



Shicheng Zhao

Department: School of Chemical Engineering
Professional field: Chemical Engineering and Technology,
Materials Chemistry and Engineering
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Profile

2012-2019: Associate professor of East China University of Science and Technology

2012-2013: Visiting Scholar at Harvard University

2019- : Professor of East China University of Science and Technology

Prof. Shicheng Zhao received his PhD from East China University of Science and Technology (ECUST) and then worked as a teacher in ECUST in 2008. Currently, he is a member of Microchemical Technology Specialized Committee of Chemical Industry and Engineering Society of China; a member of Expert Committee of China Plastic Processing Association; a member of the 10th Polymer Specialized Committee of Shanghai Society of Chemistry and Chemical Industry; and the editorial board member of China Plastics Industry. He has published more than 40 papers in SCI international journals like Nano Research, Chemical Engineering Journal, Polymer etc.; authorized 4 patents; and undertaken three projects of National Natural Science Foundation of China.

Research Field

- 1.Design and preparation of high-performance polyolefin additives and its mechanism
- 2.Reactive Extrusion Processing Technology for Polyolefins
- 3.Structural design and processing technology of medical polymer materials
- 4.Continuous preparation of chemicals based on microchannel reactors

Research results and main published thesis

Our scientific research focuses on the regulation of crystallization, reaction extrusion, structure-property relationship and modification mechanism of polymers. We invented a series of new and efficient polymer additives, including nucleating agents, flame retardants, heat-resistant agents, etc.; established the structure-property relationship of polymers; developed a series of modified polymers as well as molding and processing technologies; investigated continuous preparation of chemicals based on microfluidic technology and microchannel reactors.

Main published thesis:

1. Wu Songting, Xin Zhong, Zhao Shicheng*, Sun Shengtong*. High-throughput droplet microfluidic synthesis of hierarchical metal-organic framework nanosheet microcapsules. Nano Research, 2019, 12(11):2736-2742.
- 2.Qin Wei, Xin Zhong, Pan Chunmeng, Sun Shibao, Jiang Xiaofeng, Zhao Shicheng*. In situ formation of zinc phthalate as a highly dispersed β -nucleating agent for mechanically strengthened isotactic polypropylene, Chemical Engineering Journal, 2019, 358: 1243-1252.
- 3.Chen Hong, Jia Feng, Zhu Chengcheng, Xu Jumei, Hua Xiaobin, Xi Zhenhao, Shen Liang, Zhao Shicheng*, Cen Lian*. Controllable preparation of SB-3CT loaded PLGA microcapsules for traumatic-brain-injury pharmaco-therapy. Chemical Engineering Journal, 2018, 339, 346-358.
4. Zhao Shicheng, Qin Wei, Xin Zhong, Zhou Shuai, Gong Hanzhang, Ni Yeming, Zhang Ke. In situ generation of a self-dispersed beta-nucleating agent with increased nucleation efficiency in isotactic polypropylene. Polymer, 151:84-91.
5. Zhao Shicheng, Liu Kehua, Zhou Shuai, Shi Yaoqi, Xin Zhong. A novel self-dispersed β nucleating agent for isotactic polypropylene and its unique nucleation behavior and mechanism. Polymer, 2017, 132: 69-78.
6. Zhao Shicheng, Yu Xin, Gong Hanzhang, Xin Zhong, Shi Yaoqi, Zhou Shuai. The crystallization behavior of isotactic polypropylene induced by a novel antinucleating agent and its inhibition mechanism of nucleation. Ind. Eng. Chem. Res. 2015, 54, 7650-7657.