



Basic Information



景泽锋 河南邓州人
副教授 博/硕士生导师

能源与动力工程学院热能工程系
动力工程多相流国家重点实验室
热流科学与工程教育部重点实验室

副教授，博士生导师，陕西省“三秦学者”创新团队核心骨干，陕西省科技项目会评专家，北京市工业碳达峰碳中和与绿色发展专家，参与《能源与人类文明发展》、《碳中和与绿色发展》等教材的编写，主要从事能源开发与利用中的多相流动与传热、泡沫等非牛顿流体流变、新能源开发、热能转化利用装置设计与开发等，发表研究论文60余篇（SCI期刊论文38篇，ESI高被引论文1篇），申请国家发明专利20余项，美国专利2项，承担国家自然科学基金、国家重点研发计划子课题、企业课题、陕西省等省部级课题，担任多个国际期刊审稿人。

[ResearchGate](#)

研究团队责任教授：[王树众 - 教师个人主页 \(xjtu.edu.cn\)](#)

授课：

本科生课程：

大学物理；能源战略与能源经济；能源与人类文明发展

研究生课程：

计算方法；气液两相流与沸腾传热；碳中和与绿色发展

Contact Information

News

- 祝贺硕士生马旭瑞一作论文被Renewable and Sustainable Energy Reviews期刊接收! 2022-12-09
- 祝贺学生马旭瑞签约BYD! Up 2022-11-09
- 祝贺硕士生乔明正拿到研究生国家奖学金!!! Up 2022-10-30
- 欢迎陈成、邹旭朋加入课题组，近期出版的多相流方向论文 2022-04-25
- 恭喜博士生冯琛琛等的两相泡沫流体论文被《国际多相流》出版，近期部分出版论文. Up 2021-08-12
- 欢迎报考我的研究生（能源与动力、油气田开发方向，暖通专业） 2020-04-02

[More news](#)

Research Fields

主要研究方向：

多相非牛顿流体流动与传热

多孔介质中多相流动：油气田高效开发的压裂技术研究，土壤原位修复（泡沫淋洗技术研究），CO₂泡沫驱油，以CO₂泡沫（气泡）流体为介质的地质碳封存；泡沫成因及消泡技术、泡沫洗消技术

泡沫能源材料

热能利用装备设计与开发、相变蓄热取热设备开发

地热(冷)能用于空调制冷、制热

近年发表期刊论文：(*通讯作者)

发表研究论文60余篇，其中SCI国际期刊论文38篇（ESI高被引论文1篇），申请国家发明专利20余项，美国专利2项。

1. Ma X., **Jing Z.***, Feng C., Qiao M. & Xu, D. (2023). Research and development progress of porous foam-based electrodes in advanced electrochemical energy storage devices: a critical review, *Renewable and Sustainable Energy Reviews*, 173, 113111.
2. Yang, W., Xu, D., Diao, Y., Zhao, J., **Jing, Z.**, & Guo, Y. (2022). Molecular dynamics simulations on K₂SO₄ nucleation in supercritical water. *Journal of Molecular Liquids*, 367, 120565.
3. Feng, P., Xu, D., Yang, W., Ma, M., Guo, Y., & **Jing, Z.** (2022). Characteristics, mechanisms and measurement methods of dissolution and deposition of inorganic salts in sub-/supercritical water. *Water Research*, 225, 119167.
4. Yang W., Xu D.*, Jiang G., **Jing, Z.**, Guo Y., Wang S. & Wang, B. (2022) . Inorganic salts crystallization and deposition characteristics and mechanisms in supercritical water. *Desalination*, 540, 116016.
5. Qiao M., **Jing Z.***, Ma X., Xu D., & Wang, S. (2022) .Thermal-hydraulic characteristics and structure optimization of Z-channel printed circuit heat exchanger. *Numerical Heat Transfer, Part A: Applications*, DOI: 10.1080/10407782.2022.2105111.
6. **Jing Z.***, Feng C., Ma X., et al (2022) . Non-uniform heat transfer behavior of wet foam fluid in a narrow fracture channel. *Experimental Thermal and Fluid Science*, 134, 110614.
7. **Jing, Z.***, & Feng, C. (2022). Variation of the lift force components of a settling particle caused by structural evolution of flowing foam. *Journal of Non-Newtonian Fluid Mechanics*, 305, 104819.
8. Guo, S., Xu, D.*, Jiang, G., Guo, Y., & **Jing, Z.** (2022). Sulfate corrosion and phosphate passivation of Ni-based alloy in supercritical water. *The Journal of Supercritical Fluids*, 184, 105564.

邮箱: zfjing@mail.xjtu.edu.cn
电话: 15991752709



9. **Jing, Z.***, & Feng, C. (2022). Influence mechanisms of several parameters on the interaction between flowing wet foam and settling particle. *International Journal of Multiphase Flow*, 150, 104015.
10. **Jing, Z.***, Feng, C., Ma, X., Xu, D., & Wang, S. (2022). Mechanical evolution of bubble structure and interactive migration behaviors of two particles in flowing wet foam. *Journal of Rheology*, 66(2), 349-364.
11. Feng, C., Ma, X., & **Jing, Z.***. (2022). Dynamic proppant-carrying performance of VES-CO₂ foam fracturing fluid in the pipeline and the fracture. *Journal of Petroleum Science and Engineering*, 210, 110034.
12. Guo, S., Xu, D.*, Jiang, G., **Jing, Z.**, Wang, S., & Lv, H. (2021). High-temperature corrosion of Fe-Ni-based alloy HR6W, Ni-based alloys Haynes 282 and Inconel 740 in supercritical water at 450° C and 25 MPa. *Journal of Alloys and Compounds*, 878, 160350.
13. Feng, C., **Jing, Z.***, Ma, X., & Wang, H. (2021). Effect of finite contact angle on the structure and shear behavior of two-dimensional wet foam. *International Journal of Multiphase Flow*, 143, 103782.
14. **Jing, Z.***, Feng, C., Cox, S., & Hutzler, S. (2021). Variation of average coordination number with liquid fraction for two-dimensional foams with finite contact angle. *Philosophical Magazine*, 101(9), 1048-1060.
15. Feng, C., Wang, H., & **Jing, Z.***. (2021). Investigation of heat extraction with flowing CO₂ from hot dry rock by numerical study. *Renewable Energy*, 169, 242-253.
16. Hao, B., Xu, D.*, Jiang, G., Sabri, T. A., **Jing, Z.**, & Guo, Y. (2021). Chemical reactions in the hydrothermal liquefaction of biomass and in the catalytic hydrogenation upgrading of biocrude. *Green Chemistry*, 23(4), 1562-1583.
17. **Jing, Z.***, Wang, H., Feng, C., & Wang, S. (2020). Numerical study on the heat characteristics of a novel artificial seepage thermal storage based on the successive four seasons. *Renewable Energy*, 160, 1185-1193.
18. Xu, D.*, Liu, L., He, Z., Yang, J., Wu, Z., & **Jing, Z.** (2019). Hydrothermal upgrading of water-insoluble algal biocrude over γ -Al₂O₃ supported multi-metallic catalysts. *Journal of Analytical and Applied Pyrolysis*, 140, 188-194.
19. **Jing, Z.***, Feng, C., Wang, S.*, & Xu, D. (2019). Effects of temperature and pressure on rheology and heat transfer among bubbles in waterless CO₂-based foam fracturing fluid. *Journal of Natural Gas Science and Engineering*, 63, 18-26.
20. Ma, L., Wang, S.*, Zhao, J., Zhang, X., Zhang, Z., **Jing, Z.**, & Meng, H. (2019). Numerical simulation of liquid slag flow in liquid slag storage device from energy saving of steel industry. *Energy Procedia*, 158, 4735-4740.
21. Zhang, X., Wang, S.*, Zhao, J., Ma, L., Yu, P., Wu, Z., & **Jing, Z.** (2019). Energy saving from furnace slag: An analysis of free-surface film flow characteristics of liquid slag on the rotary cup. *Energy Procedia*, 158, 4747-4752.
22. Xu, D.*, Lin, G., Guo, S., Wang, S., Guo, Y., & **Jing, Z.** (2018). Catalytic hydrothermal liquefaction of algae and upgrading of biocrude: A critical review. *Renewable and Sustainable Energy Reviews*, 97, 103-118. (高被引论文)
23. Ma, Z., Xu, D.*, Guo, S., Wang, Y., Wang, S., **Jing, Z.**, & Guo, Y. (2018). Corrosion properties and mechanisms of austenitic stainless steels and Ni-base alloys in supercritical water containing phosphate, sulfate, chloride and oxygen. *Oxidation of Metals*, 90(5), 599-616.

24. **Jing, Z.***, Feng, C., Wang, S., & Xu, D. (2018). Stress and bubble pressure response of wet foam to continuous and oscillatory sinusoidal shear. *The European Physical Journal E*, 41(12), 1-11.
25. Xu, D.*, Lin, G., Liu, L., Wang, Y., **Jing, Z.**, & Wang, S. (2018). Comprehensive evaluation on product characteristics of fast hydrothermal liquefaction of sewage sludge at different temperatures. *Energy*, 159, 686-695.
26. He, Z., Xu, D.*, Liu, L., Wang, Y., Wang, S., Guo, Y., & **Jing, Z.** (2018). Product characterization of multi-temperature steps of hydrothermal liquefaction of *Chlorella* microalgae. *Algal research*, 33, 8-15.
27. Xu, D.*, Guo, S., Liu, L., Hua, H., Guo, Y., Wang, S., & **Jing, Z.** (2018). Ni-Ru/CeO₂ catalytic hydrothermal upgrading of water-insoluble biocrude from algae hydrothermal liquefaction. *BioMed Research International*, 2018.
28. **Jing, Z.***, Feng, C., Wang, S., & Xu, D. (2018). Origin of accelerated and hindered sedimentation of two particles in wet foam. *The European Physical Journal E*, 41(3), 1-10.
29. He, Z., Xu, D.*, Wang, S.*, Zhang, H., & **Jing, Z.** (2018). Catalytic upgrading of water-soluble biocrude from hydrothermal liquefaction of *Chlorella*. *Energy & Fuels*, 32(2), 1893-1899.
30. Xu, D.*, Guo, S., He, Z., Huang, C., **Jing, Z.**, & Wang, S. (2018). Simulation of a transpiring wall reactor for supercritical water oxidation: characteristics of water film. *Industrial & Engineering Chemistry Research*, 57(4), 1307-1318.
31. **Jing, Z.***, Feng, C., Wang, S.*, Xu, D., & Xu, G. (2017). Effect of foam quality on flow behavior of liquid CO₂-based foam fracturing fluid stabilized by hydrofluoroether. *Journal of Petroleum Science and Engineering*, 159, 710-716.
32. **Jing, Z.***, Wang, S., & Zhai, Z. (2017). Effects of slip and rheological parameters on the flow and heat transfer of a Herschel-Bulkley fluid. *International Journal of Numerical Methods for Heat & Fluid Flow*, 27(4): 981-999
33. Lv, M., Wang, S.*, Zhai, Z., Luo, X., & **Jing, Z.** (2016). Comparative investigation of the static and dynamic properties of CO₂ foam and N₂ foam. *The Canadian Journal of Chemical Engineering*, 94(7), 1313-1321.
34. **Jing, Z.***, Wang, S.*, & Wang, Z. (2016). Detailed structural and mechanical response of wet foam to the settling particle. *Langmuir*, 32(10), 2419-2427.
35. Wang, Z., Wang, S.*, **Jing, Z.**, & Luo, X. (2016). Viscoelastic drag of particles settling in wormlike micellar solutions of varying surfactant concentration. *Journal of Dispersion Science and Technology*, 37(3), 442-449.
36. Luo, X., Wang, S.*, Wang, Z., **Jing, Z.**, Lv, M., Zhai, Z., & Han, T. (2015). Adsorption of methane, carbon dioxide and their binary mixtures on Jurassic shale from the Qaidam Basin in China. *International Journal of Coal Geology*, 150, 210-223.
37. Luo, X., Wang, S.*, Wang, Z., **Jing, Z.**, Lv, M., Zhai, Z., & Han, T. (2015). Experimental investigation on rheological properties and friction performance of thickened CO₂ fracturing fluid. *Journal of Petroleum Science and Engineering*, 133, 410-420.
38. **Jing, Z.***, Wang, S., Lv, M., Wang, Z., & Luo, X. (2015). Flow behavior of two-dimensional wet foam: Effect of foam quality. *Journal of Fluids Engineering-Transactions of the ASME*, 137(4).
39. **Jing, Z.***, Wang, S.*, Lv, M., Wang, Z., & Luo, X. (2015). The effect of plastic rearrangements on the flow of two-dimensional wet foam. *Soft Matter*, 11(15), 2973-2982.
40. Luo, X., Wang, S.*, Wang, Z., **Jing, Z.**, & Lv, M. (2014). Experimental research on rheological properties and proppant transport performance of GRF-CO₂ fracturing fluid. *Journal of Petroleum*

Science and Engineering, 120, 154-162.

41. 王治国, 王树众*, 孙晓, 景泽锋, 吴金桥, 何静. OTAC/NaSal虫状胶束流体
微观结构与线性黏弹性[J]. 力学学报. 2013, 06: 854-859.

版权所有：西安交通大学 陕ICP备05001571号

技术支持联系电话：029-82664996 029-88968982 (创新港)

服务邮箱：xjtuteacher@mail.xjtu.edu.cn

欢迎您访问我们的网站，您是第 2083458181 位访客



微信公众号



QQ答疑群