Macro- and Supramolecular Architectures and Materials

Selected Contributions
from the conference:
“4th International Symposium on
Macro- and Supramolecular Architectures
and Materials: Synthesis, Properties and
Applications (MAM-08)”
in: Düsseldorf (Germany),
September 7 – 11, 2008

Symposium Editors:

Helmut Ritter
(Heinrich-Heine-Universität, Germany),
Kurt E. Geckeler
(Gwangju Institute of Science
& Technology (GIST), South-Korea),
Monir Tabatabai, Ella Bezdushna,
Carsten Koopmans, Maricica Munteanu
(Heinrich-Heine-Universität, Germany)

© 2010 WILEY-VCH Verlag GmbH & Co. KGaA
Weinheim
Cover: The conference sponsored by IUPAC and DFG, continued the series of MAM symposia. The aim of this congress was to bring together scientists from over the world to present scientific and technological findings related to the areas of polymer chemistry (macromolecular) and extended molecular networks (supramolecular). The cover was composed by the editors.

Macro- and Supramolecular Architectures and Materials
Düsseldorf (Germany), September 7 - 11, 2008

Preface

H. Ritter
K. E. Geckeler

Modular Synthesis and Electronic and Hole-Transport Properties of Monodisperse Oligophenothiazines

Thomas J. J. Müller,*
Adam W. Franz,
Christa S. Barkschat (née Kämer),
Markus Sailer,
Klaus Meerholz,
David Müller,
Alexander Colsmann,
Uli Lemmer

Chromophoric Barbituric Acid Derivatives with Adjustable Hydrogen-Bonding Patterns as Component for Supramolecular Structures

Ina Bolz, Mirko Bauer,*
Anja Rollberg,
Stefan Spange*
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligent Hydrogels Via Gamma-Ray Induced Polymerization of Micellar Monomer Solutions and Microemulsions</td>
<td>Tatjana Friedrich, Bernd Tieke*</td>
<td>16</td>
</tr>
<tr>
<td>Ion-selective Membranes Prepared Upon Layer-by-Layer Assembly of Azamacrocycles and Polyelectrolytes</td>
<td>Kristina Hoffmann, Ashraf El-Hashani, Bernd Tieke*</td>
<td>22</td>
</tr>
<tr>
<td>Nano-Encapsulation of Proteins Via Self-Assembly with Lipids and Polymers</td>
<td>Alexandra Dalla-Bona,*</td>
<td>32</td>
</tr>
<tr>
<td>Dendritic Macromolecules as Inhibitors to Protein-Protein Binding</td>
<td>Fumiko Chiba, Ting Chou Hu, Lance J. Twyman, *</td>
<td>37</td>
</tr>
<tr>
<td>Rotaxanes and Catenanes Derived from Tetra-Urea Calix[4]arenes</td>
<td>Volker Böhmer,*</td>
<td>42</td>
</tr>
<tr>
<td>Synthesis of Cyclodextrin and Sugar-Based Oligomers for the Efavirenz Drug Delivery</td>
<td>Indrajit Shown, Sudip Banerjee, A.V. Ramchandran, Kurt E. Geckeler, C. N. Murthy*</td>
<td>51</td>
</tr>
<tr>
<td>Unexpected Interactions of an Alternating Poly(ether-ester) with Artificial and Biological Bilipidic Membranes</td>
<td>Nicolas Illy, Laurent Bacri, Justyna Wojno, Damien Destouches, Blandine Brissault, José Courty, Loïc Auvray, Jacques Penelle, Valessa Barbier*</td>
<td>60</td>
</tr>
<tr>
<td>Water-Soluble Polymers and Their Polymer-Metal Ion-Complexes as Antibacterial Agents</td>
<td>Bernabé L. Rivas,*</td>
<td>69</td>
</tr>
<tr>
<td>Ultrasound-Triggered Release of Ibuprofen from a Chitosan-Mesoporous Silica Composite - a Novel Approach for Controlled Drug Release</td>
<td>Antonio Maureira N., Catherine Guzmán S.</td>
<td>80</td>
</tr>
<tr>
<td>Isolation of a Dosage Dependent Lethal Mutation in Ubiquitin Gene of Saccharomyces Cerevisiae</td>
<td>C. Ratna Prabha,*</td>
<td>89</td>
</tr>
<tr>
<td>Aging of Polyimides in High Temperature Environments</td>
<td>Jan U. Wieneke,*</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Claudia Staudt</td>
<td></td>
</tr>
</tbody>
</table>
Crystallization and Physical Ageing of Poly(2-vinyl pyridine)-b-poly(ethylene oxide) Diblock Copolymers

Polymeric Monolithic Media: Synthesis, Pore Size Selective Functionalization and Applications

Influence of the Operative Conditions on the Characteristics of Poly(D,L-lactide-co-glycolide) Synthesized in Supercritical Carbon Dioxide

Oligomeric Branched Polyethers with Multiple Hydroxyl Groups by Cationic Ring-Opening Polymerization for Inorganic Surface Modification

Novel Functional Mesoporous Materials Obtained from Nanostructured Diblock Copolymers

Pore Modification in Porous Ceramic Membranes With Sol-Gel Process and Determination of Gas Permeability and Selectivity

CVD Growth of Carbon Nanotubes and Nanofibers: Big Length and Constant Diameter

TiO$_2$-Functionalized Sulphur Containing Polyimides for Optical Applications

Evolution of Fiber Morphologies during Poly (acrylonitrile) Electrospinning
Using Neural Networks or Linear Models to Predict the Characteristics of Microcapsules Containing Phase Change Materials

Luz Sánchez,
Paula Sánchez,
Antonio De Lucas,
Manuel Carmona,
Juan Francisco Rodríguez*

Impact of Low-Dosage Inhibitors on Clathrate Hydrate Stability

Tatiana Kuznetsova,*
Alla Sapronova,
Bjørn Kvatnme,
Klaus Johannsen,
Jarle Haug