

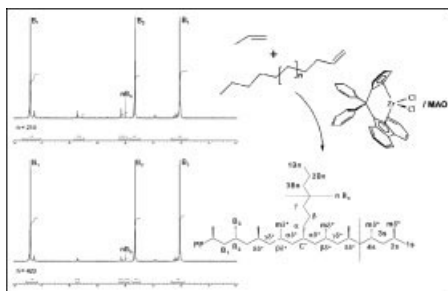
Macromolecular Symposia

Articles published on the web will appear several weeks before the print edition.
They are available through:



www.interscience.wiley.com

Cover: The Hamburg Macromolecular Symposia have been organized by the Institute of Technical and Macromolecular Chemistry of the University of Hamburg on annual basis since 1976. The meetings are dedicated to different specific fields of polymer science and are the place for discussions of leading research groups from academies and industry. The Hamburg Macromolecular Symposium 2005 had the topic “Polyolefin polymerization”. This research field is predestined for a cooperation between different faculties such as physics, chemistry, materials science, and engineering under the slogan “From molecule to material”. As an example, the picture shows ^{13}C NMR spectra of long-chain branched syndiotactic poly(propylene) with ethene-based side chains (please see contribution by S. Rulhoff and W. Kaminsky).



Olefin Polymerization

Hamburg (Germany), 2005

Preface

W. Kaminsky

Topic A: New Catalysts and Cocatalysts

Ansa-Metallocenes by Intramolecular Ring Closure Reactions – Syntheses and Applications

Gerhard Erker

I1

Metallocene Catalysts for Olefin Oligomerization	<i>Christoph Janiak, Frederik Blank</i>	14
Syndiospecific Polymerization Catalysts for Styrene Based on Rare Earth Metal Half-Sandwich Complexes	<i>Julia Hitzbleck, Klaus Beckerle, Jun Okuda,* Tobias Halbach, Rolf Mülhaupt</i>	23
Novel Initiators for Thermally and UV-Triggered ROMP	<i>Yan Zhang, Dongren Wang, Peter Lönnecke, Thomas Scherzer, Michael R. Buchmeiser*</i>	30
Single-Site Organochromium Catalysts: Synthesis, Characterisation by Paramagnetic NMR and Olefin Polymerisation	<i>Markus Enders</i>	38
Activation of Metallocyclopropenes, five-membered Metallocyclocumulenes and Metallocyclopentynes of Zirconium with $t\text{-Bu}_2\text{AlH}$	<i>Vladimir V. Burlakov,* Marc A. Bach, Marcus Klahn, Perdita Arndt, Wolfgang Baumann, Anke Spannenberg, Uwe Rosenthal</i>	48
^{19}F NMR Investigations of the Reaction of $\text{B}(\text{C}_6\text{F}_5)_3$ with Different Tri(alkyl)aluminum Compounds	<i>Christoph Janiak,* Paul-Gerhard Lassahn</i>	54
Topic B: Kinetics, Mechanism, and Polymer Reaction Engineering		
Methylalumoxane (MAO)-Derived MeMAO^- Anions in Zirconocene-Based Polymerization Catalyst Systems – A UV-Vis Spectroscopic Study	<i>Ulrich Wieser, Frank Schaper, Hans-Herbert Brintzinger*</i>	63
Solvent-Ligated Transition Metal Complexes as Initiators for the Polymerization of Isobutene	<i>Oskar Nuyken,* Mario Vierle, Fritz E. Kühn, Yanmei Zhang</i>	69
Microkinetic Videomicroscopic Analysis of the Olefin-Copolymerization with Heterogeneous Catalysts	<i>Daniela Ferrari, Stefan Knoke, Bernd Tesche, Gerhard Fink*</i>	78

Metal Complexes for the Vinyl Addition Polymerization of Norbornene: New Compound Classes and Activation Mechanism with $B(C_6F_5)_3/AlEt_3$	<i>Christoph Janiak,* Paul-Gerhard Lassahn, Vasile Lozan</i>	88
Anion Influence in Metallocene-based Olefin Polymerisation Catalysts	<i>Polly A. Wilson, Mark H. Hannant, Joseph A. Wright, Roderick D. Cannon, Manfred Bochmann*</i>	100
Living Olefin Polymerisation and Block Copolymer Synthesis in the Presence of a Single-site Catalyst Containing a Phenoxyimine Ligand	<i>Marc-Stephan Weiser,* Rolf Mülhaupt</i>	111
Synthesis of Very Small Polymer Particles by Catalytic Polymerization in Aqueous Systems	<i>Stefan Mecking,* Vincent Monteil, Johannes Huber, Ludmila Kolb, Peter Wehrmann</i>	117
Tandem Copolymerization: An Effective Control of the Level of Branching and Molecular Weight Distribution	<i>Marco Frediani,* Christian Piel, Walter Kaminsky, Claudio Bianchini, Luca Rosi</i>	124
Using the Transfer Function of an Isoperibolic Reaction Calorimeter for Thermo-kinetic Analysis	<i>Arnd-Lüder Gaulke,* Werner Pauer, Hans-Ulrich Moritz</i>	134
Topic C: Synthesis of Special Polymers		
New Polyolefin Nanocomposites and Catalyst Supports Based on Organophilic Boehmites	<i>Rainer Xalter, Tobias S. Halbach, Rolf Mülhaupt*</i>	145
Control of Ultrahigh Molecular Weight Polypropene Microstructures via Asymmetric “Dual-Side” Catalysts	<i>C. Cobzaru, B. Rieger*</i>	151
Ethylene/1,3-Cyclohexadiene Copolymerization by Means of Methylaluminoxane Activated Half-Sandwich Complexes	<i>Dirk E. Heiser, Frederic Pelascini, Dominic Kramer, Jennifer Scott, Sandro Gambarotta, Jennifer McCahill, Douglas W. Stephan, Jun Okuda, Rolf Mülhaupt*</i>	156

Direct Copolymerization of Propene and Ethene-based Macromers to Produce Long Chain Branched Syndiotactic Polypropene	<i>S. Rulhoff, W. Kaminsky*</i>	161
New Materials Designed by Coordination Polymerization of ω -undecenyl Macromonomers	<i>Frédéric Peruch,* Edgar Catari, Said Zahraoui, François Isel, Pierre Joseph Lutz*</i>	168
Coordination Homopolymerization of ω -undecenyl Poly(styrene- <i>block</i> -isoprene) Macromonomers in the Presence of CGC-Ti/MAO Complexes	<i>Edgar Catari, Frédéric Peruch, François Isel, Pierre Joseph Lutz*</i>	177
PP/PMMA Block Copolymers by Combination of ATRP and Metallocene Catalysis	<i>Albrecht Dix, Saija Ptacek, Sven Poser, Manfred Arnold</i>	186
Synthesis of Copolymers with Sterically Hindered and Polar Monomers	<i>Matthias Donner, Mercia Fernandes, Walter Kaminsky*</i>	193
Polymerization of Polar Monomers Using Cyclopentadienyl Complexes of the Alkaline Earth Metals	<i>Alexandra Steffens, Herbert Schumann*</i>	203
Topic D: Characterization of Polyolefins		
Rheological Characterization of Long-chain Branched Polyethylenes and Comparison with Classical Analytical Methods	<i>Florian J. Stadler, Christian Piel, Walter Kaminsky, Helmut Münstedt*</i>	209
The Rheology of Linear and Long-chain Branched Polymer Melts	<i>Manfred H. Wagner</i>	219
Characterization of Branched Polyolefins by High Temperature GPC Utilizing Function Specific Detectors	<i>K. Tribe, G. Saunders, R. Meißner</i>	228
Sorption Studies of Propylene in Polypropylene Polymerized with Novel Ziegler-Natta-Catalysts in Liquid and Gas Phase	<i>M. Patzlaff, A. Wittebrock, K.-H. Reichert</i>	235
The Study of Cavitation in HDPE Using Time Resolved Synchrotron X-ray Scattering During Tensile Deformation	<i>K. Schneider,* S. Trabelsi, N.E. Zafeiropoulos, R. Davies, Chr. Riekel, M. Stamm</i>	241
Morphology Evolution in the Early Stages of Olefin Polymerization	<i>Xuejing Zheng, Joachim Loos</i>	249

Arndt, P.	48	Monteil, V.	117
Arnold, M.	186	Moritz, H.-U.	134
Bach, M. A.	48	Mülhaupt, R.	23, 111, 145, 156
Baumann, W.	48	Münstedt, H.	209
Beckerle, K.	23	Nuyken, O.	69
Bianchini, C.	124	Okuda, J.	23, 156
Blank, F.	14	Patzlaff, M.	235
Bochmann, M.	100	Pauer, W.	134
Brintzinger, H.-H.	63	Pelascini, F.	156
Buchmeiser, M. R.	30	Peruch, F.	168, 177
Burlakov, V. V.	48	Piel, C.	124, 209
Cannon, R. D.	100	Poser, S.	186
Catarí, E.	168, 177	Ptacek, S.	186
Cobzaru, C.	151	Reichert, K.-H.	235
Davies, R.	241	Rieger, B.	151
Dix, A.	186	Riekkel, Chr.	241
Donner, M.	193	Rosenthal, U.	48
Enders, M.	38	Rosi, L.	124
Erker, G.	1	Rulhoff, S.	161
Fernandes, M.	193	Saunders, G.	228
Ferrari, D.	78	Schaper, F.	63
Fink, G.	78	Scherzer, T.	30
Frediani, M.	124	Schneider, K.	241
Gambarotta, S.	156	Schumann, H.	203
Gaulke, A.	134	Scott, J.	156
Halbach, T.	23	Spannenberg, A.	48
Halbach, T. S.	145	Stadler, F. J.	209
Hannant, M. H.	100	Stamm, M.	241
Heiser, D. E.	156	Steffens, A.	203
Hitzbleck, J.	23	Stephan, D. W.	156
Huber, J.	117	Tesche, B.	78
Isel, F.	168, 177	Trabelsi, S.	241
Janiak, C.	14, 54, 88	Tribe, K.	228
Kaminsky, W.	124, 161, 193, 209	Vierle, M.	69
Klahn, M.	48	Wagner, M. H.	219
Knoke, S.	78	Wang, D.	30
Kolb, L.	117	Wehrmann, P.	117
Kramer, D.	156	Weiser, M.-S.	111
Kühn, F. E.	69	Wieser, U.	63
Lassahn, P.-G.	54, 88	Wilson, P. A.	100
Lönnecke, P.	30	Wittebrock, A.	235
Loos, J.	249	Wright, J. A.	100
Lozan, V.	88	Xalter, R.	145
Lutz, P. J.	168, 177	Zafeiropoulos, N. E.	241
McCahill, J.	156	Zahraoui, S.	168
Mecking, S.	117	Zhang, Y.	30, 69
Meißner, R.	228	Zheng, X.	249