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Advances in Polymer Science

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Advances in Polymer Science

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The series presents critical reviews of the present and future trends in polymer and biopolymer science including chemistry, physical chemistry, physics and material science. It is addressed to all scientists at universities and in industry who wish to keep abreast of advances in the topics covered.

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Volume Editor

Prof. Dr. Michael R. Buchmeiser

Institute for Analytical Chemistry and Radiochemistry
University of Innsbruck
Innrain 52a
6020 Innsbruck, Austria
michael.r.buchmeiser@uibk.ac.at

Editorial Board

Prof. Akihiro Abe

Department of Industrial Chemistry
Tokyo Institute of Polytechnics
1583 Iiyama, Atsugi-shi 243-02, Japan
aabe@chem.t-kougei.ac.jp

Prof. A.-C. Albertsson

Department of Polymer Technology
The Royal Institute of Technology
S-10044 Stockholm, Sweden
aila@polymer.kth.se

Prof. Ruth Duncan

Welsh School of Pharmacy
Cardiff University
Redwood Building
King Edward VII Avenue
Cardiff CF 10 3XF, United Kingdom
duncan@cf.ac.uk

Prof. Karel Dušek

Institute of Macromolecular Chemistry,
Czech Academy of Sciences of the
Czech Republic
Heyrovský Sq. 2
16206 Prague 6, Czech Republic
dusek@imc.cas.cz

Prof. Dr. W. H. de Jeu

FOM-Institute AMOLF
Kruislaan 407
1098 SJ Amsterdam, The Netherlands
dejeu@amolf.nl
and

Dutch Polymer Institute
Eindhoven University of Technology
PO Box 513
5600 MB Eindhoven, The Netherlands

Prof. Jean-François Joanny

Institute Charles Sadron
6, rue Boussingault
F-67083 Strasbourg Cedex, France
joanny@europe.u-strasbg.fr

Prof. Hans-Henning Kausch

c/o IGC I, Lab. of Polyelectrolytes
and Biomacromolecules
EPFL-Ecublens
CH-1015 Lausanne, Switzerland
kausch.cully@bluewin.ch

Prof. S. Kobayashi

Department of Materials Chemistry
Graduate School of Engineering
Kyoto University
Kyoto 615-8510, Japan
kobayasi@mat.polym.kyoto-u.ac.jp

Prof. Kwang-Sup Lee

Department of Polymer Science &
Engineering
Hannam University
133 Ojung-Dong
Daejeon 306-791, Korea
kslee@mail.hannam.ac.kr

Prof. L. Leibler

Matière Molle et Chimie
Ecole Supérieure de Physique
et Chimie Industrielles (ESPCI)
10 rue Vauquelin
75231 Paris Cedex 05, France
ludwik.leibler@espci.fr

Prof. Timothy E. Long

Department of Chemistry
and Research Institute
Virginia Tech
2110 Hahn Hall (0344)
Blacksburg, VA 24061, USA
telong@vt.edu

Prof. Ian Manners

Department of Chemistry
University of Toronto
80 St. George St.
M5S 3H6 Ontario, Canada
imanners@chem.utoronto.ca

Prof. Dr. Martin Möller

Deutsches Wollforschungsinstitut
an der RWTH Aachen e.V.
Pauwelsstraße 8
52056 Aachen, Germany
moeller@dwi.rwth-aachen.de

Prof. Oskar Nuyken

Lehrstuhl für Makromolekulare Stoffe
TU München
Lichtenbergstr. 4
85747 Garching, Germany
oskar.nuyken@ch.tum.de

Dr. E. M. Terentjev

Cavendish Laboratory
Madingley Road
Cambridge CB 3 0HE
United Kingdom
emt1000@cam.ac.uk

Prof. Brigitte Voit

Institut für Polymerforschung Dresden
Hohe Straße 6
01069 Dresden, Germany
voit@ipfdd.de

Prof. Gerhard Wegner

Max-Planck-Institut
für Polymerforschung
Ackermannweg 10
Postfach 3148
55128 Mainz, Germany
wegner@mpip-mainz.mpg.de

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Preface

Clearly illustrated and demonstrated by the entire series of *Advances in Polymer Science.*, the area of polymer science is a rapidly developing and growing field, strongly influencing other areas of chemistry. Among other polymerization techniques, those based on metathesis polymerization have experienced significant progress. With a rapidly developing armory of initiators on hand, one is now capable of polymerizing various types of functional monomers by metathesis-based techniques. Thus, ring-opening metathesis polymerization (ROMP) uses strained monomers such as (substituted) norborn-2-enes, norbornadienes, benzbarrelenes, etc. Acyclic diene metathesis (ADMET) polymerization utilizes functional α,ω -dienes. And finally, an almost unlimited number of 1-alkynes as well as 1,6-heptadiynes may be polymerized via 1-alkyne or cyclopolymerization to yield highly conjugated materials. The latest developments in all these areas of metathesis-based polymerizations are summarized in this book. It is designed to attract equally students and advanced scientists working in the areas of polymer science, physical, and organometallic chemistry by providing both extensive background information and up-to-date interdisciplinary knowledge. Special consideration has been given to the literature sections in order to facilitate further reading.

Any edited book strongly depends on the quality of every individual contribution. It was both my privilege and honor to win over such well-known authors. I wish to thank all of them for the time they spent on writing the corresponding chapters and for the unprecedented timely delivery of their contributions. Both their professional attitude and the quality of their manuscripts have made my job as an editor an easy one. With their contributions, I am convinced that we now have a book that represents the state of the art and is comprehensive summary of the status quo in the selected research areas.

What remains to be done is to thank all those who have provided professional help, i.e. *Springer* and in particular *Ms. Ulrike Kreusel*, for her support, encouraging e-mails and patience.

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