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Research Interests:

Heat Transfer of Supercritical Fluid, Transcritical CO₂ refrigeration system with ejector, Organic Rankine Cycle for Low Grade Waste Heat Recovery, Refrigerant maldistribution in micro-channel heat exchanger

Work Experience and Education Experience:

- 09/2018 - Present Professor, Chongqing University
- 09/2013 - 09/2018 Associate Professor, Chongqing University
- 01/2011 - 08/2013 Lecturer, Chongqing University
- 10/2009 - 10/2010 Visiting scholar, University of Illinois at Urbana and Champaign
- 09/2006 - 12/2010 Ph.D, Institute of Refrigeration and Cryogenics, Zhejiang University
- 09/1999 - 03/2006 M. S.& B. S. Shenyang University of Chemical Technology

Main Journal Publications:

- (1) Shijie Zhang, **Xu Xiaoxiao***, Chao Liu, Xinxin Liu, Zhipeng Ru, Chaobin Dang. Experimental and numerical comparison of the heat transfer behaviors and buoyancy effects of supercritical CO₂ in various heating tubes. *International Journal of Heat and Mass Transfer*. 149 (2020) 119074
- (2) Shijie Zhang, **Xu Xiaoxiao***, Chao Liu, Xinxin Liu, Yadong Zhang, Chaobin Dang. The heat transfer of supercritical CO₂ in helically coiled tube: Trade-off between curvature and buoyancy effect. *Energy*, 2019, 176,765-777.
- (3) Shijie Zhang, **Xu Xiaoxiao***, Chao Liu, Xinxin Liu, Chaobin Dang. Experimental investigation on the heat transfer characteristics of supercritical CO₂ at various mass flow rates in heated vertical-flow tube. *Applied Thermal Engineering*. 2019, 157:113687.
- (4) Xinxin Liu, **Xu Xiaoxiao***, Chao Liu, Jiacheng He, Chaobin Dang, The effect of geometry parameters on the heat transfer performance of supercritical CO₂ in horizontal helically coiled tube under the cooling condition. *Int. J. Refrigeration*. 2019,106, 650-661.

- (5) **Xu Xiaoxiao***, Zhang Yadong, Liu Chao, Zhang Shijie, Dang Chaobin. Experimental investigation of heat transfer of supercritical CO₂ cooled in helically coiled tubes based on exergy analysis, *Int. J. Refrigeration*. 2018, 89: 177-185.
- (6) Zhang Shijie, **Xu Xiaoxiao***, Liu Chao, Zhang Yadong, Dang Chaobin. The buoyancy force and flow acceleration effects of supercritical CO₂ on the turbulent heat transfer characteristics in heated vertical helically coiled tube. *International Journal of Heat and Mass Transfer*, 2018, 125: 274-289.
- (7) Liu Xinxin, **Xu Xiaoxiao***, Liu Chao, Bai Wanjin, Dang Chaobin. Heat transfer deterioration in helically coiled heat exchangers in trans-critical CO₂ Rankine cycles. *Energy*, 2018, 147: (1-14).
- (8) Kaizheng Wang, **Xiaoxiao Xu***, Chao Liu, Wanjin Bai, Chaobin Dang. Experimental and numerical investigation on heat transfer characteristics of supercritical CO₂ in the cooled helically coiled tube, *International Journal of Heat and Mass Transfer*, 2017, 108:1645~1655.
- (9) Liu Xinxin, **Xu Xiaoxiao***, Liu Chao, Ye Jian, Li Hongrui, Bai Wanjin, Dang Chaobin. Numerical study of the effect of buoyancy force and centrifugal force on heat transfer characteristics of supercritical CO₂ in helically coiled tube at various inclination angles. *Applied Thermal Engineering*, 2017, 116: 500–515.
- (10) **Xiaoxiao Xu***, Chao Liu, Chaobin Dang, Yangyang Wu, Xinxin Liu. Experimental investigation on heat transfer characteristics of supercritical CO₂ cooled in horizontal helically coiled tube. *International Journal of Refrigeration*, 2016, 67: 190-201.
- (11) **Xiaoxiao Xu***, Chao Liu, Xiang Fu, Hong Gao, Yourong Li. Energy and exergy analyses of a modified combined cooling, heating, and power system using supercritical CO₂. *Energy*, 2015, 86: 414-422.
- (12) Kaizheng Wang, **Xiaoxiao Xu***, Yangyang Wu, Chao Liu, Chaobin Dang. Numerical investigation on heat transfer of supercritical CO₂ in heated helically coiled tubes. *The Journal of Supercritical Fluids*, 2015, 99:112-120.
- (13) **Xiaoxiao Xu**, Guangming Chen, Liming Tang, Zhijiang Zhu. Experimental investigation on performance of transcritical CO₂ heat pump system with ejector under optimum high-side pressure. *Energy*, 2012, 44(1): 870-877.
- (14) **Xiaoxiao Xu**, Guangming Chen, Liming Tang, Zhijiang Zhu. Development and validation of helical-coil-in-fluted-tube gas cooler for CO₂ heat pump water heaters. *International Journal of Energy Research*, 2011, 35(14): 1266-1273.
- (15) Guangming Chen, **Xiaoxiao Xu**, Shuang Liu, Lixia Liang, Liming Tang. An experimental and theoretical study of a CO₂ ejector. *International Journal of refrigeration*. 2010, 33, 915-921.