

个人信息

姓名: 沈嘉炜
出生年月: 1980.7
工作单位: 杭州师范大学医学院药学系
联系电话: +86-571-28865674 (办公室)
邮箱地址: shen.jiawei@hotmail.com

工作经历

2013.6 至今	杭州师范大学医学院药学系	校聘教授
2009.9-2013.6	Max Planck Institute for Polymer Research (马克斯-普朗克高分子研究所, 德国)	Research Associate 研究助理

教育背景

2004.9-2009.6	浙江大学	化学系	化学博士
2003.1-2003.6	香港大学	化学系	交换学生
2000.9-2004.6	浙江大学	化学系	理学学士

主要研究领域

- 药物传递及载药材料的分子模拟
- 生物分子表面吸附的分子模拟
- 多尺度模拟方法的发展
- 二维纳米材料的制备及计算机模拟

主持科研项目与人才计划

苏州高新区科技创新创业领军孵化人才、2015

国家自然科学基金青年项目、多肽与无机晶体相互作用的多尺度模拟方法研究、25 万、负责人、2015.1-2017.12。

获奖及荣誉

2011.9	Best Poster Award, Max Planck Institute for Polymer Research Posterday 2011
2010.6	Biomaterials 期刊 2006-2010 中国大陆 top50 高引论文
2009-2010	Max Planck Society Research Fellow, Germany
2009.6	由 中德科学中心 选拔, 代表中国博士生参加第 59 界德国林岛诺贝尔奖获得者大会
2007-2008	浙江大学优秀研究生二等荣誉
2007-2008	浙江大学光华奖学金

已发表论文

L.J. Liang*, J.W. Shen*, Z.S. Zhang, Q. Wang*. DNA sequencing by two-dimensional materials: As theoretical modeling meets experiments. *Biosensors and Bioelectronics*, accepted. doi:10.1016/j.bios.2015.12.037.

L.J. Liang, E.Y. Chen, J.W. Shen*, Q. Wang*. Molecular modeling of translocation of biomolecules in carbon nanotubes: method, mechanism and application. *Molecular Simulation*, accepted.

Z. Kong, W. Zheng, Q. Wang, H.B. Wang, F.N. Xi, L.J. Liang*, **J.W. Shen***. Charge-tunable absorption behavior of DNA on graphene. *Journal of Materials Chemistry B*, 2015, 3, 4814.

J.W. Shen, T. Tang, X.H. Wei, W. Zheng, T.Y. Sun, Z.S. Zhang, L.J. Liang*, Q. Wang*. On the loading mechanism of ssDNA into carbon nanotubes. *RSC Advances*, 2015, 5, 56896.

C.C. Shi, Z. Kong, T.Y. Sun, L.J. Liang, **J.W. Shen**, Z.Y. Zhao*, Q. Wang, Z.Z. Kang, H. Agren, Y.Q. Tu. Molecular dynamics simulations indicate that DNA bases using graphene nanopores can be identified by their translocation times. *RSC Advances*, 2015, 5, 9389.

Z.S. Zhang, **J.W. Shen** (共同一作), H.B. Wang, Q. Wang, J.Q. Zhang, L.J. Liang, H. Agren, Y.Q. Tu. Effects of graphene nanopore geometry on DNA sequencing. *Journal of Physical Chemistry Letters*, 2014, 5, 1602.

P. Shan, **J.W. Shen** (共同一作), D.H. Xu, L.Y. Shi, J. Gao, Y.W. Lan, Q. Wang, X.H. Wei. Molecular dynamics study on the interaction between doxorubicin and hydrophobically modified chitosan oligosaccharide. *RSC Advances*, 2014, 4, 23730.

L.J. Liang, Z.S. Zhang, **J.W. Shen**, K. Zhe, Q. Wang, T. Wu, H. Agren, Y.Q. Tu. Theoretical studies on the dynamics of DNA fragment translocation through multilayer graphene nanopores. *RSC Advances*, 2014, 4, 50494.

L. Zhang, Z.P. Liu, T. Ren, P. Wu, **J.W. Shen**, W. Zhang, X.P. Wang. Understanding the structure of hydrophobic surfactants at the air/water interface from molecular level. *Langmuir*, 2014, 30, 13815.

J.W. Shen, C.L. Li, N.F.A. van der Vegt, C. Peter. Understanding the control of mineralization by polyelectrolyte additives: simulation of preferential binding to calcite surfaces. *Journal of Physical Chemistry C* 2013, 117, 6904.

C.L. Li, **J.W. Shen**, C. Peter, N.F.A. van der Vegt. A Chemically accurate implicit-solvent coarse-grained model for polystyrenesulfonate solutions. *Macromolecules* 2012, 45, 2551.

J.W. Shen, C.L. Li, N.F.A. van der Vegt, C. Peter. Transferability of coarse grained potentials: implicit solvent models for hydrated ions. *Journal of Chemical Theory and Computation* 2011, 7, 1916.

Y. Kang, Q. Wang, Y.C. Liu, **J.W. Shen**, T. Wu. Diameter selectivity of protein encapsulation in carbon nanotubes. *Journal of Physical Chemistry B* 2010, 114, 2869.

J.W. Shen, T. Wu, Q. Wang, Y. Kang, X. Chen. Adsorption of insulin peptide on charged single-walled carbon nanotubes: significant role of ordered waters. *ChemPhysChem* 2009, 10, 1260.

J.W. Shen, T. Wu, Q. Wang, Y. Kang, X. Chen. Protein adsorption on charged single-walled carbon nanotubes: significant role of ordered waters. Biomaterials Asia 2009 conference.

L.J. Liang, Q. Wang, T. Wu, **J.W. Shen**, Y. Kang. Molecular dynamics simulation on stability of insulin on graphene. *Chinese Journal of Chemical Physics* 2009, 22, 627.

Y. Kang, Y.C. Liu, Q. Wang, **J.W. Shen**, T. Wu, W.J. Guan. On the spontaneous encapsulation of proteins in carbon nanotubes. *Biomaterials* 2009, 30, 2807.

Y.C. Liu, **J.W. Shen**, K.E. Gubbins, J. D. Moore, T. Wu, Q. Wang. Diffusion dynamics of water controlled by topology of potential energy surface inside carbon nanotubes. *Physical Review B* 2008, 77, 125438. (featured in *Virtual Journal of Nanoscale Science & Technology*)

J.W. Shen, T. Wu, Q. Wang, H.H. Pan. Molecular simulation of protein adsorption and desorption on hydroxyapatite surfaces. *Biomaterials* 2008, 29, 513. (**Leading Opinion Paper**, one of 12 figures featured in “2008 - The Year in Images” of *Biomaterials*)

J.W. Shen, T. Wu, Q. Wang, Y. Kang. Induced stepwise conformational change of human serum albumin on carbon nanotube surfaces. *Biomaterials* 2008, 29, 3847. (one of 12 figures featured in “2008 - The Year in Images” of *Biomaterials*)

X. Chen, T. Wu, Q. Wang, **J.W. Shen**. Shield effect of silicate on adsorption of protein onto silicon-doped hydroxyapatite (100) surface. *Biomaterials* 2008, 29, 2423.

F. Liu, X.S. Ye, T. Wu, C.T. Wang, **J.W. Shen**, Y. Kang. Conformational mobility of GOx coenzyme complex on single-wall carbon nanotubes. *Sensors* 2008, 8, 8453.

X. Chen, Q. Wang, **J.W. Shen**, H.H. Pan, T. Wu. Adsorption of leucine-rich amelogenin protein on hydroxyapatite (001) surface through $-\text{COO}^-$ claws. *Journal of Physical Chemistry C* 2007, 111, 1284.

H.L. Zhou, T. Wu, X.L. Dong, Q. Wang, **J.W. Shen**. Adsorption mechanism of BMP-7 on hydroxapatite (001) surfaces. *Biochemical and Biophysical Research Communications* 2007, 361, 91.

J.W. Shen, T. Wu, Y.G. Wang, Q. Wang. Quantum mechanics study on the selectivity of alkali metal cations by a novel fluorescent chemosensor. *Molecular Simulation* 2006, 32, 1123.

国际会议及报告

244th American Chemical Society National Meeting & Exposition

2012 年 8 月 19-23 日, Philadelphia, 美国 (会议报告)

SPP 1420 Winter School & International Conference for Bio-inspired Materials

2012 年 4 月 19-23 日, Potsdam, 德国 (会议报告)

Perspectives and Challenges of Simulations at Bio-materials Interfaces

2011 年 10 月 10-14 日, Bremen, 德国

Mainz Materials Simulation Days

2011 年 5 月 25-27 日, Mainz, 德国

5th Rhein-Main-Modelling Meeting

2010 年 12 月 7 日, Darmstadt, 德国

DFG Priority Program “Biomimetic Materials Research: Functionality by Hierarchical Structuring of Materials” Winter School

2010 年 3 月 23-26 日, Kerkrade, 荷兰

International workshop on Coarse-Grained Biomolecular Modeling

2010 年 3 月 7-12 日, Levi, 芬兰

MolSim 2010 Winter School

2010 年 1 月 4-15 日, Amsterdam, 荷兰

59th Lindau Nobel Laureate Meeting

2009 年 6 月 28 日-7 月 3 日, Lindau, 德国

Biomaterials Asia 2009 conference

2009 年 4 月 5-8 日, 香港 (会议报告)

学术职务

美国化学会会员

*J. Chem. Phys.*等国际权威期刊审稿人