Sulfur-Containing Polymers: From Synthesis to Functional Materials
Xing-Hong Zhang (Editor), Patrick Theato (Editor)

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**DESCRIPTION**

A must-have resource to the booming field of sulfur-containing polymers

*Sulfur-Containing Polymers* is a state-of-the-art text that offers a synthesis of the various sulfur-containing polymers from low-cost sulfur resources such as elemental sulfur, carbon disulfide (CS2), carbonyl sulfide (COS) and mercaptan. With contributions from noted experts on the topic, the book presents an in-depth understanding of the mechanisms related to the synthesis of sulfur-containing polymers. The book also includes a review of the various types of sulfur-containing polymers, such as: poly(thioester)s, poly(thioether)s and poly(thiocarbonate)s and poly(thiourethane)s with linear or hyperbranched (dendrimer) architectures. The expert authors provide the fundamentals on the structure-property relationship and applications of sulfur-containing polymers.

Designed to be beneficial for both research and application-oriented chemists and engineers, the book contains the most recent research and developments of sulfur-containing polymers. This important book:

- Offers the first comprehensive handbook on the topic
- Contains state-of-the-art research on synthesis of sulfur containing polymers from low-cost sulfur-containing compounds
- Examines the synthesis, mechanism, structure properties, and applications of various types of sulful-containing polymers
- Includes contributions from well-known experts
Written for polymer chemists, materials scientists, chemists in industry, biochemists, and chemical engineers, *Sulfur-Containing Polymers* offers a groundbreaking text to the field with information on the most recent research.

## ABOUT THE AUTHOR

Xing-Hong Zhang is the Deputy Dean of Department of Polymer Science and Engineering, Zhejiang University. He received his B.S. degree (2000) from Fuyang Teachers College and M. Eng. degree (2003) from Shantou University. In 2003, he joined Professor Guo-Rong Qi's group at Zhejiang University, where he received his PhD degree in 2006. He then became Associate Professor and full professor at the end of 2009, 2016, respectively at Zhejiang University. During 2012-2013, he worked as a visiting scholar at Dr. Jeffrey S. Moore’s group at Beckman Institute for Advanced Science and Technology, University of Illinois at Urbana-Champaign. His current research interest focuses on the synthesis and catalysis of sulfur-containing polymers and polycarbonates. He has published 80+ peer-reviewed papers and held 20 authorized Chinese invention patents and 2 authorized U.S. patents.

Patrick Theato is Full Professor at Karlsruhe Institute of Technology (KIT), Germany. He studied chemistry at Mainz (Germany) and Amherst (USA), and received his Ph.D. in 2001 from the University of Mainz with Prof. R. Zentel. After postdoctoral research with Prof. D.Y. Yoon (Seoul National University, Korea) and Prof. C.W. Frank (Stanford University, USA), he joined the University of Mainz as a young faculty member and completed his Habilitation in 2007. From 2009 to 2012 he held a joint appointment with the School of Chemical and Biological Engineering at Seoul National University within the World Class University program. In 2011 he accepted a prize senior lectureship at the University of Sheffield, UK. Shortly after he moved to University of Hamburg, Germany. From 2011 to 2017, he is Associate Professor for Polymer Chemistry at University of Hamburg. Since 2018, he becomes full professor at KIT. His current research interests mainly focus on the synthesis of precisely tailored polymers.

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