

陈全博士

联系方式

地址: 311 Steidle Bldg, University Park, PA 16802, U.S.A

Email: chenquant@gmail.com

电话: +1(650)518-6078



教育背景:

- 1999年9月-2003年7月: 本科学位: 上海交通大学化学化工学院高分子化学与物理专业
指导教师: 周持兴
- 2004年9月-2007年3月: 硕士学位: 上海交通大学化学化工学院高分子化学与物理专业
指导教师: 俞炜
- 2007年11月-2011年3月: 博士学位: 日本京都大学化学研究所分子工学专业
毕业论文: 相容聚合物共混物组份的分子动力学 *Component Dynamics in Miscible Polymer Blends and Block Copolymers*
指导教师: Hiroshi Watanabe

科研背景:

- 2011年3月-2012年2月: G-COE 项目博士后, 日本京都大学化学研究所
研究课题: 限制空间中聚合物链段和链的分子动力学
Dynamics of Polymer Blocks/Chains in Confined Space.
指导教师: Hiroshi Watanabe
- 2012年3月-现在: 博士后: 宾夕法尼亚州州立大学材料科学与工程专业
指导教师: Ralph H. Colby
研究课题: 聚合物单离子导体的流变学行为和导电机理 (美国能源部 DOE 项目)
Rheology and ion transport of single-ion conductors.

学术职务:

美国流变协会, 美国物理学会, 日本流变协会会员, *Macromolecules*, *Journal of Rheology*, *Applied Surface Science* 审稿人 (2012-2013年 *Macromolecules* 审稿数排名前300 审稿人; 2013-2014年 *Macromolecules* 审稿数排名前100 审稿人)

科研兴趣与方向:

高分子物理, 流变学, 分子结构与动力学研究。研究体系包括共混物, 聚合物纳米复合材料, 聚合物电解质特别是单离子导体。

Rheology, Dynamics, and Structure of Macromolecules and Related Systems, including polymer blends, nanocomposites, and polyelectrolyte in particular single-ion conductor.

荣誉:

- 2009-2011 日本学术振兴会研究员 (JSPS Scholarship)
2008-2009 村田奖学金
2003 上海交通大学优秀毕业生

英文专著章节, 综述文章

1. Watanabe, H.; Matsumiya, Y.; **Chen, Q.**; and Yu, W. Rheological Characterization of Polymeric Liquids. *Comprehensive Polymer Science*, 2nd Ed., edited by Krzysztof Matyjaszewski and Martin Möller, Elsevier, Oxford, UK, **2012** (由 Martin Möller 和 Krzysztof Matyjaszewski 主持编写).

代表性的科研文章 (*通讯作者)


共二十二篇, 其中第一作者 (含共同一作) 文章十七篇, SCI 大区一区文章十二篇,

2. **Chen, Q.***; Huang, C.; Weiss R.A.; and Colby, R.H. Viscoelasticity of Reversible Gelation for Ionomers. *Macromolecules* **2015**, *48*, 1221-1230.
3. **Chen, Q.**; Gong, S.S.; Moll, J.; Zhao, D.; Colby, R.H.*; Kumar S.K. Mechanical Reinforcement of Polymer Nanocomposites from Percolation of a Nanoparticle Network. *ACS Macro Letters* **2015** (已接收)
4. **Chen, Q.**; Masser, H.; Shiau, H.S.; Liang S.; Runt, J.; Painter P.C.; and Colby, R.H.* Linear Viscoelasticity and Fourier Transform Infrared Spectroscopy of Polyether-Ester-Sulfonate Copolymer Ionomers. *Macromolecules* **2014**, *47*, 3635-3644.
5. **Chen, Q.***; Uneyama, T Linear Viscoelasticity of Unentangled Corona Blocks and Star Arms. *Rheologica Acta* **2014**, *53*, 701-714.
6. Gong, S.S.; **Chen, Q.** (共同一作); Moll, J.; Kumar S.K.; Colby, R.H.* Segmental Dynamics of Polymer Melts with Spherical Nanoparticles. *ACS Macro Letters* **2014**, *3*, 773-777.
7. **Chen, Q.**; Liang, S. (共同一作); Shiau, H.; and Colby, R.H.* *Linear Viscoelastic and Dielectric Properties of Phosphonium Siloxane Ionomers*. *ACS Macro Letters* **2013**, *2*, 970-974.
8. **Chen, Q.**; Gregory, J.T.; and Colby, R.H.* Ionomer Dynamics and the Sticky Rouse Model. Invited paper to *Journal of Rheology*, **2013**, *57*, 1441-1462. (基于 2013 美国流变学会最高奖宾汉奖获奖报告, 2013 年 9 月 *Journal of Rheology* 杂志点阅量排名前十)
9. **Chen, Q.**; Matsumiya, Y.; Iwamoto, T. Nishida, K.; Kanaya, T.; Watanabe, H.*; Takano, A.; Matsuoka, K.; and Matsushita, Y. Dielectric Behavior of Guest *cis*-Polyisoprene Confined in Spherical Microdomain of Triblock Copolymer. *Macromolecules* **2012**, *45*, 2809-2819.
10. **Chen, Q.*** Creep Dynamics in Non-entangled Miscible Polymer Blends and Block Copolymers. *Rheologica Acta* **2012**, *51*, 569-577.
11. **Chen, Q.*** Conformational Evolution Under Steady Shear Flow: a Comparison Between Cyclic and Linear Block Copolymers. *Rheologica Acta* **2012**, *51*, 343-355.
12. **Chen, Q.**; Matsumiya, Y.; Masubuchi, Y.; Watanabe, H.*; and Inoue, T. Dynamics of Polyisoprene-Poly(*p*-tert-butyl styrene) Diblock Copolymer in Disordered State. *Macromolecules* **2011**, *44*, 1585-1602.

13. Watanabe, H.*; **Chen, Q.**; Kawasaki, Y.; Matsumiya, Y.; Inoue, T.; and Urakawa, O. Entanglement Dynamics in Miscible Polyisoprene/Poly(*p*-*tert*-butyl styrene) Blends. *Macromolecules* **2011**, *44*, 1570-1584.
14. **Chen, Q.**; Matsumiya, Y.; Masubuchi, Y.; Watanabe, H.*; and Inoue, T. Component Dynamics in Polyisoprene/Poly(4-*tert*-butylstyrene) Miscible Blends. *Macromolecules* **2008**, *41*, 8694-8711.

其他科研文章:

15. **Chen, Q.**; Colby R.H.* Linear Viscoelasticity of Oligomeric Sulfonated Styrene near the Sol-gel Transition. *Korea-Australia Rheology Journal* **2014**, *26*(3), 257-261. (邀请文章)
16. Liang, S.; O'Reilly, M.V.; Choi, U.H.; Shiau, H.; Bartels, J.; **Chen, Q.**; Runt, J.; Winey, K.I.*; Colby, R.H.* High Ion-Content Siloxane Phosphonium Ionomers with Very Low *T*. *Macromolecules* **2014**, *47*, 4428-4437.
17. **Chen, Q.**; Matsumiya, Y.; and Watanabe, H.* Dynamics in Miscible Blends of Polyisoprene and Poly(*p*-*tert*-butyl styrene): Thermo-Rheological Behavior of Components. Invited paper to *Polymer Journal* **2012**, *44*, 102-114. (邀请文章)
18. Wang, Q.; **Chen, Q.**; Yang, Y.H.*; Shao, Z.Z.* Effect of Various Dissolution Systems on the Molecular Weight of Regenerated Silk Fibroin. *Biomacromolecules* **2013**, *14*, 285-289.
19. Matsumiya, Y.; **Chen, Q.**; Akiko, U.; Watanabe, H.*; Takano, A.; Matsuoka, K.; and Matsushita, Y. Dielectric Behavior of Styrene-Isoprene (SI) and SIIS Copolymers: Global Dynamics of I Blocks in Spherical and Cylindrical Domains Embedded in Glassy S Matrix. *Macromolecules* **2012**, *51*, 7050-7060.
20. **Chen, Q.**; Uno, A.; Matsumiya, Y.; and Watanabe, H.* Viscoelastic Mode Distribution of Moderately Entangled Linear Polymers. *Journal of the Society of Rheology, Japan* **2010**, *38*, 187-193.
21. **Chen, Q.**; Yu, W.*; and Zhou, C.X. Rheological Properties of Immiscible Polymer Blends under Parallel Superposition Shear Flow. *Journal of Polymer Science Part B: Polymer Physics* **2008**, *46*, 431-440.
22. **Chen, Q.**; Yu, W.*; and Zhou, C.X. Transient Stresses and Morphology of Immiscible Polymer Blends under Varying Shear Flow. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* **2008**, *326*, 175-183.
23. 陈全; 俞炜*; 周持兴. 液滴在大振幅振荡剪切流动中的非线性行为研究, *力学学报* **2007**, *39*, 528-532

For more information, see Google scholar 

已投稿或准备中的科研文章:

24. **Chen, Q.***; and Colby, R.H. *Viscoelasticity of Entangled Polystyrene Ionomers* (即将投稿 *Journal of Rheology*)

25. **Chen, Q.**; Bao, N.; Wang, H.J.; Tunic, T.; Liang, S.; and Colby, R.H.* *Linear Viscoelasticity and Dielectric Spectroscopy of Ionomer/Plasticizer Mixtures: a Transition from Ionomer to Polyelectrolyte* (即将投稿*Macromolecules*)
26. **Chen, Q.**; Colby, R.H.* *Miscible Polymer Blends Dynamics*. (应*Progress in Polymer Science*主编Guy C. Berry和Krzysztof Matyjaszewski邀稿的综述文章, 即将投稿)
27. Liang, S.; **Chen, Q.** (共同一作); Choi, U.H.; Runt, J.; and Colby, R.H.* *Non-volatile Polar Plasticizers in Single-Ion Li Conducting Gel Electrolytes*. (准备中)
28. LaFemina, N.; Roach, D.J.; **Chen, Q.**; Colby, R.H.; Mueller, K.T.* *The Diffusion and Conduction of Lithium Cations in Poly(Ethylene Oxide) Based Sulfonate Ionomers*. (准备中)

代表性的会议口头报告:

1. **Chen, Q.**; Wang, J.-H.; Liang, S.; Tunic, T.; Bao, N.; Colby, R.H. Linear viscoelasticity and dielectric spectroscopy of ionomer/plasticizer mixtures: A transition from ionomer to polyelectrolyte, *The Society of Rheology 86th Annual Meeting*, Philadelphia, U.S.A, Oct. 2014.
2. **Chen, Q.**; Tudryn, G. J.; Shiau, S.; Colby, R.H. Linear Viscoelasticity of polyether-ester-sulfonate copolymer ionomers, *The Society of Rheology 85th Annual Meeting*, Montréal, Canada, Oct. 2013.
3. **Chen, Q.**; Liang, S.; Choi, U.H.; Runt, J.; Colby, R.H. Linear Viscoelastic Properties of Ionomers with Bulky Phosphonium Cations, *APS annual meeting*, Baltimore, U.S.A, March. 2013.
4. **Chen, Q.** Dynamics in Miscible Blends of Polyisoprene and Poly(*p*-*tert*-butyl styrene) : Thermo-Rheological Behavior of Components. *The 6th International Workshop for Far East Asian Young Rheologists (IWEAYR-6)*, Yamagata, Japan, Jan. 2011.
5. **Chen, Q.**; Matsumiya, Y; and Watanabe, H. Dynamics of Disordered Diblock Copolymer: Poly(isoprene-*b*-4-*tert*-butyl styrene). *The 5th Pacific Rim Conference on Rheology*, Sapporo, Japan, Aug. 2010.
6. **Chen, Q.** Dynamics of Disordered Diblock Copolymer: Poly(isoprene-*b*-*p*-*tert*-butyl styrene). *The 5th International Workshop for Far East Asian Young Rheologists (IWFEAYR-5)*, Pusan, Korea, Jan. 2010.
7. **Chen, Q.**; Matsumiya, Y.; Masubuchi, Y.; and Watanabe, H. Dynamics of Disordered Diblock Copolymer: Poly(isoprene-*b*-*p*-*tert*-butyl styrene)", *The 4th International Workshop for Far East Asian Young Rheologists (IWFEAYR-4)*, Nakhon Ratchasima, Thailand, Jan. 2009.
8. **Chen, Q.** Terminal Dynamics of Disordered Diblocks of Polyisoprene and Poly (4-*tert*-butyl styrene). *JAPAN- KOREA Polymer Young Scientist Symposium*, Niigata, Japan, Oct. 2008.
9. **Chen, Q.**; Matsumiya, Y.; Masubuchi, Y.; and Watanabe, H. Component Dynamics in Polyisoprene/Poly(4-*tert*-butyl styrene) Miscible Blends. *The XVth International Congress on Rheology*, Monterey, USA, Aug. 2008.
10. **Chen, Q.**; Matsumiya, Y.; Masubuchi, Y.; and Watanabe, H. Component Dynamics in

Polyisoprene/Poly(4-*tert*-butyl styrene) Miscible Blends. *The 3rd International Workshop for Far East Asian Young Rheologists (IWFEAYR-3)*, Shanghai, China, Jan. 2008.

11. **Chen, Q.**; Yu, W.; and Zhou, C.X. Transient Behavior of Immiscible Polymer Blends under Varying Flow Field. *The 2nd International Workshop for Far East Asian Young Rheologists (IWFEAYR-2)*, Kyoto, Japan, Jan. 2007.
12. **Chen, Q.**; Yu, W.; and Zhou, C.X. Rheological and Morphological Properties of Polymer Blends under Parallel Superposition Flow. *The 1st International Workshop for Far East Asian Young Rheologists (IWFEAYR-1)*, Seoul, Korea, Feb. 2006.

邀请报告

1. **Chen, Q.** Dynamics of Miscible Polymer Blends and Block Copolymers, *Special Polymer Physics Seminar*, State College, USA, Jul. 2012.
2. **Chen, Q.** Component Dynamics in Miscible Polymer Blends and Block Copolymers. *The 5th Workshop and Summer School on Complex Fluids*, Shanghai, China, Jul. 2011.

授课经验

2014 年宾州州立大学春季学期 研究生课程 Polymer physics 六课时授课，主讲高分子链的构象。

3 位推荐专家：

Hiroshi Watanabe (日本京都大学化学研究所教授):

地址: Institute for Chemical Research

Kyoto University

Uji 611-0011, Kyoto, Japan

E-mail: hiroshi@scl.kyoto-u.ac.jp

Tel: +81(0774) 38-3135

Ralph H Colby (美国宾州州立大学教授):

地址: 309 Steidle Building

Dept. of Materials Science and Engineering

The Pennsylvania State University

University Park, PA, 16802-5007, USA

Email: rhc@plmsc.psu.edu

Tel: +1(814) 863-3457

Robert A Weiss (美国阿克伦大学教授)

地址: Department of Polymer Engineering

The University of Akron,

Akron, Ohio 44325, USA

Email: rweiss@uakron.edu

Tel: +1(330) 972-2581