Curriculum Vitae

Biographical Data

Name	Fan Jin (金帆)
Date of Birth	03/26/1978
Sex	Male
Place of Birth	Beijing, China
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Contact Information

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Education

2003.08-2007.06	Ph.D. Candidate, Department of Chemistry, The Chinese University of Hong Kong. Degree awarded: Ph.D in chemistry, 06/2007
1997.07-2002.07	B.S., Student, Department of Applied Chemistry, University of Science & Technology of China, P. R. China. Degree awarded: B.S. in chemistry, 07/2002

Positions held

2009.11- present	Postdoctoral Associate, Department of Bioengineering, California Nanosystems Institute, University of California, Los Angeles.
2009.01-2009.11	Postdoctoral Associate, Department of Materials Science and Engineering, University of Illinois at Urbana Champaign.
2007.06-2009.01	Postdoctoral Associate, Department of Chemistry, The Chinese University of Hong Kong.
2002.07-2003.07	R.A., The Hefei National Laboratory of Physical Science at Microscale, Department of Chemical Physics, University of Science & Technology of China, P. R. China.

Research Interests

Using a combination of physical chemistry, colloidal science, molecular biology, microbiology, we design and execute decisive experiments to answer important questions of macromolecules, colloids and biology, including

- Polyelectrolyte and colloidal particles in the oil-water interface.
- Interaction between Antibiotic peptides and lipids membrane.
- Living cell image and living cell micro-manipulation.
- Self-assembly in biology and biotechnology. (Ex: drug and gene delivery)
- Bacterial communities. (Ex: signaling, motility, social organization in biofilms)

Publications (+: co-first author; *: corresponding author)

1 Gibiansky, M.L.[+], Conrad, J.C.[+], **Jin, F.,** Gordon, V.D. Motto, D.A., Mathewson, M.A., Stopka, W.G., Zelasko, D.C., Shrout, J.D., Wong, G.C.L.[*]**,** "Bacteria use type IV pili to walk upright and detach from surfaces". *Science*, 330,197(2010).

2 Deng, R., Diao, S, Yue, Y., Ngai, T., Wu, C., **Jin, F.**[*], "Dynamic and structural scalings of the complexation between pDNA and bPEI in semidilute and low-salt solutions". *Biopolymers*, 93(6), 571 (2010).

3 **Jin, F**., Gong, XJ., Ye, J., Ngai, T.[*], "Direct measurement of nanobubble-induced weak depletion attraction between a spherical particle and a flat surface in an aqueous solution". *Soft Matter*, 4, 968 (2008).

4 **Jin, F**[*]., Ye, XD., Wu, C., "Observation of kinetic and structural scalings during slow coalescence of nanobubbles in an aqueous solution". *J. Phys. Chem. B*, 111(46), 13143 (2007).

5 **Jin, F**., Li, JF, Ye, XD., Wu, C.[*], "Effects of pH and ionic strength on the stability of nanobubbles in aqueous solutions of α-cyclodextrin", *J. Phys. Chem. B*, 111(40), 11745 (2007).

6 **Jin, F**., Ye, J., Hong, LZ., Wu, C.[*], "Slow relaxation mode in mixtures of water and organic molecules: Supramolecular structures or nanobubbles?", *J. Phys. Chem. B*, 111(9), 2255 (2007).

7 **Jin, F**., Wu, C.[*], "Observation of first order transition in ultra-filtration of flexible linear polymer chains", *Phys. Rev. Lett.* 96 237801 (2006).

8 Deng, R.[*], Yue, Y., **Jin, F.**, Chen, Y., Kung, HF., Lin, MC., Wu, C., "Revisit the complexation of PEI and DNA - how to make low cytotoxic and highly efficient PEI gene transfection non-viral vectors with a controllable chain length and structure? ". *J Control Release*, 140(1), 40 (2009).

9 Ge, H., **Jin, F.**, Li, JF., Wu, C.[*], "How Much Force Is Needed To Stretch a Coiled Chain in Solution?". *Macromolecules*, 42, 4400 (2009).

10 Ngai, T[*]., Xing, XC., J **Jin, F**., "Depletion Attraction between a Polystyrene Particle and a Hydrophilic Surface in a Pluronic Aqueous Solution". *Langmuir*, 24(24), 13912 (2008).

11 Hong, LZ., **Jin, F**., Li, JF., Lu, YJ., Wu, C.[*]**,** "How Are Insoluble Blocks Interacted with and Packed Inside a Micelle Made of Block Copolymers in a Selective Solvent?". *Macromolecules*, 41(21), 8220 (2008).

12 Huo, H., **Jin, F**., Ngai, T.[*], "Structure and kinetics of cluster decomposition of polystyrene star chains in dilute solutions". *Macromolecules.* 40(19), 6796 (2007).

13 **Jin, F**., Wu, C.[*], "The observation of first order transition in ultra-filtration of flexible linear polymer chains". *Act. Poly. Sci* . 4 486 (2005). In Chinese

14 Yang, C., Kizhakkedathu, JN., Brooks, DE., **Jin, F**., Wu, C.[*], "Laser-light-scattering study of internal motions of polymer chains grafted on spherical latex particles". *J. Phys. Chem. B*, 108, 18479 (2004).

15 Yue, Y.[*], **Jin, F.**, Deng, R., Cai, J., Chen, Y., Lin, M.C., Kung, H.F., Wu, C.[*], "Revisit complexation between DNA and polyethylenimine –Effect of uncomplexed chains free in the solution mixture on gene transfection", *J Control Release*, Accepted (2010).

16 Yue, Y.[*], **Jin, F.**, Deng, R., Cai, J., Dai, Z., Lin, M.C., Kung, H.F., Mattebjerg, M.A., Andresen, T.L., Wu, C.[*], "Revisit complexation between DNA and polyethylenimine –Effect of length of free polycationic chains on gene transfection", *J Control Release*, Accepted (2010).

17 Conrad, J.C.[+], Gibiansky, M.L.[+], **Jin, F.**, Gordon, V.D. Motto, D.A., Mathewson, M.A., Stopka, W.G., Zelasko, D.C., Shrout, J.D., Wong, G.C.L.[*], "Flagella and pili-mediated near-surface single-cell motility mechanisms in P. aeruginosa", *Biophysical J*, submitted.

18 **Jin, F.**[+], Conrad, J.C.[+], Wong, G.C.L.[*], "Bacteria turn on surfaces by over-steering using type-VI pili", *Phys. Rev. Lett.*, submitted.

Conferences attended

1 "The multifunctional roles of Type IV pili in bacterial surface motility", (Fan Jin and Gerard Wong), 2010 APS March Meeting, Mar. 15, 2010 Portland, USA. (Oral Presentation)

2 "First observation of the first-order transition in ultra-filtration of flexible linear polymer chains", (Fan Jin and Chi Wu), 2007 APS March Meeting, Mar. 5, 2007 Denver, USA. (Oral Presentation)

3 "Slow relaxation mode in small organic molecular aqueous solutions: Supramolecular structures or Nanobubbles?", (Fan Jin and Chi Wu) The 1st Annual Conference on The Physics, Chemistry and Biology of Water, Oct. 26, 2006 Brattleboro, USA. (Poster Presentation)

4 "Ultrafiltration of macromolecules through nanopores", (Fan Jin and Chi Wu) The Sepcial Meeting for 50 years of the Institute of Chemistry, CAS, 2006 Oct.17, 2006 Beijing, China. (Oral Presentation)

5 "Can a filter differentiate polymer chains with different lengths?", (Fan Jin and Chi Wu) The 3rd East Asian Polymer Conference, Jun. 08, 2004, ChengDu, China. (Oral Presentation)

References

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