DESCRIPTION

Polymers are huge macromolecules composed of repeating structural units. While polymer in popular usage suggests plastic, the term actually refers to a large class of natural and synthetic materials. Due to the extraordinary range of properties accessible, polymers have come to play an essential and ubiquitous role in everyday life - from plastics and elastomers on the one hand to natural biopolymers such as DNA and proteins on the other hand. The study of polymer science begins with understanding the methods in which these materials are synthesized. Polymer synthesis is a complex procedure and can take place in a variety of ways. This book brings together the "Who is who" of polymer science to give the readers an overview of the large field of polymer synthesis. It is a one-stop reference and a must-have for all Chemists, Polymer Chemists, Chemists in Industry, and Materials Scientists.

ABOUT THE AUTHOR

A. Dieter Schlüter is since 2004 Professor for polymer chemistry at the Materials Department of the ETH Zürich. He studied chemistry and geophysics at the University of Munich and received in 1984 his PhD under the supervision of Prof. G. Szeimies. After post-doctoral fellowships with Prof. K. P.C. Vollhardt (UC Berkeley, USA) and Prof. W.J. Feast (University of Durham, UK) he was head of the polymer synthesis research group in Prof. G. Wegner's department at the Max-Planck-Institut für Polymerforschung (Mainz, Germany). 1991 he finished his habilitation, received a scholarship award of the Fonds der Chemischen Industrie and started as Professor for polymer chemistry at the...
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Junji Sakamoto is currently a Habilitand at the Swiss Federal Institute of Technology (ETH) Zurich. Born in Kyoto, Japan in 1973, he studied chemistry and polymer science at Kyoto University, and earned his PhD in 2002 on the synthesis of polysaccharides under the supervision of Prof. S. Kobayashi. He carried out his postdoctoral research with Prof. K. Müllen at the Max-Planck-Institute for Polymer Research in Mainz, Germany, working on the synthesis of dendrimers (2002-2004). He then moved to the group of Prof. A.D. Schlüter at ETH Zurich, Switzerland, working on the synthesis of macrocycles, where since 2006 he has been a group leader for 2D polymers, Suzuki polycondensation and new polymerization methodology leading to unprecedented structures.