

Hao Wang

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Researcher ID: <http://www.researcherid.com/rid/B-8332-2012>

Research Areas: Phase-change heat transfer, Aerosol (PM2.5) transport and removal, Biological heat and mass transfer

Professional Preparation:

Tsinghua University (China)	Engineering	B.Sc. 2000
Tsinghua University (China)	Thermal Engineering	M.Sc. 2001
Tsinghua University (China)	Thermal Engineering	Ph.D (Honored) 2004

Appointments:

2007- **Associate professor** of the Department of Energy and Resources Engineering, College of Engineering, Peking University, Beijing, China
 Director of Laboratory of Heat and Mass Transport, Peking University, Beijing, China

2004-2007 **Post Doctoral Research Associate**, CTRC (Cooling Technology Research Center), the School of Mechanical Engineering, Purdue University, IN, USA. (Advised by Professor Suresh V. Garimella)

Representative Publications (5-10): # *SCI Pubs.* 41, # *SCI Citations* 310, *H-Index* 12

1. Yu J P and Wang H*, A molecular dynamics investigation on evaporation of thin liquid films, *International Journal of Heat and Mass Transfer*, 55(4):1218-1225, 2012. (SCI citation: 6)
2. Pan Z H, Wang F and Wang H*, Instability of Marangoni toroidal convection in a microchannel and its relevance with the flowing direction, *Microfluidics and Nanofluidics*, 11(3): 327-338, 2011. (SCI citation: 6)
3. Wang H*, Pan Z H, Garimella S V, Numerical investigation of heat and mass transfer from an evaporating meniscus in a heated open groove, *International Journal of Heat and Mass Transfer*, 54: 3015-3023, 2011. (SCI citation: 13)
4. Li Y H, Wang F, Wang H*, Cell death along single microfluidic channel after freeze-thaw treatment, *Biomicrofluidics*, 4: 014111, 2010. (SCI citation: 3)
5. Pan Z H and Wang H*, Symmetry-to-asymmetry transition of Marangoni flow at a convex volatilizing meniscus, *Microfluidics and Nanofluidics*, 9(4-5): 657-669, 2010. (SCI citation: 9)
6. Wang H, Garimella S V and Murthy J Y, An analytical solution for the total heat transfer in the thin-film region of an evaporating meniscus, *International Journal of Heat and Mass Transfer*, 51: 6317-6322, 2008. (SCI citation: 30)
7. Wang H, Murthy J Y and Garimella S V, Transport from a volatile meniscus inside an open microtube, *International Journal of Heat and Mass Transfer*, 51: 3007-3017, 2008. (SCI citation: 29)
8. Wang H, Garimella S V and Murthy J Y, Characteristics of an evaporating thin film in a microchannel, *International Journal of Heat and Mass Transfer*, 50: 3933-3942, 2007. (SCI citation: 89)

Representative Research Projects (5-10):

1. Nature Science Foundation of China (NSFC) (No. 91334110): "Heat and mass transfer at triple-phase contact lines" RMB 750, 000, PI, 2014-2016
2. Nature Science Foundation of China (NSFC) (No. 51276003): "Mechanisms of intracellular ice formation" RMB 800, 000, PI, 2013-2016
3. Nature Science Foundation of China (NSFC) (No. 50706001): "Evaporative thin liquid films at triple-phase contact lines" RMB 200, 000, PI, 2008-2010
4. Nature Science Foundation of China (NSFC) (No. 50876001): "Heat transfer at cellular level during hyperthermia with nanoparticles" RMB 380, 000, PI, 2009-2011
5. Beijing City Foundation: "Application of intracellular ice formation in cryotherapy", RMB 500, 000, PI, 2013-2014

Patents

1. Heat Dissipation Utilizing Flow of Refrigerant, USA, 8555953
2. Cooling device and cooling method, China, ZL200810041373.8
3. Heat dissipating device and heat dissipating method, China, ZL200810041372.3
4. A solar thermal collector, China, ZL201120364162.5
5. A solar thermal collector, China, ZL201120363571.3
6. A solar thermal collector, China, ZL201110288661.5

Services and others (editorial board, experts committee, conference organizer, invited speaker, etc.):

- 2012, invited speech in Exxon Mobil, New Jersey, "Micro to macro, heat transfer enhancement in phase-change systems"
- 2013, jury in Solar Decathlon (US Department of Energy)
- 2013, invited lead guest editor of the heat-transfer special issue of Advances in Materials Science and Engineering
- 2013, keynote in annual conference of Chinese Society of Engineering Thermophysics, "convex nanobending at a moving contact line"