman.2021.115117
- [12] Chunming Hu, Rui Wang, **Ping Yang**, Weihao Ling, Min Zeng, Jiyu Qian, et al. *Numerical Investigation on Two-Phase Flow Heat Transfer Performance and Instability with Discrete Heat Sources in Parallel Channels*. **Energies**. 2021; 14(15). [Published] DOI: 10.3390/en14154408

Conference

- [1] **Ping Yang**, Weihao Ling, Min Zeng, Qiuwang Wang. *A novel modified phase change model for flow boiling based on Lee model*. The 5th South East European Conference on Sustainable Development of Energy, Water and Environment Systems, May 22-26, 2022 in Vlorë [Web](#)

Project and Research

1. Numerical and experimental investigations on two-phase flow

With global energy scarcity and severe environmental problems, flow boiling is paid more attention to due to its high heat transfer efficiency and temperature uniform. I **numerically investigated** on flow pattern, heat transfer and pressure drop characteristics of flow boiling with discrete heat sources. I also developed a model that can calculate flow and heat distribution of two-phase flow in complex heat exchange system by **MATLAB programming**. Moreover, I have established an experimental platform to further study, so I master some **experimental skills** too.

2. Insight into the heat transfer and energy storage characteristics of graphene aerogel composite phase change materials (CPCMs).

I optimized the hydrothermal self-assembly method to synthesize graphene aerogel and proposed a new idea about CPCMs cascade arrangement. Heat transfer and phase change progress of graphene aerogel CPCMs were investigated by experiments.

3. Design high efficiency and compact heat exchange systems using various methods of enhanced heat transfer.

I designed high efficiency heat exchange systems and can develop heat exchanger design software through programming like Matlab and C++.

Other activity

1. Studying in University of Minnesota

2018/06-2018/08

Studied three courses: System Dynamics, Heat Transfer and Balloon & Rockets.

2. Internship in LG Corporation of Korea

2019/06-2019/07

Trained to make CFD analysis and learned knowledge about air conditioning design.

3. **As a session chair** at the 5th South East European Conference on Sustainable Development of Energy, Water and Environment Systems.

Skill

1. Master MATLAB, C++ and FORTRAN for programming;
2. Master SOLIDWORKS, ICEM, FLUENT et al. software for numerical simulation.