DESCRIPTION

Due to their use and importance in many fields, a great deal of research focuses on developing inorganic materials. For example, a computer contains many types of inorganic materials, including the glass in the display or a layer of the LCD screen, the metal wires, and semiconductor materials in the chips and other electronic components. Computers can even be powered by solar cells, which also include inorganic materials. Zeolites also belong to this class and are found in applications ranging from catalysts to cat litter.

This third edition of the popular textbook contains 30% new and/or revised content to reflect the latest developments in this fast developing field. Written from the chemist's point of view, the well-known and experienced authors provide a thorough and pedagogical introduction, now including example real-life applications of the syntheses, as well as new sections on nanomaterials, templating methods and biomineralization.

A valuable resource for advanced undergraduates as well as masters and graduate students in inorganic chemistry and materials science.

ABOUT THE AUTHOR

Ulrich Schubert has been Professor of Inorganic Chemistry at the Institute of Materials Chemistry, Vienna University of Technology, since 1994. He received his PhD from the Technical University of Munich, under the supervision of E.O. Fischer.
He then worked as a postdoctoral researcher with W.S. Johnson at Stanford University. From 1982 to 1994 he held a chair in inorganic chemistry at the University of Würzburg, as well as various positions at the Fraunhofer Institute of Silicate Research in Würzburg from 1989 to 1994. His research interests are centered around application-oriented fundamental research on solgel processes and inorganic-organic hybrid materials.

Nicola Hüsing was appointed Professor of Materials Chemistry at the Paris-Lodron University of Salzburg, Austria in 2010. She received her PhD in 1997. The following year she was awarded a post-doctoral fellowship with C.J. Brinker in Alberquerque, USA. Returning to Vienna, she gained her lecturing qualification in 2003, becoming a full professor of inorganic chemistry at the University of Ulm one year later.

Professor Hüsing’s research interests focus on the liquid phase synthesis of porous materials, inorganic-organic hybrid materials and mesoscopically organized systems, especially with respect to synthesis - structure - property relations.

NEW TO EDITION

The book will be completely updated and revised, a few out-dated topics will be deleted and missing topics will be implemented.

* The chapter on nanomaterials will be rewritten to accommodate new developments and new sub-chapters will be included.

* There will be a new chapter on templating methods.

* The subchapter on biomineralization will be rewritten.

* Examples of industrially applied syntheses will be implemented.

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