



Department: School of Chemical Engineering
Professional field: Chemical Engineering and Technology
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Profile

Education

2001: PhD, Polymer, Karlsruhe University, Germany.
1992: ME, Biomedical Engineering, Sichuan University, China.
1989: BE, Chemical Engineering, Tsinghua University, China.

Academic Experience

2006-present: ECUST, Professor.
2005-2006: Princeton University, Research Staff Member.
2002-2005: Princeton University, Postdoctoral Research Associate.
2001-2002: Indiana University-Purdue University at Indianapolis, Post-doctor.
1994-1998: Sichuan University, Lecturer.
1992-1994: Sichuan University, Assistant Lecturer.

Non-academic Experience

2001.2-8: BASF, Post-doctor, Product rheological analysis, part time.
2009-present: Asia Paint, Consultant, advice on new products, part time.

Research Field

Functional polymer material, energy chemical industry, material chemical industry

Research results and selected published papers

1. Yiming Wang, Frank Versluis, Sander Oldenhof, Vasudevan Lakshminarayanan, Kai Zhang, Yunwei Wang, Jie Wang, Rienk Eelkema*, Xuhong Guo*, Jan H. van Esch*, Directed Nanoscale Self-Assembly of Low Molecular Weight Hydrogelators Using Catalytic Nanoparticles, *Adv Mater* 2018, 30(21), 1707408 1-7.
2. Tao Li, Tongshuai Wang, Jun Xu*, Run Zou, Zhongye Si, Julian Becker, Li Li, Martien A. Cohen Stuart, Robert K. Prud'homme, Xuhong Guo*, Pressure Effect on the Rheological Behavior of Waxy Crude Oil with Comb-Type Copolymers Bearing Azobenzene Pendant, *Ind Eng Chem Res* 2018, 57 (14), 4887-4894.
3. Ang Li, Yunfei Jia, Shengtong Sun*, Yisheng Xu*, Burcu Minsky, M.A. Cohen Stuart, Helmut Coelfen, Regine von Klitzing, Xuhong Guo*, Mineral enhanced polyacrylic acid as oyster-inspired organic-inorganic hybrid adhesive. *ACS Applied Materials & Interfaces* 2018, 10(12), 10471-10479.
4. Tao Li, Jun Xu*, Run Zou, Hao Feng, Li Li, Junyou Wang, Martien A. Cohen Stuart, Xuhong Guo*, Resin from Liaohe heavy oil: Molecular structure, aggregation behavior and effect on oil viscosity, *Energ & Fuel* 2018, 32, 306-313.
5. Yiqing Wang, Feng Yu*, Mingyuan Zhu, Cunhua Ma, Dan Zhao, Chao Wang, Amin Zhou, Bin Dai, Junyi Ji*, Xuhong Guo*, N-doping of plasma exfoliated graphene oxide via dielectric barrier discharge plasma treatment for oxygen reduction reaction, *J Mater Chem A* 2018, 6, 2011-2017.
6. Weihua Wang, Li Li*, Katja Henzler, Yan Lu, Junyou Wang, Haoya Han, Yuchuan Tian, Yunwei Wang, Zhiming Zhou, Gudrun Lotze, Theyencheri Narayanan, Matthias Ballauff, Xuhong Guo*, Protein immobilization onto cationic spherical polyelectrolyte brushes studied by small angle X-ray scattering. *Biomacromolecules* 2017, 18(5), 1574-1581.
7. Rui Zhang*, Lei Wang, Zheqi Shen, Ming Li, Xuhong Guo*, and Yuan Yao*, Ultrastretchable, tough, and notch-insensitive hydrogels formed with spherical polymer brush crosslinker. *Macromol Rapid Comm* 2017, 38(22), 17004551-5.
8. Haoya Han, Li Li*, Weihua Wang, Yuchuan Tian, Yunwei Wang, Junyou Wang, Regine von Klitzing, Xuhong Guo*, Core-Shell-Corona Silica Hybrid Nanoparticles Templated by Spherical Polyelectrolyte Brushes: A Study by Small Angle X-ray Scattering, *Langmuir* 2017, 33(38), 9857-9865.
9. Yiming Wang, Jie Wang*, Zhenyu Yuan, Haoya Han, Tao Li, Li Li and Xuhong Guo*, Chitosan cross-linked poly(acrylic acid) hydrogels: Drug release control and mechanism. *Colloid Surface B* 2017, 152, 252-259.
10. Tao Li, Jun Xu*, Run Zou, Hejian Jiang, Junyou Wang, Li Li, Martien A. Cohen Stuart, Robert K. Prud'homme, Xuhong Guo*, Effect of spacer length between phenyl pendant and backbone in comb copolymers on flow ability of waxy oil with asphaltenes. *Ind Eng Chem Res* 2017, 56(44), 12447-12455.
11. Xiaochi Liu, Ding Hu, Ziwen Jiang, Jiaming Zhuang, Yisheng Xu*, Xuhong Guo*, Sankaran Thayumanavan*, Multi-Stimuli Responsive Amphiphilic Assemblies through Simple Post Polymerization Modifications. *Macromolecules* 2016, 49(17), 6186-6192.
12. Weina Wang, Yisheng Xu, Sebastian Backes, Ang Li, Samantha Micciulla, A. Basak Kayitmazer, Li Li, Xuhong Guo* and Regine von Klitzing. Construction of compact polyelectrolyte multilayers inspired by marine mussel: Effects of salt concentration and pH as observed by QCM-D and AFM. *Langmuir* 2016, 32(14), 3365-3374.
13. Jun Xu*, Hejian Jiang, Tao Li, Xiaoming Wei, Tongshuai Wang, Jing Huang, Weina Wang, Anthony L. Smith, Jie Wang, Rui Zhang, Yisheng Xu, Li Li, Robert K. Prud'homme, Xuhong Guo*, Effect of Comb-type Copolymers with Various Pendants on Flow Ability of Heavy Crude Oil, *Ind Eng Chem Res* 2015, 54(19), 5204-5212.
14. Mingwei Wang, Nan Yang, Zhiqian Guo*, Kaizhi Gu, Andong Shao, Wei-Hong Zhu, Yisheng Xu*, Jie Wang, Robert K. Prud'homme, Xuhong Guo*, Facile Preparation of AIE-active Fluorescent Nanoparticles through Flash Nanoprecipitation, *Ind Eng Chem Res* 2015, 54(17), 4683-4688.
15. Yu Cang, Rui Zhang*, Guixin Shi, Jianchao Zhang, Lixiao Liu, Xiaoyan Hou, Zhenchuan Yu, Dingye Fang, Xuhong Guo*, Immobilized CdS quantum dots in spherical polyelectrolyte brushes: fabrication, characterization and optical properties, *J Mater Chem C* 2015, 3(15), 3745-3751.
16. Xuanji Yu, Shibin Huang, Kaimin Chen, Zhiming Zhou, Xuhong Guo*, Li Li*, Preparation of functional Janus particles with response to magnetic force, *Ind Eng Chem Res* 2015, 54(10), 2690-2696.
17. Jing Huang, Jun Xu*, Kaimin Chen, Tongshuai Wang, Chao Cui, Xiaoming Wei, Rui Zhang, Li Li, Xuhong Guo*, Synthesis of triblock copolymers via RAFT polymerization and their effects on oil-in-water emulsification, *Ind Eng Chem Res* 2015, 54(5), 1564-1575.
18. Mi Wang, Yanfeng Gao*, Chuanxiang Cao, Kaimin Chen*, Yicun Wen, Dingye Fang, Li Li, Xuhong Guo*, Binary solvent colloids of thermosensitive poly(N-isopropylacrylamide) microgel for smart window, *Ind Eng Chem Res* 2014, 53(48), 18462-18472.
19. Yisheng Xu, Siyi Wang, Haoya Han, Kaimin Chen, Li Qin, Jun Xu, Jie Wang, Li Li, and Xuhong Guo*, Enhancement of enzymatic activity by magnetic spherical polyelectrolyte brushes: A potential recycling strategy for enzymes, *Langmuir* 2014, 30, 11156-11164.
20. Xiaochi Liu, Yisheng Xu*, Shijian Ma, Yunfei Ma, Ayyaz Ahmad, Yuchuan Tian, Xinhua Zhong*, Xuhong Guo*, Encapsulation of Quantum Dot Clusters in Stimuli-responsive Spherical Polyelectrolyte Brushes, *Ind Eng Chem Res* 2014, 53(28), 11326-11332.
21. Kaimin Chen, Subinoy Rana, Daniel F. Moyano, Yisheng Xu, Xuhong Guo*, Vincent M. Rotello*, Optimizing the selective recognition of protein isoforms through tuning of nanoparticle hydrophobicity, *Nanoscale* 2014, 6(12), 6492-9495.
22. Jianjia Liu, Jie Wang*, Zhongming Zhu, Li Li, Xuhong Guo*, Stephen F. Lincoln, Robert K. Prud'homme, Cooperative catalytic activity of alpha-cyclodextrin and Ag nanoparticles immobilized on spherical polyelectrolyte brushes, *AIChE J* 2014, 60(6), 1977-1982.
23. Muxian Shen, Li Li, Yimin Sun, Jun Xu, Xuhong Guo*, Robert K. Prud'homme, Rheology and adhesion of poly(acrylic acid)/Laponite nanocomposite hydrogels as biocompatible adhesives, *Langmuir* 2014, 30(6), 1636-1642.
24. Yicun Wen, Xuhong Guo, Surachate Kalasin, and Maria M. Santore*, Capture of soft particles on electrostatically heterogeneous collectors: Brushy particles. *Langmuir* 2014, 30(8), 2019-2027.