

Curriculum Vitae

Mingcheng Yang

Personal details

Gender: Male
Date of birth: 10 May 1979
Nationality: Chinese
Status: married
Children: Letong
Address: Institute of Physics, Beijing
E-mail: mcyang@iphy.ac.cn



Education

Dec 2008 **Ph.D. in Theoretical Physics**
Shanghai Jiao Tong University
Advisor: Prof. **Hongru Ma**
Dissertation: The Monte Carlo simulation of the polydisperse hard sphere colloids.

Jul 2003 **B.S. in Physics**
Shanghai Jiao Tong University
Advisor: Prof. **Junhan You**
Dissertation: Calculation of Fe K_α Radiation Spectrum in active galactic nuclei.

Experience

Since May 2013 Associate Professor, Laboratory of Soft Matter Physics,
Institute of Physics, Chinese Academy of Sciences, Beijing

Jan 2009 - Apr 2013 Postdoctoral research fellow, Institute of Complex Systems,
Forschungszentrum Jülich (DE)

Sep 2003 - Dec 2008 Research Assistant, Department of Physics,
Shanghai Jiao Tong University (CN)

Feb 2004 - Jan 2008 Teaching Assistant, Department of Physics,
Shanghai Jiao Tong University (CN)

Research interests: Computer simulation and theory of soft condensed matter

- synthetic micro-motors and active colloids
- thermophoresis of complex fluids
- thermodynamics and nonequilibrium dynamics of colloids
- mesoscopic hydrodynamic simulations, advanced Monte Carlo methods

Reviewer for

Soft Matter, The Journal of Chemical Physics, Applied Physics Letters, Physical Review E, Physica A, Chinese Physics B, Acta Physica Sinica, Comptes Rendus Mécanique

Publications

17. X. Chen, X. Yang, **M. Yang** and H. P. Zhang, "Dynamic Clustering in Suspension of Motile Bacteria", *Europhysics Letters* 111, 54002 (2015).
16. **M. Yang**, R. Liu, M. Ripoll and K. Chen, "A microscale turbine driven by diffusive mass flux", *Lab on a chip*, DOI: 10.1039/c5lc00479a (2015).
15. J. Hu, **M. Yang**, G. Gompper and R. G. Winkler, "Modelling the Mechanics and Hydrodynamics of Swimming E. coli" *Soft Matter*, DOI: 10.1039/c5sm01678a (2015).
14. **M. Yang**, M. Theers, J. Hu, G. Gompper, R. G. Winkler, and M. Ripoll, "Effect of angular momentum conservation on hydrodynamic simulations of colloids", *Phys. Rev. E* 92, 013301 (2015).
13. **M. Yang**, M. Ripoll, K. Chen, "Catalytic microrotor driven by geometrical asymmetry", *J. Chem. Phys.* 142, 054902 (2015).
12. **M. Yang**, R. Liu, M. Ripoll and K. Chen, "A microscale thermophoretic turbine driven by external diffusive heat flux", *Nanoscale*, 6, 13550 (2014).
11. **M. Yang**, A. Wysocki and M. Ripoll, "Hydrodynamic simulations of self-phoretic microswimmers", *Soft Matter* 10, 6208 (2014).
10. **M. Yang** and M. Ripoll, "Self-propelled Hot Microgear", *Soft Matter* 10, 1006 (2014).
9. **M. Yang** and M. Ripoll, "Thermophoretically induced flow field around a colloidal particle", *Soft Matter* 9, 4661 (2013).
8. **M. Yang** and M. Ripoll, "Brownian motion in inhomogeneous suspensions", *Phys. Rev. E* 87, 062110 (2013).
7. D. Lüsebrink, **M. Yang** and M. Ripoll, "Thermophoresis of colloids by mesoscale simulations", *J. Phys.: Condens. Matter* 24, 284132 (2012).
6. **M. Yang** and M. Ripoll, "Driving forces and polymer hydrodynamics in the Soret effect", *J. Phys.: Condens. Matter* 24, 195101 (2012).
5. **M. Yang** and M. Ripoll, "Drift velocity in non-isothermal inhomogeneous systems", *J. Chem. Phys.* 136, 204508 (2012).
4. **M. Yang** and M. Ripoll, "Simulations of thermophoretic nanoswimmers", *Phys. Rev. E* 84, 061401 (2011).
3. **M. Yang** and H. R. Ma, "Solid-solid phase transition of size-polydisperse hard-sphere system", *J. Chem. Phys.* 130, 031103 (2009)
2. **M. Yang** and H. R. Ma, "Elasticity of a polydisperse hard sphere crystal", *Phys. Rev. E* 78, 011404 (2008).
1. **M. Yang** and H. R. Ma, "Effect of polydispersity on the relative stability of hard sphere crystals", *J. Chem. Phys.* 128, 134510 (2008).

Book chapters

1. M. Ripoll and **M. Yang**, "From colloid thermophoresis to thermophoretic machine" in Engineering of Chemical Complexity II, edited by A. Mikhailov and G. Ertl, World Scientific, Singapore, (2014).

Patents

1. M. Ripoll and **M. Yang**, "Thermophoretische Kraftmachin", German patent application 102013007189.5.