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**; **Schholar Star**; Otstanding 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 Klemeš, 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 effiency and compact heat exchange systems using various methods of enchanced heat transfer.**

I designed high effiency 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.