

PMSE Division of ACS

American Chemical Society

Division of Polymeric Materials:
Science and Engineering

PMSE Preprints Volume 97, Fall 2007

Papers Presented at the
Boston, Massachusetts Meeting

August 19-23, 2007
Boston, Massachusetts, USA

Volume 1 of 2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

ISBN: 978-1-60560-019-2

Some format issues inherent in the e-media version may also appear in this print version.

ISBN: 978-1-60560-019-2

Copyright (2007) by the PMSE Division of ACS.
All rights reserved.

For permission requests, please contact the PMSE Division of ACS at the address below.

PMSE Division of ACS
Proceedings
5200 Bayway Drive
Baytown, Texas 77520

PMSE Division of ACS
American Chemical Society
Fall Division of Polymeric Materials:
Science and Engineering
2007

TABLE OF CONTENTS

VOLUME 1

Effects of Aggregation on the Emissive Properties of PPV Oligomers	1
<i>G. Sherwood, R. Cheng, T. Smith, J. Wildeman, D. Yaron, L. Peteanu</i>	
Nanoscale Organization in Thin Films of Regioregular Poly(3-hexylthiophene) Block Copolymers	3
<i>R. Zhang, M. Iovu, G. Sauve, J. Cooper, A. Javier, D. Smilgies, R. McCullough, T. Kowalewski</i>	
Sub-Micron Scale Pattern of Poly (ethylenedioxythiophene) (PEDOT) Grafted on Flexible Polymer Substrates	5
<i>S. Im, P. Yoo, P. Hammond, K. Gleason</i>	
Morphological Control for Multicomponent Organic Electronics Using Rod-Coil Block Copolymers	7
<i>B. Olsen, Y. Tao, X. Li, M. Toney, J. Wang, R. Segalman</i>	
New Polyurethanes with Carbazole and OXD Derivate as Hole-Transporting Layer for Organic Light Emitting Diodes	9
<i>C. Ku, C. Kuo, M. Leung, K. Hsieh</i>	
Probing Morphology Effects of OLED Using First Principle Calculations	11
<i>P. Yang, E. Batista, S. Tretiak, A. Saxena, R. Martin, D. Smith</i>	
Synthesis, Characterization, Optical and Electroluminescent Properties of Novel Fluorene-Acceptor Polyfluorene-based Copolymers/Polyblends and Their Application for Color Tunable Devices	12
<i>C. Kuo, K. Lin, W. Cheng, K. Hsieh</i>	
Study of Fuel Cells Thin Film Morphologies by Grazing Incidence Small Angle X-ray Scattering (GISAXS)	15
<i>T. Irita, T. Russell, X. Li, M. Kondo, H. Aoyama</i>	
Inorganic Modification of Ionic Block Copolymers for High Temperature PEM Application	17
<i>M. Mistry, N. Choudhury, N. Dutta, S. Holdcroft</i>	
Effect of Polyelectrolyte Tacticity on Protein-polyelectrolyte Interaction	19
<i>H. Zhang, J. Guenet, R. Curtis</i>	
In-vitro Biomineralization Induced by Self-Assembled Extracellular Matrix Proteins	21
<i>X. Ba, Y. Meng, Y. Huang, H. Furedi-Milhofer, S. Kwak, S. Ge, Y. Qin, E. DiMasi, N. Pernodet, M. Rafailovich</i>	
Interfacial Peptides for the Cellularization of Titanium Implants	22
<i>S. Meyers, X. Khoo, D. Kenan, M. Grinstaff</i>	

Locally Controlled Release of Basic Fibroblast Growth Factor from Biodegradable Hollow Capsules	23
<i>Y. Itoh, M. Matsusaki, T. Kida, M. Akashi</i>	
Novel Fibrillar Protein Hydrogel as Tissue Engineering Scaffolds	24
<i>H. Yan, J. Gough, A. Nykanen, J. Ruokolainen, A. Miller</i>	
Novel Semi-Crystalline PVA Hydrogel as Load-Bearing Cartilage Substitute	26
<i>H. Bodugoz-Senturk, E. Oral, J. Choi, J. Kung, C. Macias, O. Muratoglu</i>	
Peptide Surface Modification of p(HEMA-co-MMA)-b-PIB-b-p(HEMA-co-MMA) Block Copolymers to Enhance Endothelialization	28
<i>U. Ojha, D. Feng, A. Chadekar, J. Whitten, R. Faust</i>	
Preparation and Characterization of an Artificial Peptide with Repetitive Sequences	31
<i>S. Gerber, K. Kirchhof, J. Kressler, C. Schmelzer, C. Scholz, T. Hertel, M. Pietzsch</i>	
Reversible Encapsulation of DNA into Semipermeable Polymer Capsules	34
<i>A. Zelikin, A. Becker, Q. Li, K. Wark, F. Caruso</i>	
Synthesis and Characterization of Engineered Proteins with Controllable Properties for Use in Spinal Cord Nerve Regeneration	35
<i>K. Straley, S. Heilshorn</i>	
Tailored Protein-Based Nanocarriers	37
<i>G. Mihov, R. Gropeanu, C. Kuhlmann, H. Luhmann, T. Weil</i>	
Transitional Metal Binding in Designed Peptide Block Copolymer Micelles.....	38
<i>A. Richardson, S. Banerjee, J. Wright, M. Case, D. Savin</i>	
Amphiphilic Homopolymers: An Alternate Approach to Self-Assembled Nanostructures.....	40
<i>E. Savariar, S. Aathimanikandan, S. Thayumanavan</i>	
Effect of Geometric Shape on Nano-Dispersion of Carbon Nanotubes and Layered Platelets.....	42
<i>J. Lin, Y. Lan, K. Wei, Y. Chan</i>	
Effects of Chemical Structure of Unsaturated Polyester on the Volume Shrinkage Characteristics for Unsaturated Polyester-Montmorillonite Nanocomposites	44
<i>Y. Huang, S. Hsu, C. Chu, Y. Andriani</i>	
Exfoliation of Natural Clays by Amphiphilic Copolymers to Nanoscale Silicate Platelets and their Antimicrobial Behavior.....	47
<i>J. Lin, C. Chu, M. Chiang</i>	
Impact Modifier Intercalant Usage in Layered Silica Based Polymeric Nanocomposites	49
<i>C. Bagcioglu, S. Sen, Y. Yagci, T. Nugay, N. Nugay</i>	
Influence of Specific Interactions in Controlling the State of Dispersion of MWNT in Co-continuous Polymer Blends	51
<i>S. Bose, A. Bhattacharyya, A. Kulkarni</i>	
Initial and Sequential Surface Modification of Electrospun Nano/Microfibers.....	53
<i>X. Sun, Q. Peng, H. Borner, G. Parsons, R. Spontak</i>	
Nanometer-Scale Tuning of Colloidal Photonic Crystals by Layer-by-Layer Self Assembly of Well-Defined Polyferrocenylsilane Polyelectrolytes.....	55
<i>Z. Wang, G. Masson, F. Peiris, G. Ozin, I. Manners</i>	

Preparation and Characterization of Poly(acrylic acid) Grafted Magnetite Nanoparticles	57
<i>D. Wu, L. Jiang, R. Jin</i>	
Preparation of Superparamagnetic Polyimide/y-Fe₂O₃ Nanocomposite Films	59
<i>D. Wu, J. Zhan, G. Tian, Z. Wu, R. Jin</i>	
Synthesis and Design of Electro-Active, Site Isolated Nanostructures for Applications in Bimodal Imaging and Devices	61
<i>C. Atkins, T. Croce, S. Hamilton, E. Harth</i>	
Fifty (Plus) Years of Polymer Nano-Science (Art)	62
<i>P. Geil</i>	
On the Crystallization Habits and Morphology of Nylon 66	65
<i>F. Khoury</i>	
Polymer Single Crystals: What About the Impact of the Folds?	66
<i>B. Lotz</i>	
Self Assembled Machines, in Lamellar Crystals, Driven by Stress or Electric Fields	68
<i>D. Reneker</i>	
Fifty-year Development of the Understanding of Motion and Defects in Macromolecular Crystals Based on Thermal Analysis, Structure Analysis, and Computer Simulation	70
<i>B. Wunderlich</i>	
Tuning Surface and Interface Properties Through Crystal Engineering	75
<i>S. Cheng, H. Xiong, R. Van Horn, W. Zhang</i>	
Free Radical Synthesis of Rubbers Made Entirely from Highly Unsaturated Vegetable Oils and Derivatives	76
<i>M. Valverde, R. Larock</i>	
Functionalized Norbornene Polyacetals for Use in Photoresist Applications	78
<i>J. Adams, R. Callahan, W. Durand, C. Steger, G. Willson</i>	
Hybrid Polymers Based on Polyolefins and Non-Polyolefins as Functional Materials	80
<i>N. Kawahara, J. Saito, S. Matsuo, H. Kaneko, T. Matsugi, N. Kashiwa</i>	
N-Heterocyclic Carbene-Mediated Zwitterionic Polymerization: An Expedient Organocatalytic Route to Cyclic Polyesters	82
<i>W. Jeong, E. Shin, D. Culkin, J. Hedrick, R. Waymouth</i>	
Rod-Coil Diblock Polymerization from a Bifunctional NMRP Initiator	84
<i>R. Knoop, G. Habraken, H. Menzel, C. Koning, A. Heise</i>	
Synthesis and Morphological Study of Styrene/Acetoxystyrene/Hydroxystyrene Block-Random Copolymers	86
<i>J. Quinn, R. Register</i>	
Synthesis and Performance of Acrylamide-Dimethylaminoethylacrylate Methyl Chloride Quaternary Salt Copolymer as Flocculant	88
<i>R. Subramanian, P. Reed, S. Zhu</i>	
Synthesis of Dihydroxy Poly(ethylene-co-butadiene) Oligomers via Metathetical Depolymerization	90
<i>F. Lucas, A. Leblanc, F. Peruch, S. Carlotti, C. Boisson, A. Deffieux</i>	

Synthesis of Silicone Resins Containing Polystyrene and Poly(t-butyl acrylate) Grafts using ATRP and "Click" Chemistry	92
<i>M. Nasrullah, D. Webster</i>	
Synthesis of Antibacterial Zeolite-Polyurethane Composites	94
<i>K. Kamisoglu, E. Aksoy, B. Akata, N. Bac, N. Hasirci</i>	
Synthesis of [Bis(pyridine)salen]ZnII–Based Coordination Polymers and Their Application in Enantioselective Separations	95
<i>S. Cho, T. Gadzikwa, G. Emberger, R. Snurr, S. Nguyen, J. Hupp</i>	
Understanding Dendrimer Architecture Using a Combined Experimental and Theoretical Approach	97
<i>R. Hourani, M. Whitehead, A. Kakkar</i>	
Control of Polycarbonate Dendrimer Surface Functionality	99
<i>H. Willcock, A. Cooper, S. Rannard</i>	
Synthesis of Hyperbranched Polyglycerol via Ring-Opening Polymerization of Glycidol in a Microstructured Reactor	101
<i>D. Wilms, J. Nieberle, J. Klos, H. Lowe, H. Frey</i>	
Facially Amphiphilic Dendrimers on Surfaces	103
<i>Y. Chen, A. Ambade, D. Vutukuri, S. Thayumanavan</i>	
Hierarchical Polymeric Material with Chiral Selectivity	105
<i>R. Valluzzi, L. Liu</i>	
Synthesis and Characterization of a Novel RAFT Agent with Epoxy Group	106
<i>A. Vora, M. Nasrullah, D. Webster</i>	
Synthesis and Characterization of Polycarbosilane-g-PMMA Copolymers	108
<i>K. Oh, J. Hyun, C. Ryu, L. Interrante</i>	
Click Chemistry Approach to Graphitic Structures	110
<i>J. Hoogboom, M. Juricek, J. Lauko, J. Rehak, T. Woltinge, K. van de Ruit, K. Flipse, A. Rowan</i>	
Siloxane Block Copolymer Synthesis	112
<i>R. Chakraborty, M. Soucek</i>	
Ultra-high Pore Volume, Ultra-High Surface Area Porous Polymers	114
<i>D. Sherrington, A. Watt, R. Baudry, N. Cameron</i>	
Microporous Polymers: Synthesis, Properties and Simulation	116
<i>A. Cooper, J. Jiang, A. Trewin, F. Su, B. Tan, E. Stockel, H. Niu, N. Campbell, A. Ganin, C. Dickinson, M. Rosseinsky, Y. Khimyak, C. Wood</i>	
Polymers of Intrinsic Microporosity (PIMS): Multifunctional Organic Materials	117
<i>N. McKeown, B. Ghanem, K. Msayib, M. Carta, P. Budd, J. Selbie</i>	
Microporous Polyboronate Esters	119
<i>W. Tilford, W. Gemmill, S. Mugavero, H. Loye, J. Lavigne</i>	
Porous Polyurethane Dispersions	121
<i>A. Lubnin, S. Lenhard, V. Woodward</i>	
Proposed Synthesis of Ultrahigh Surface Area Hyper-Cross-Linked Nanoparticles by Miniemulsion Polymerisation	122
<i>J. Fay, N. Cameron</i>	
Mesoporous Crosslinked Polymers Tailored from (Semi-)IPNs: Scope and Limitations	124
<i>D. Grande, G. Rohman</i>	

Reversibly Phot-Cross-Linkable Honeycomb Materials	126
<i>L. Connal, R. Vestberg, C. Hawker, G. Qiao</i>	
Asymmetric Curvature of Growth Faces of Polymer Crystals	128
<i>M. Shcherbina, G. Ungar</i>	
Branching in Spherulites of Chain Folded Polymer Crystals: Periodic Rings and Correlation Length	130
<i>A. Toda, M. Okamura, M. Hikosaka, H. Kajjoka</i>	
Crystallization Control Using Optically Active (Chiral) Polymers	131
<i>D. Maillard, R. Prud'homme</i>	
Single Lamella Crystals of Polyethylene Accessible by Catalytic Emulsion-Polymerization	133
<i>C. Weber, A. Chiche, G. Krausch, S. Rosenfeldt, M. Ballauff, I. Gottker-Schnetmann, Q. Tong, S. Mecking, L. Harnau</i>	
Intimate Relationship Between Structural Change in Crystal Lattice and Morphological Change During the Phase Transition of Polymer Crystal	135
<i>D. Tashiro</i>	
Local Structures in Polymer Single Crystals Evidenced by High-Resolution Electron Microscopy	136
<i>M. Tosaka, M. Tsuji</i>	
Grain Boundaries, Dislocations, and Vacancies in Polymer and Organic Molecular Crystals	137
<i>J. Chen, C. Shaw, D. Martin</i>	
Cycle of Life: Estimating Service Life after Film Formation	139
<i>S. Croll, B. Hinderliter</i>	
Sorption and Diffusion of Water in Bio-Based Polymer Films	140
<i>J. Meisner, R. Cairncross</i>	
Drying Defects Tunable by Periodic Air Blowing: A Simple Modeling	141
<i>M. Yamamura, T. Uchinomiya, Y. Mawatari, H. Kage</i>	
Network Instability that Causes Macrovoids in Phase Inversion Membranes: Cryo-SEM Evidence and Theoretical Development	142
<i>S. Prakash</i>	
Layer-by-Layer Assembly of Think Multifunctional Coatings	143
<i>J. Grunlan</i>	
Measuring and Modeling Cure Conversion and Stress: Retrospective and Prospects in Coating Processes	145
<i>A. McCormick, D. O'Neal, B. Richter, L. Francis</i>	
Pattern Generation by Wrinkling in a Two-Layer Coating	146
<i>S. Basu, L. Francis, A. McCormick, L. Scriven</i>	
Molecular Biomimetics: Genetically Engineered Polypeptides as Building Blocks in Materials and Medicine	148
<i>M. Sarikaya</i>	
Biosynthetically Derived Polypeptides as Templates in Materials Design	149
<i>K. Kiick</i>	
Forward and Inverse Design of Hierarchically-Ordered Functional Assemblies from Anisotropic Nanocolloids	150
<i>S. Glotzer</i>	

Chemically Functionalized Viral Capsids for Light Harvesting and Diagnostic Imaging	151
<i>M. Francis</i>	
Bacteriophage Qβ: An Example of a Hierarchically Ordered Functional Device	152
<i>S. Brown, E. Jung, E. Strable, M. Finn</i>	
Petrification to Form Functional Hybrid Materials	153
<i>G. Gupta, P. Atanssov, S. Rathod, T. Ward, G. Lopez</i>	
Fabrication of Biodegradable Scaffolds via Supercritical Carbon Dioxide Foaming: Effect of Polymer Composition and Processing Conditions	154
<i>S. Howdle, K. Shakesheff, H. Tai</i>	
Polymeric Nanoparticles Designed for Targeted Delivery of Anticancer Drugs	155
<i>M. Shi, K. Ho, M. Shoichet</i>	
Cell Adhesion Molecules-targeted Polymeric Worm Micelles as Selective in vivo Drug Delivery Systems Against Endothelial Cells	156
<i>M. Ilies, Y. Kim, V. Shuvaev, S. Zaitsev, S. Cai, D. Discher, V. Muzykantov</i>	
Characterization of a Nanoporous Poly(1,8 octanediol-co-citrate) (POC) Biodegradable Elastomer	157
<i>R. Hoshi, G. Ameer</i>	
Design of Polyester-Based 3D Materials as Scaffolds for Bladder Tissue Engineering	159
<i>G. Rohman, J. Pettit, S. Baker, N. Cameron, J. Southgate</i>	
Emulsion-templated Porous Polymers Enabling Three-Dimensional Cell Growth	161
<i>R. Carnachan, M. Bokhari, S. Pyrzboriski, N. Cameron</i>	
Porous Materials Containing Biodegradable Polymers: High Internal Phase Emulsion Synthesis	163
<i>Y. Lumelsky, J. Zoldan, S. Levenberg, M. Silverstein</i>	
Model Porous Polymer Blends as a Route for Controlled Release	165
<i>P. Salehi, P. Sarazin, B. Favis</i>	
Nano Patterned Hydrogels as Scaffolds for Cardiac Tissue Regeneration	167
<i>A. Ranjan, T. Webster</i>	
Morphological Changes Upon Adding Nanotubes or Acid Groups to Polyethylene	168
<i>K. Winey</i>	
On the Shish Kebab Structure of Carbon Nanotube Induced Polymer Crystallization	170
<i>L. Li, B. Li, B. Wang, C. Li</i>	
Tailoring Onion-Like Morphology in Polylactide-containing Block Copolymers	172
<i>L. Sun, L. Rong, B. Hsiao, L. Zhu</i>	
Polymer Single Crystal Mediated Au Nanoparticle Assembly	174
<i>B. Li, C. Li</i>	
Low Voltage TEM and Scherrer Analysis of Bombyx Mori Silk Fiber Crystallites	176
<i>L. Drummy, R. Naik, B. Farmer</i>	
Beta Pleated Sheet Crystals in Silk Fibroin	178
<i>X. Hu, D. Kaplan, P. Cebe</i>	
Hierarchic Structure of Shish-Kebab by Neutron Scattering in a Wide Q Range	180
<i>T. Kanaya, G. Matsuba, Y. Ogino, K. Nishida</i>	

Control of Copolyptide Architecture Using Transition Metal Initiators for Amino Acid N-Carboxyanhydride Polymerization	182
<i>T. Deming</i>	
Ammonium-Mediated Polymerization of Amino Acid N-Carboxyanhydrides: Kinetic Investigations	183
<i>H. Schlaad, M. Meyer</i>	
Living Ring Opening Polymerization of Aminoacid-N-Carboxyanhydrides	185
<i>J. Cheng, H. Lu</i>	
Chemistry of the Molecules of Life: Total Synthesis of Enzymes for Biological Research	186
<i>S. Kent</i>	
Protein Engineering, a Versatile Technique in Materials Research	187
<i>J. van Hest</i>	
Cationic Protein Polymers as Scaffolds for Multivalent and Polyvalent Ligand Display, in Solution and in Crosslinked Hydrogels	188
<i>A. Barron, N. Davis, S. Ding, L. Karfeld, P. Messersmith</i>	
Biosynthetically Derived Glycopolypeptides for the Manipulation of Multivalent Binding Events	189
<i>K. Kiick</i>	
"Clicked" glycoprotein Mimics as Multivalent Displays for Lectins and Cells Recognition	190
<i>J. Geng, G. Mantovani, L. Tao, D. Mitchell, D. Haddleton</i>	
Synthesis of Peptide and Protein Polymer Conjugates by ATRP and RAFT Polymerization	192
<i>H. Maynard</i>	
Silica Nanoparticle Crystals and Ordered Coatings Using Lys-Sil and Novel Coating Device	193
<i>M. Snyder, A. Lee, T. Davis, L. Scriven, M. Tsapatsis</i>	
Influence of the Colloidal Stability of Latex Particles on their Distribution in Drying Films	194
<i>J. Keddie, P. Ekanayake, A. Konig, T. Weerakkody, N. Barber, D. Johannsmann, R. Sear, P. McDonald</i>	
Flow-Controlled Compaction of Latex Coatings	196
<i>J. de Santos, E. Arlinghaus, L. Scriven</i>	
Capillary Forces and Stress Development in Drying Latex Coating	197
<i>L. Pekurovsky, L. Scriven</i>	
New Controlled Environment Vitrification System for Preparing Wet Coatings for Cryo-SEM	198
<i>H. Ge, W. Suszynski, T. Davis, L. Scriven</i>	
Tess Award Presentation in Honor of L. E. (Skip) Scriven	199
<i>L. Scriven</i>	
Reaching for the Stars: Layered Polyvalent Self-Assembly of Hyperbranched Pigment Arrays	200
<i>J. Sly, C. Bonifacio, L. Chang, K. Glab, V. Lee, M. McNeil, M. Jefferson, J. Frommer, W. Risk, R. Miller</i>	
Nano-patterned Functional Polyelectrolyte Multilayers	202
<i>B. Nysten, B. Muls, J. Habib-Jiwan, A. Jonas</i>	

Investigation of the Structure of the Emitting Centers in the Spontaneously Formed Poly (4-vinyl pyridine) Gel	203
<i>E. Vaganova, N. Berestetsky, S. Yitzchaik, A. Goldberg</i>	
Magnetic Assembly of Functionalized Ferromagnetic Colloids as Templates for 1-D Ordered Mesostuctures	204
<i>S. Bowles, I. Shim, J. Benkoski, A. Karim, T. Kowalewski, M. Schalnat, R. Davis, J. Pemberton, J. Pyun</i>	
Novel Self-Assembling Pearl-Necklace Microstructure Induced by Partial Wetting in Ternary Polymer Blends	205
<i>N. Virgilio, P. Desjardins, G. L'Esperance, B. Favis</i>	
Replica Molding of High-Aspect-Ratio Hydrogel Micropillar Arrays and Study of their Pattern Collapse	207
<i>D. Chandra, J. Taylor, S. Yang</i>	
Stimuli Responsive Colloidal Systems: Hierarchical Assembly and Fabrication of Ultrahydrophobic Surfaces	209
<i>M. Motornov, R. Sheparovych, R. Lupitsky, E. MacWilliams, S. Minko</i>	
Structured Multiple Percolated Polymer Blends	211
<i>S. Ravati, N. Virgilio, J. Zhang, B. Favis</i>	
Complex Formation Between Opositely Charged Cylindrical Brushes and Dendrimers	213
<i>S. Duschner, D. Storkle, M. Maskos, M. Schmidt</i>	
Mechanically Robust Nanoporous Plastics from Multicomponent Block Copolymers	215
<i>M. Hillmyer, L. Chen, A. Meuler, D. Olson, F. Bates</i>	
Simple Route for Preparation of Nanoporous Templates	216
<i>S. Park, J. Wang, B. Kim, T. Russell</i>	
Synthesis of Porous Polymers by Hard and Soft Templates	217
<i>M. Antonietti, A. Thomas, P. Kuhn</i>	
Multiple Strategies Towards Nanoporous Thin Films from Block Copolymers	218
<i>C. Fustin, N. Lefevre, P. Guillet, B. Lohmeijer, U. Schubert, J. Gohy</i>	
Mesoporous Inorganic/Block-Copolymer and Carbon Films	220
<i>B. Chmelka, G. Athens</i>	
Effect of Stereochemistry and Stereocomplexation of Polylactides on Organosilicate Nanostructure	221
<i>S. Kim, F. Nederberg, R. Pratt, J. Choi, L. Zhang, C. Wade, R. Waymouth, J. Hedrick</i>	
Design of Mesoporous Materials with Controlled Porosity and Functionality from Nanostructured Diblock Copolymers	223
<i>B. Gorzolnik, J. Penelle, D. Grande</i>	
Block Copolymer Template with Carbon Dioxide for Nano-Cellular and Porous Structures	225
<i>H. Yokoyama, L. Li, C. Dutriez, K. Sugiyama</i>	
Panel Discussion on Opportunities and Challenges in Crystalline Polymers	226
<i>A. Lovinger</i>	
Molecular 'Hole Punchers' and their Mechanisms: From Synthetic Antimicrobials to HIV Protein Transduction Domains	227
<i>G. Wong</i>	

Hydrogels for Cell Encapsulation and Injectable Delivery via Peptide Folding and Consequent Self-Assembly	228
<i>D. Pochan</i>	
Non-Invasive Studies of Proteins and DNA Fragments by SEC and SEC Coupling Methods	229
<i>T. Hofe, G. Reinhold, D. Held, M. Gray</i>	
Influence of Network Parameters on the Properties of Dynamic, Protein-Based Hydrogels	231
<i>Z. Sui, W. King, W. Murphy</i>	
Polypeptide-Based Polymersomes as Biomimetic Nano-carriers	232
<i>W. Agut, C. Sanson, D. Taton, A. Soum, C. Schatz, S. Lecommandoux</i>	
Microstructure and Rheology of Amphiphilic Block Copolypeptide Gels	234
<i>V. Breedveld</i>	
Analytical Ultracentrifugation for the Characterization of Proteins and Protein Assemblies	235
<i>P. Schuck</i>	
Polypeptide Multilayer Nanofilms for Cell and Tissue Engineering	236
<i>D. Haynie, J. Rudra, N. Palath, L. Zhang, H. Handa, G. Mao</i>	
Collapse and Folding of a Small Protein Observed with Force-Clamp Spectroscopy	237
<i>J. Fernandez</i>	
Multi-Sensitive Hydrogel Thin Films- from Synthesis to Application	238
<i>C. Corten, A. Unger, B. Menges, D. Kuckling</i>	
Why Nanoconfinement May Lead to the Development of Polymer Glasses that do not Physically Age	240
<i>R. Priestley, L. Broadbelt, J. Torkelson</i>	
Plastic Near-Infrared Photodetectors Utilizing Low Band Gap Polymer	242
<i>Y. Yao, Y. Liang, L. Yu, Y. Yang</i>	
Facile Preparation of Fluorinated Conjugated Polymers Possessing Tunable Photoluminescence and Chemical Sensing	244
<i>S. Iacono, S. Budy, J. Moody, R. Smith, D. Smith Jr.</i>	
Aptamer Incorporated Polyelectrolyte Multilayer Films Targeting Influenza Virus's Hemagglutinin Binding Region	246
<i>S. Kidambi, I. Lee, C. Chan</i>	
Liquid Crystalline Co-Elastomers Displaying One-Way Shear Shape Memory	249
<i>K. Burke, P. Mather</i>	
Ultra-Strong, Transparent Polymer Nanocomposites with Stiffness Characteristic of Individual Nanoscale Clay Platelets	251
<i>P. Podsiadlo, A. Kaushik, B. Shim, A. Waas, E. Arruda, N. Kotov</i>	
Controlling Nanoscale Surface Assembly Using Ditopic Nucleobase-Containing Monomers	254
<i>S. Rowan, A. Kumar, S. Sivakova, J. Fox, R. Marchant</i>	
Nanostructured Block Copolymers with Inspiration from Biology	256
<i>B. Mather, M. Baker, S. Williams, F. Beyer, T. Long</i>	
Modeling Energy Transduction in Composite Materials that Encompass Chemo-Responsive Gels	258
<i>V. Yashin, O. Kuksenok, A. Balazs</i>	

Entropically Dominated Self-Assembly in Multi-Component Granular Systems	260
<i>M. Benedict, J. Maguire</i>	
Incorporation and Selective Localization of Bio-Nanoparticles in Thin Film of Water-Insoluble Block Copolymer	264
<i>T. Russell, D. Shin, L. Molnar, S. Kim, T. Xu</i>	
Synthesis of Asymmetrically Functionalized Nanoparticles via Polymer Single Crystals	265
<i>C. Li, B. Li</i>	
Nanoparticle-Induced Porosity in Rubbery 1,2-Polybutadiene and Its Effect on Gas Permeability	267
<i>S. Matteucci, V. Kusuma, B. Freeman</i>	
Conductive Polypyrrole/Polyurethane Composite Foams as Sensors for Volatile Organic Chemicals	269
<i>Y. Wang, G. Sotzing, R. Weiss</i>	
Diffusion of Entangled Linear Polymer Chains through a Porous Thin Gel Network by using Specially Prepared Small Core-Shell Particles	271
<i>C. Wu, Q. Song</i>	
Nanoporous Polymers for Hydrogen Storage	272
<i>J. Germain, J. Frechet, F. Svec</i>	
Atom Transfer Radical Polymerization Initiated from Surfaces of Ordered Mesoporous	274
<i>M. Kruk, B. Dufour, E. Celer, T. Kowalewski, M. Jaroniec, K. Matyjaszewski</i>	
Intrinsic Microporosity in Polyimides	276
<i>P. Budd, J. Selbie, M. Swal, N. McKeown, B. Ghanem, K. Msayib, D. Fritsch</i>	
Structure-Property Relationships in PEG-Based Hydrogels for Potential Hydrophilic Membrane Coating Materials	278
<i>A. Sagle, M. Shama, B. Freeman</i>	
New Insights into the Relationship Between Internal Phase Level of Emulsion Templates and Gas/Liquid Permeability of Open Porous Polymer Foams	280
<i>S. Manley, N. Graeber, A. Menner, F. Stepanek, G. Hewitt, A. Bismarck</i>	
Electrochemical Gating using a Responsive Polymer Gel Membrane	281
<i>I. Tokarev, M. Orlov, E. Katz, S. Minko</i>	
Crystallization of Perfectly Linear Polyethylene Inside Nanodomains	283
<i>S. Myers, R. Register</i>	
Crystallization of the Chiral Block Copolymers with Helical Nanostructures	285
<i>R. Ho, Y. Chiang</i>	
Manipulation of Athermal Nuclei in a Levitated Droplet of Aqueous Polyethylene Oxide	288
<i>J. Kornfield, A. Olsen, R. Flagan</i>	
Investigating Homogeneous Nucleation and Phase Transformations in iPP Nanodroplets Using Temperature Controlled AFM	293
<i>L. Kailas, C. Vasilev, J. Hobbs</i>	
Dynamic Formation of Shear-Induced Shish-Kebab Structure in Highly Entangled Melts of UHMWPE/HDPE Blends	294
<i>B. Hsiao, J. Keum, F. Zuo</i>	
Aspects of Crystallization in Polymer Blends	296
<i>J. Schultz</i>	

Crystallization Kinetics of Linear Polyethylene under Nanoscopic Cylindrical Confinements	298
<i>K. Shin, E. Woo, J. Huh, Y. Jeong</i>	
Virus Capsid Proteins as Building Blocks for Nanoreactors and New Materials	299
<i>J. Cornelissen, I. Reynhout, A. Dirks, F. Sikkema, M. Comellas-Aragones, A. Navazo, R. Nolte</i>	
Protein Engineering Methods for Investigation of Structure-Function Relationships in Protein-Based Elastomeric Materials	300
<i>V. Conticello</i>	
Metallopolymer-Peptide Conjugates: Synthesis and Self-Assembly of Polyferrocenylsilanes End-Functionalized with a β-Sheet Forming Tetrapeptide Segment	301
<i>S. Tangbunsuk, G. Whittell, M. Ryadnov, D. Woolfson, I. Manners</i>	
Self-Assembly of A-B-C Nanofibers and their Applications	303
<i>J. Hartgerink, H. Dong, V. Gauba, K. Galler, S. Paramonov</i>	
Biological Routes to Inorganic Material Synthesis	304
<i>J. Slocik, M. Gupta, L. Drummy, M. Tomczak, R. Naik</i>	
Combining Self-Assembling Cyclic Peptides with Soft Polymers for the Design of Shape-Defined Nanostructures	305
<i>M. Biesalski</i>	
Polymer Vesicles as Nanocompartments for Cascade Reactions	306
<i>W. Meier</i>	
Self-Assembly of Amyloid Peptide Fragments and Filaments	307
<i>I. Hamley, M. Krysmann</i>	
Switch it on: Controlled Peptide-Guided Assembly of Polymer-Peptide Conjugates	308
<i>H. Borner, J. Hentschel</i>	
Multiresponsive Vesicles from Well-Defined Polypeptides. Formation of Gene Vehicles	310
<i>H. Iatrou, N. Hadjichristidis</i>	
Controlling Novel Photocrosslinked Biomaterial Properties through Macromer Structure	311
<i>C. Chung, D. Brey, J. Ifkovits, J. Burdick</i>	
Tailoring the Architecture of Tissue Engineering Scaffolds Using Crosslinked Carboxymethylcellulose Hydrogels	313
<i>L. Lombardo, C. Guarraia, R. Reeves, A. Ribeiro, J. Leach</i>	
Biopolymer Gels and Ions	314
<i>F. Horkay</i>	
NMR Studies of RGD-Functionalized Hydrogels	316
<i>C. Rice, S. Carter, K. Meyer</i>	
Glassy, Block-Copolymer Surfactants as In Vivo and In Vitro Nanoparticle Stabilizers	318
<i>A. Taton, Y. Shibasaki, B. Kim, A. Young, Y. Chen, C. Zuo</i>	
Preparation and Characterization of Superparamagnetic Iron Oxide - Containing Polydiacetylenic Liposomes	319
<i>Y. Cai, E. de Muinck, R. Grubbs</i>	

Labeling of Shell Crosslinked Nanoparticles (SCKs) for MRI	321
<i>Z. Li, D. Banerjee, J. Zheng, G. Sun, J. Xu, P. Woodard, D. Moore, K. Wooley</i>	
Preparation of Shell Crosslinked Nanoparticles Containing pH-Sensitive Crosslinkers for Drug Delivery	322
<i>Y. Li, W. Du, G. Sun, K. Wooley</i>	
Drug Delivery with Polymeric Nanoparticles Through Cell Surface Tags	323
<i>Y. Iwasaki, M. Haruki, K. Akiyoshi</i>	
Thermoresponsive "Particle Pumps": Activated Release of Organic Nanoparticles from Hierarchical Macroporous Polymers	325
<i>H. Zhang, A. Cooper</i>	
Quasi-Transparent Hybrid Particles Using Atom Transfer Radical Polymerization	327
<i>L. Bombalski, H. Dong, J. Listak, K. matyjaszewski, M. Bockstaller</i>	
Nanoparticle Liquids for Reconfigurable Electronic Materials	328
<i>R. MacCuspie, A. Elsen, S. Patton, D. Jacobs, S. Diamanti, M. Arlen, A. Voevodin, R. Vaia</i>	
Post-Functionalization of Polymer Brushes for Patternable Nanoparticle Adsorption	330
<i>S. Diamanti, S. Arifuzzaman, A. Elsen, S. Wargacki, R. Naik, J. Genzer, R. Vaia</i>	
Self-Assembly and Dynamics of Peptide-Functionalized Polyphenylene Dendrimers	332
<i>G. Floudas, A. Gitsas, M. Mondeshki, H. Spiess, K. Muellen</i>	
Biomimetic Modular Design for High-Strength, High-Toughness Materials	334
<i>A. Kushner, J. Roland, V. Gabuchian, E. Johnson, Z. Guan</i>	
Critical Strand Length Controls the Mechanical Resistance of Beta-Sheets	335
<i>M. Buehler, S. Keten</i>	
hierarchical Self-Assembly of Hydrogen-Bonded Block Copolymer Complexes in Organic Solvents	338
<i>N. Lefevre, C. Fustin, J. Gohy</i>	
Side Chain Liquid Crystalline Block Copolymer Thin Films: Effects of Thermal Annealing Upon Morphology	340
<i>E. Verploegen, D. Boone, P. Hammond</i>	
Periodic Polymer/Air Structures for Photonics and Phononics	342
<i>C. Koh, J. Jang, M. Maldovan, T. Gorishnyy, T. Choi, E. Thomas</i>	
Macroporous Films, Colloidal Beads and Fibers	343
<i>Y. Xia</i>	
Nano- and Microporous Ion-Conducting Layer-by-Layer Assemblies	344
<i>J. Lutkenhaus, K. McEnnis, P. Hammond</i>	
Salt-Induced Electrospinning Method for Producing Porous Nylon 6 Nanofibers	346
<i>M. Afshari, A. Gupta, X. Zhang, A. Tonelli, S. Khan, R. Kotek</i>	
Delivery System for Self-Healing Metal Oxide Films	347
<i>H. Liu, B. Gnade, K. Balkus Jr.</i>	
Molecular Simulation of the Effect of Olefin Block Copolymer Microstructure on Lamellar Thickness	350
<i>J. Weinhold, G. Marchand, S. Chum</i>	
Preparation and Characterization of Silica- and Pore- Gradient Gels for Soft Actuator	353
<i>T. Asoh, M. Matsusaki, T. Kaneko, M. Akashi</i>	

Reversibly Porating Polymeric Materials	354
<i>F. Yan, D. England, H. Gu, J. Texter</i>	
Influence of Constitutional Defects on the Crystallization Properties of Isotactic Polypropylene: A Tool to Predict the Polymorphic Behavior	356
<i>C. De Rosa, F. Auriemma, O. Ballesteros, G. Talarico</i>	
Effect of Nucleating Agents on Fractionated Crystallization of Polypropylene	358
<i>A. Hiltner, D. Langhe, Y. Jin, E. Baer</i>	
Enhanced Nucleation of Semi-Crystalline Polymers: Specificity and Versatility of Nucleating Agents Toward Isotactic Polypropylene Crystal Phases	360
<i>A. Thierry, D. Alcazar, C. Mathieu, B. Lotz</i>	
Synthesis and Surface Properties of a Semicrystalline Poly(fluorooxetane)	362
<i>Y. Zheng, K. Wynne</i>	
Room Temperature Liquid Crystalline Material with Crystalline π Stacks and Its Crystallization	363
<i>S. Jin, C. Xue, Y. Xu</i>	
Holographic Polymer Dispersed Semicrystalline Polymers and Block Copolymers	366
<i>M. Birnkrant, C. Li, L. Natarajan, V. Tondiglia, P. Lloyd, R. Sutherland, T. Bunning</i>	
Solid-State Packing and Hole Transport of Functionalized Pentacenes in Solution- Processed Organic Thin-Film Transistors	368
<i>J. Chen, S. Subramanian, C. Tee, M. Shtein, J. Anthony, D. Martin</i>	
Structure of Elastomeric Olefin Copolymers	370
<i>P. Diax, H. Wang, A. Taha, S. Chum, A. Hiltner, E. Baer</i>	
Artificial Extracellular Matrix Proteins	372
<i>D. Tirrell</i>	
Self-Assembling Peptide Systems for Cancer, Stem Cell, and Gene Therapies	373
<i>S. Stupp, S. Standley, S. Soukasene, C. Koh</i>	
Supramolecular Nanocarriers Assembled from Block Copolymers for Gene and Drug Delivery	374
<i>K. Kataoka</i>	
Elastin Biopolymers for Drug Delivery	375
<i>A. Chilkoti</i>	
Great Balls of Fire: Icosahedral Virus Platforms for Materials Synthesis	376
<i>E. Strable, D. Prasuhn Jr., S. Brown, E. Kaltgrad, M. Finn</i>	
Block Copolypeptide Vesicles for Drug Delivery	377
<i>D. Kamei</i>	
pH Responsive heterodimeric Coiled Coil Peptide Motifs as Building Blocks for Novel Supramolecular Biomedical Materials and Therapeutics	378
<i>B. Apostolovic, H. Klok</i>	
Intracellular Delivery of Pharmaceutical Nanocarriers by Cell-Penetrating Peptides	379
<i>V. Torchilin</i>	
Miscibility and Crystallization Behaviors of PEO and PLA, PLLA or PLLA/PDLA Stereocomplex Blends	380
<i>W. Cao, L. Sun, L. Zhu</i>	
Surface Effects on PHB Crystallization	382
<i>O. Farrance, J. Hobbs, R. Jones</i>	

Crystal Orientation of Poly(ethylene oxide) in a Defect-Free 1D Confined System of Poly(ethylene oxide)-b-Polystyrene Diblock Copolymer Single Crystals	383
<i>M. Hsiao, J. Zheng, H. Xiong, R. Van Horn, R. Quirk, B. Lotz, E. Thomas, S. Cheng</i>	
Crystal Phases of PVDF/OMS Nanocomposites Prepared at Low Supercooling	384
<i>S. Ince-Gunduz, K. Burke, P. Cebe, M. Koplitz, M. Meleski, A. Sagiv</i>	
Effect of Comonomer Type on the Crystallization Rate and Crystalline Morphology of Random Propylene Copolymers up to 21 mol% Comonomer	386
<i>K. Jeon, Y. Chiari, H. Palza, R. Alamo</i>	
Flow-Induced Crystallization Precursor Structure in High Molecular Weight Isotactic Polypropylene/Low Molecular Weight Linear Low Density Polyethylene Blends	388
<i>J. Keum F. Zuo, Y. Mao, B. Hsiao</i>	
Crystallization Kinetics of Blocky Olefin Copolymers	390
<i>D. Khariwala, A. Taha, S. Chum, A. Hiltner, E. Baer</i>	
Structure and Morphology of Porphyrin Based Discotic Liquid Crystals	392
<i>R. Kulkarni, Q. Li, K. Jeong, M. Durstock, B. Farmer, F. Harris, S. Cheng</i>	
Phase Transitions and Structures of Organic Photovoltaic Materials	393
<i>S. Leng, R. Moustafa, J. Hu, S. Jin, J. Jing, K. Jeong, R. Van Horn, B. Kaafarani, F. Harris, S. Cheng</i>	
ATRP of PMMA on Gold Nanoparticles Immobilized on PEO Single Crystals	395
<i>B. Wang, B. Li, C. Li</i>	
Self Assembly of Gold/P₂VP-PCL Hybrid System.....	397
<i>T. Lin, R. Ho</i>	
Influence of Strain on Shear-Induced Crystallization of Poly(ethylene oxide).....	399
<i>Y. Mao, F. Zuo, R. Somani, J. Keum, B. Hsiao</i>	
Strain-induced Crystallization of Vulcanized Rubber Filled with Carbon Black and Carbon Nanotubes Studied by Synchrotron X-ray Scattering	401
<i>H. Song, M. Kang, H. Jeon, G. Kwag, H. Choi</i>	
Studies on Crystallization of Isotactic Polystyrene from Dilute Solution using Dynamic Light Scattering Method.....	403
<i>K. Taguchi, A. Toda, Y. Miyamoto</i>	
Tethered Polymer Chains on Single Crystal Surfaces.....	404
<i>R. Van Horn, J. Zheng, H. Xiong, R. Quirk, B. Lotz, E. Thomas, A. Shi, S. Cheng</i>	
In Situ Observation of the Growth of Helices in a Main-Chain Chiral Liquid Crystalline Polyester.....	405
<i>J. Wang, Y. Tu, S. Cheng, F. Harris</i>	
Probing Orientation Fluctuations Prior to the Crystallization of a Polyethylene	406
<i>Z. Xiao, Y. Akpalu</i>	
Supramolecular Self-Assembly in a Disk-Cube Dyad Molecule based on Triphenylene and Polyhedral Oligomeric Silsesquioxane.....	408
<i>L. Cui, J. Collet, L. Zhu</i>	
Novel Drug Releasing Biomimetic Coating -- Helical Rosette Nanotubes	410
<i>Y. Chen, T. Webster, H. Fennin</i>	
Nano-Structure Quantification in Polymer-Clay Nanocomposites	412
<i>S. Basu, A. Tewari, P. Fasulo, W. Rodgers</i>	

Carbon Nanotube-Filled Epoxy: Electrical Conductivity Improvement with Templating Clay	414
<i>J. Grunlan, L. Liu</i>	
Multi-Functional Nanocomposites of Soft Polymer Colloids and Carbon Nanotubes	416
<i>J. Keddie, T. Wang, I. Jurewicz, A. Dalton, C. Creton, M. Manea, J. Asua</i>	
Lipophobicity on Hierarchically Structured Superhydrophobic Surfaces	418
<i>D. Wu, R. Vrancken, B. Van Loenen, R. Van Benthem, G. De With, W. Ming</i>	
Chemically Induced Exfoliation in Clay Systems Using Photopolymerizable Surfactants	420
<i>K. Owusu-Adom, A. Guymon</i>	
Materials for Patterned Porous Films	422
<i>B. Erenturk, K. Carter</i>	
Effect of Acidic and Ionic Groups on the Swelling and Thermal Behavior of Poly (2-hydroxyethyl acrylate) Based Hydrogels	424
<i>N. Bait, B. Grassi, S. Djadoun</i>	
Designing Porous Thermosets From Polycyanurate Networks Modified by Oligo (E-caprolactone)	426
<i>D. Grande, N. Lacoudre, C. Lorthioir, D. Gusakova, O. Grigoryeva, A. Fainleib</i>	
Functionalized Porous Networks Obtained from Semi-IPNs: Evaluation in Ion-Exchange Chromatography	428
<i>G. Rohman, M. Millot, D. Grande</i>	
Functional (Semi-)Interpenetrating Polymer Networks as Precursors to Porous Nanoreactors	430
<i>D. Grande, S. mamache, N. Lacoudre, R. Denoyel</i>	
Nanoscale Porous Networks Derived from Oligoester-Containing Semi-IPNs: SEM, DSC, and NMR Investigation of Morphology	432
<i>G. Da Costa, C. Gaillet, D. Grande</i>	
Biodendrimer-Based Hydrogel Scaffolds for Cartilage Tissue Repair	434
<i>P. Bansal, L. Degoricija, N. Joshi, B. Snyder, M. Grinstaff</i>	
Amphiphilic Block Copolyptide Stabilized Emulsions	436
<i>J. Hanson, C. Chang, S. Graves, T. Mason, T. Deming</i>	
Hierarchical Organic-Silica Composite-Fibers by Peptide-Guided Organization	437
<i>S. Kessel, D. Eckhard, H. Borner</i>	
Hydrogels Assembled from Pentablock Copolyptides	439
<i>Z. Li, T. Deming</i>	
Mechanism Study of Hexamethyldisilazane Mediated Ring-Opening Polymerization of Aminoacid-N-Carboxyanhydrides	440
<i>H. Lu, J. Cheng</i>	
Spider Silk-Like Block Copolymers	441
<i>O. Rabotyagova, M. Curtis, P. Cebe, D. Kaplan</i>	
Devirtification of the Rigid Amorphous Fraction in Nylon-6	442
<i>H. Chen, P. Cebe</i>	
Gas Transport Properties of Polymeric Nanocomposites Based on Polyhedral Oligomeric Silsesquioxanes	444
<i>N. Hao, M. Bohning, A. Schonhals</i>	

Dielectric Relaxation Behavior of PVDF/OMS Nanocomposites	446
<i>L. Yu, S. Ince-Gunduz, P. Cebe</i>	
Comparison of (ArO)₂TiClX (X = Cl, Cp) Complexes in Styrene Polymerizations Initiated by Epoxide Radical Ring Opening	448
<i>A. Asandei, Y. Chen, M. Gilbert, T. Hanna, L. Liu</i>	
Cp₂TiCl-Catalyzed Styrene Living Radical Polymerizations Initiated from (1-Bromoethyl)Benzene	450
<i>A. Asandei, Y. Chen</i>	
Room Temperature Copolymerization of Vinylidene Fluoride with Hexafluoropropene and POSS-Methacrylate under UV Irradiation	452
<i>A. Asandei, Y. Chen</i>	
Effect of Nanoparticle on The Electrohydrodynamic Instability of Polymer/Nanoparticle Thin Film	454
<i>J. Bae, E. Glogowski, S. Gupta, T. Emrick, T. Russell</i>	
Crosslinked Polymer Composites as Proton Exchange Membrane (PEM) Materials in Fuel Cell Applications	456
<i>Z. Bai, M. Yoonessi, M. Durstock, T. Dang</i>	
Comparison of HR EI MS and HR F MALDI MS for the Group IVB Metallocene Polyamines Containing the Plant Growth Hormone Kinetin in Their Backbones	458
<i>C. Carraher Jr., G. Barot, D. Chamely-Wiik</i>	
Organotin Polymers from teh Hormone Dienestrol- HR F MALDI MS Results	462
<i>C. Carraher Jr., Y. Ashida, G. Barot</i>	
Polymeric Cisplatin Derivatives of Tilorone and Tilorone 11,567 - HR F MALDI MS	466
<i>C. Carraher Jr., G. Barot</i>	
Ability of Dibutyltin Polyamine Derivatives of Diaminopyrimidines to Inhibit Ovarian, Bone, Colon, Lung, and Breast Cancer Cells	469
<i>K. Shahi, M. Roner, A. Battin, C. Carraher Jr.</i>	
HR F MALDI TOF MS of a Series of Organotin Polyamines Derived from Diaminopyrimidines Employing 2,5-Dihydroxybenzoic Acid as the Matrix	473
<i>A. Battin, C. Carraher Jr.</i>	
Mechanistic Studies for MMA Insertion in Cationic Diimine Palladium(II) Alkyl Complexes	477
<i>S. Borkar, A. Sen</i>	
Synthesis of Polymers for Micro- and Nanopatterning of Oriented Proteins	479
<i>R. Broyer, K. Christman, Z. Tolstyka, H. Maynard</i>	
Flow Properties of Natural Rubber Composites Filled with Defatted Soy Flour	481
<i>L. Jong, J. Byars</i>	
Encapsulation and Cellular Delivery of Antisense Genes by Poly (ethylene oxide)-poly (lactic acid) Bilayer Polymersomes	483
<i>S. Cai, D. Discher</i>	
Hydrogel Encapsulated Quantum Dots	484
<i>T. Cai, J. Li, J. Zhang, A. Lin, M. Marquez, Z. Hu, A. Neogi</i>	
Poly (ethylene oxide)-poly (ε-caprolactone) Micelles in Different Morphologies: Advantages of Worm-like Micelles for Paclitaxe	485
<i>S. Cai, T. Minko, D. Discher</i>	

EI F MALDI MS of Zirconocene and Hafnocene Polyethers Containing Diethylstilbestrol	486
<i>C. Carraher Jr., Y. Ashida</i>	
F HR MALDI TOF MS of Organotin Polyethers Containing the Hormone Diethylstilbestrol	489
<i>C. Carraher Jr., Y. Ashida, G. Barot</i>	
F MALDI and EI MS for Methotrexate and the Cisplatin Polymeric Derivative	493
<i>C. Carraher Jr., G. Barot</i>	
HR TOF F MALDI MS for the Titanocene Polyether Containing the Synthetic Estrogen Diethylstilbestrol	496
<i>C. Carraher Jr., Y. Ashida</i>	

VOLUME 2

Tubular Nanostructures from Degradable Core-Shell Cylinder Microstructures in Chiral Diblock Copolymers	498
<i>C. Chen, Y. Chiang, R. Ho</i>	
Polymer Filled Anodized Alumina Membrane: A Study of Post Aspect Ratio	500
<i>D. Cheng, D. Carter, T. McCarthy</i>	
Preparation of the Biodegradable Poly(butylene succinate) (PBS) Foams with Closed-cells	502
<i>S. Lim, S. Jang, S. Lee, K. Lee, I. Chin</i>	
Ion Induced Morphology Change of Polyaniline	504
<i>C. Chen, W. Chiu</i>	
Nucleation Mechanism and Morphology of Composite Latex Particles, Polystyrene/Fe₃O₄ via Miniemulsion Polymerization using AIBN as Initiator	506
<i>Y. Luo, C. Dai, W. Chiu</i>	
Preparation of PS-b-PBA Block Copolymer and Kinetic Model Analysis	508
<i>K. Kuo, W. Chiu, K. Cheng</i>	
Reaction Kinetics of Maleic Anhydride Grafted Polypropylene as the Reactive Compatibilizer	510
<i>M. Choi, K. Lee</i>	
Controlling the Location and Position of Metallic Nanoparticles in Block Copolymers	512
<i>J. Cordaro, N. Gupta, K. Van Berkel, B. Messmore, C. Hawker</i>	
Properties and Morphology of Ethylene Vinyl Acetate Copolymer/Organoclay Nanocomposites	514
<i>L. Cui, X. Ma, D. Paul</i>	
Superhydrophobic Nanoporous Membrane for Bioethanol Production	516
<i>Y. Ding, B. Bikson</i>	
Production and Characterization of Chitosan and Alginate Multilayer Membranes Containing Copper	518
<i>R. De Paiva, M. Beppu</i>	
Study of the Swelling Dynamics of Porous Hydrogels Based on Poly(Chitosan-g-Acrylic Acid) for Oral Colon Targeting-drug Delivery System	520
<i>H. Dong, Y. Shao, Y. Yin, X. Ji, H. Zheng</i>	

Electrospinning of Thiolated Poly(vinyl alcohol)/Wheat Gluten Fibers	522
<i>J. Dong, R. Parnas, A. Asandei</i>	
Block Copolymer Characterization	524
<i>Z. Boukhal, E. Cabane, Y. Durant</i>	
Facile Synthesis of Diphenylethylene End-Functional Polyisobutylene and its Applications for the Synthesis of Poly (isobutylene-b-methyl methacrylate).....	526
<i>D. Feng, T. Higashihara, R. Faust</i>	
Modeling of Modulus and Stress of In Situ Cured Polymers as Functions of Monomer Conversion	529
<i>L. Feng, B. Suh</i>	
Transcription of Synthetic Polymers: Synthesis by Template-Directed Olefin Metathesis.....	531
<i>D. Friedman, D. Benitez, D. Lanari, K. Leung, F. Stoddard</i>	
Polyelectrolyte Complex Nanoparticles Based on Chitosan and the Primary Study on Their Drug-Loaded Properties.....	532
<i>Y. Zheng, W. Yang, C. Wang, S. Fu</i>	
Model Predicting Delivery of Saquinavir in Nanoparticles to Human Monocyte/Macrophage (Mo/Mac) Cells.....	533
<i>E. Gamsiz, L. Shah, M. Amiji, R. Carrier</i>	
Ionic Liquids for Surface Analysis	534
<i>L. Gao, T. McCarthy</i>	
Synthesis and Characterization of New Itaconate-Based Polymerizable Surfactant	536
<i>S. Ghosh, J. Morizur, L. Mathias</i>	
Preparation and Characterization of Poly(butylene terephthalate) (PBT)/Clay Nanocomposites using Thermally Stable Imidazolium Surfactant.....	538
<i>S. Goswami, B. Nayak, L. Mathias</i>	
One-Step Synthesis of an Alkoxyamine Initiator and its Polymerization Efficacy	540
<i>A. Greene, Q. Xia, E. Jackson, R. Grubbs</i>	
Cytotoxicity and Cellular Uptake of a Dendrimer-Encapsulated Camptothecin	541
<i>A. Griset, M. Morgan, Y. Nakanishi, D. Kroll, M. Carnahan, M. Wathier, N. Oberlies, G. Manikumar, M. Wani, M. Grinstaff</i>	
Novel Polymer Hydrogels Constructed by Cyclodextrin Inclusion Association: The Binding Structure as Observed by H-NOESY-NMR	543
<i>X. Guo, J. Wang, L. Li, C. Pacheco, L. Fu, R. Prud'homme, S. Lincoln</i>	
Mechanical Stability of Peptidomimetic β-sheets Revealed by Steered Molecular Dynamics Simulations.....	545
<i>D. Guzman, J. Roland, Z. Guan, H. Keer, T. Ritz</i>	
Effects of Polyol, Isocyanate, and Additives on Poly(ester urethane) Urea Scaffolds: Material and in vivo Histological Properties.....	546
<i>A. Hafeman, J. Davidson, S. Guelcher</i>	
Synthesis of Boehmite Polyolefin Nanocomposites by In-Situ Polymerization.....	547
<i>T. Halbach, R. Mulhaupt</i>	
Peptide-Guided Assembly of Bioconjugates Obtained by RAFT Radical Polymerization.....	549
<i>J. Hentschel, H. Borner</i>	

Synthesis and Characterization of Triazole Tethered Polyphosphazene for Fuel Cell Application	551
<i>M. Higami, R. Woudenberg, S. Grandados-Focil, O. Yavuzcetin, M. Tuominen, B. Coughlin</i>	
Novel Synthesis Routes Towards Polylysines	553
<i>C. Ho, J. Tiller</i>	
Novel Liquid Thermal Polymerization Resists for Nanoimprint Lithography	555
<i>W. Liao, S. Hsu</i>	
Preparation of Fluorine-Containing Polybenzimidazole/Montmorillonite Nanocomposite Membranes for Fuel Cell Applications	557
<i>S. Chuang, S. Hsu, C. Hsu</i>	
Role of Water Molecules in the Thermal Crystallization of Silk Fibroin Protein	559
<i>X. Hu, D. Kaplan, P. Cebe</i>	
Nano Particles Montmorillonite Filled Poly(ethylene terephthalate) Nanocomposites by In-Situ Polymerization	561
<i>S. Hwang, S. Im</i>	
Monomer Recovery of Waste Organic Resources by Liquid Phase Decomposition in High Temperature Water	563
<i>A. Ikeda, H. Tagaya</i>	
Hyperbranched Polymers with Polymerizable Groupes from Dental Filling Monomers	565
<i>A. Soltesz, T. Fonagy, M. Szesztay, B. Ivan</i>	
Hyperbranched Polystyrene by Quasiliving Carbocationic Polymerization Combined with Friedel-crafts Self-Grafting	567
<i>G. Kasza, P. Groh, M. Szesztay, B. Ivan</i>	
Phase Behavior of Poly(ethylene-co-1,4-dimethyl cyclohexane terephthalate) Copolyesters Blend with Polycarbonates (or Branched Polycarbonates) and Their Interaction Energies	569
<i>M. Jeon, L. Kim, C. Kim</i>	
Bone Formation Mediated by Synergy-Acting Growth Factors Embedded in a Polypeptide Multilayer Film	571
<i>N. Jessel</i>	
Study of Poly(N-isopropylacrylamide), Poly(methacrylic acid), and Their Copolymers for Oral Colon-Specific Drug Delivery	572
<i>Y. Gao, X. Ji, Y. Yin, H. Dong, H. Zheng</i>	
Study of Swelling Kinetics of Sodium Alginate-graft-Acrylic Acid Hydrogels	574
<i>X. Ji, Y. Yin, H. Dong, Y. Gao, H. Zheng</i>	
Bacterial Cellulose Hydrogels Incorporating Silver Nanoparticles	576
<i>R. Jung, Y. Kim, H. Kim, H. Jin</i>	
Effect of Metal Ion-Carbonyl Interactions on the Compatibility and the Crystallization Behavior of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate)/poly(butylene succinate) Ionomer Blends	578
<i>J. Lim, I. Noda, S. Im</i>	
Study on the Stability of Bisphenol-A-Based Polybenzoxazine in Aprotic Polar Solvents	580
<i>H. Kim, J. Yoo</i>	
Carbon Nanotubes and Silk Fibers-Reinforced Biodegradable Composites	582
<i>H. Kim, M. Kang, H. Jin</i>	

Synthesis and Characterization of Metal Oxide Nanoparticles Stabilized by Poly(ethylene oxide)-Folate Conjugate	584
<i>S. Choi, D. Go, H. Jeon, Y. Kim, J. Lee, H. Ryu, J. Kim</i>	
Synthesis and Characterization of Poly(ethylene oxide -b- Sulfadimethoxinyl methacrylamide) via ATRP Technique	587
<i>K. Kim, H. Park, S. Choi, H. Jeon, D. Go, H. Yoo, H. Kim, J. Kim</i>	
Interaction of Poly(styrene-co-sodium methacrylate) Ionomers with Long Chain Aliphatic Dibasic Salt Additives	589
<i>M. Luqman, J. Kim</i>	
Spin-Assisted Assembly of Multilayers of Polyelectrolytes with Fluorohpores	591
<i>K. Kim, S. Yoo, B. Sohn</i>	
Anti-Adhesion Surface Treatments of Molds for High Resolution Unconventional Lithography and Applications	592
<i>M. Kim, M. Lee, J. Kim, C. Choi, M. Jo, E. Jeon, Y. Kim</i>	
Development on New Chromium Based Tetramerization Catalyt Systems: Chiral Recognition on Chromium Metal Center by Sterically Demanding Diphenylphosphinobutane	594
<i>S. Kim, K. Wee, T. Kim, T. Han, M. Ok, J. Ko, S. Kang</i>	
Synthesis of (Diarlylamido) (pentamethylcyclopentadienyl)titanium(IV) Complexes and Their Use in Catalysis for Ethylene Polymerization at High Temperature	595
<i>S. Kim, T. Kim, J. Hahn, M. Ok, J. Ko, S. Kang</i>	
Polyolefin Catalytic Activity of 2-phenylphenolate Titanium Complexes by Electro Push-pull Aryl Substituents	596
<i>T. Kim, S. Kim, J. Hahn, M. Ok, J. Ko, S. Kang</i>	
Unpredicted High Catalytic Activity of Aryloxo Titanium Complexes in High Temperature Olefin Polymerization: Ancillary Ligand Effects of 2-Phenylphenol in Half-Titanocene Complexes	597
<i>T. Kim, S. Kim, J. Hahn, M. Ok, J. Ko, S. Kang</i>	
Investigation of Amphiphilic Biaryl Dendrimer Structures using Protein Recognition	598
<i>A. Klaikherd, B. Sandanaraj, D. Vutukuri, S. Thayumanavan</i>	
NEXAFS and Dynamic Contact Angle Measurements of Polystyrene Treated with Ultraviolet-Ozone and Annealed above Tg	600
<i>R. Klein, D. Fischer, J. Lenhart</i>	
Mechanical Properties of Sulfonated Polystyrene Ionomer Mixtures	602
<i>K. Ko, J. Song, J. Choi, J. Kim</i>	
Brush-Modified Polymer Surfaces	604
<i>D. Koylu, K. Carter</i>	
Advantages and Limitations of Biocatalysts In Amphiphilic Conetworks	607
<i>R. Ladisch, N. Bruns, J. Tiller</i>	
Preparation of Electrospun Cellulose Membrane for EAPap Actuator	609
<i>E. Lee, H. Kim, K. Kim, I. Chin</i>	
Partially Sulfonated Polystyrene-b-Poly-(dimethylsiloxane) as Proton Exchange Membrane for Direct Methanol Fuel Cell	611
<i>W. Lee, H. Kim, H. Chang</i>	

Application of Type II Collagen Grafted PCL Porous Scaffold in Cartilage Tissue Engineering	615
<i>K. Chang, L. Hung, Y. Lee</i>	
Cross Conjugated Poly(para-phenylenes) with Strong Stacking Force: Synthesis and Characterization	617
<i>H. Li, M. hanafiah, S. Vallyaveetil</i>	
Volume Shrinkages and Mechanical Properties of Various Fiber-Reinforced Hydroxyethyl Methacrylate-Polyurethane/Unsaturated Polyester Composites	619
<i>S. Lin, J. Shen, J. Han, Y. Lee, J. Yeh, F. Chang, K. Hsieh</i>	
Synthesis of Bionanoparticle-polymer Conjugates via In Situ Atom Transfer Radical Polymerization (ATRP) Reaction	621
<i>T. Li, S. Li, Q. Zeng, Q. Wang</i>	
Novel Method to Prepare Osteoconductive-Osteoinductive Materials Composed of Chitosan and Recombinant Bone Morphogenetic Proteins-2	623
<i>K. Chang, C. Chang, Y. Lin, C. Lin, C. Jiang, K. Hsieh</i>	
High Refractive Index Thin Films of Epoxy Resin Compounded with TiO₂ Nanoparticles	626
<i>Y. Lin, J. Chau, A. Li, W. Su, K. Chang, T. Li, S. Hsu</i>	
Synthesis and Photopolymerization Study of Phenyl Substituted Disilacyclobutane Compounds	628
<i>X. Liu, C. Ryu, L. Interrante</i>	
Electrospinning of Self-Assembled Inclusion Complexes of Poly(ethylene oxide) with Urea	630
<i>Y. Liu, C. Pellerin</i>	
Controlled Release Profile of Hyoscyamine from Carboxymethyl Chitosan Nanoparticles In Vitro	632
<i>L. Yiceng, Y. Han, Z. Feng, S. Qing, Y. Xiangfeng</i>	
Plasticization of Sulfonated Polystyrene Ionomers with Amphiphilic Bifunctional Amines: Dynamic Mechanical and Morphological Studies	634
<i>M. Luqman, J. Kim</i>	
Structure and Property of High Flux Cellulose Membranes Fabricated by Ionic Liquid	636
<i>H. Ma, L. Rong, K. Yoon, B. Hsiao, B. Chu</i>	
Phosphorescent, Surfactant-Free Chitosan Nanoparticles	638
<i>S. Marpu, Z. Hu, M. Omary</i>	
Anhydrous Proton Conduction: Effect of Heterocycle Nature and Backbone Mobility	639
<i>S. Martwiset, R. Woudenberg, S. Grandados-Focil, O. Yavuzcetin, M. Tuominen, B. Coughlin</i>	
Porous Scaffolds Containing Highly Oriented Anisotropic Nanoparticles	641
<i>D. Massa, T. Blanton, D. Majumdar</i>	
Novel Design of Polymer Surfaces for Immobilization of Functional Proteins	643
<i>H. Matsuno, Y. Nagasaka, K. Kurita, T. Serizawa</i>	
Automatic Continuous Online Monitoring of Complex Polymerizations	644
<i>J. McConville, G. Saunders, I. Willoughby, S. O'Donohue</i>	

Development of a New Packing Material with Intermediate Surface Polarity for Size Exclusion Chromatography	646
<i>J. McConville, G. Saunders, L. Gilbert, I. Willoughby</i>	
Extrapolation of Polymer Aging in Waste Storage with the Use of High Energy Beam: Toward and Understanding of Mechanisms by the Analysis of Radicals, Gas and lixivation Products Formed	648
<i>C. Moulin, B. Amekraz, A. Dannoux, V. Dauvois, S. Esnouf</i>	
Schizophyllan, β-1,3-Glucan, -Oligoamine Conjugates as Non-Viral Vector	649
<i>T. Nagasaki, A. Uno, K. Koumoto, K. Sakurai, S. Shinkai</i>	
Effects of Graft Densities on Separation of Bioactive Compounds on Temperature Responsive Polymer Brush Surfaces	650
<i>K. Nagase, J. Kobayashi, A. Kikuchi, Y. Akiyama, H. Kanazawa, T. Okano</i>	
Inhibition of Bacteria, Fungi, and Yeast by Polymeric Organotin and Group IVB Metallocene Polyether Compounds Containing the Synthetic Hormone Diethylstilbestrol	652
<i>Y. Naoshima, K. Nagao, Y. Ashida, C. Carraher Jr.</i>	
Alignment of MWNTs using Electrospun MWNT-g-PLLA Nano-Fibers	655
<i>Y. Jang, C. Park, I. Chin</i>	
Preparation of Electrospun Membrane for Low-fouling Ultra-Filtration	657
<i>C. Park, K. Kim, I. Chin</i>	
Influence of Ionic Diffusion in Oligomer Electrolytes for Dye-Sensitized Solar Cells	659
<i>J. Park, K. Choi, J. Kim, Y. Kang, S. Lee</i>	
Mechanical Properties of Styrene-co-Tigrate Ionomers	661
<i>J. Park, J. Kim</i>	
Improved Elevated Temperature Nafion® Membrane Proton Conductivity by In Situ Generation of Metal Oxide Nano-Particles	663
<i>Y. Patil, K. Mauritz</i>	
PEGylated Ultrathin Capsules of a Poly(carboxylic acid) with Tunable Permeability	665
<i>S. Pavlukhina, V. Kozlovskaya, S. Sukhishvili</i>	
Comparison of Properties of Two Polymer Latices Modified Mortars	666
<i>L. Liu, X. Qin, Z. Wang, J. Zhang, Q. Pan, M. Pei</i>	
Effect of Starch Swelling on the Composite Modulus of Low- and High-Gluten Wheat Flours and Carboxylated Styrene-Butadiene Latex	668
<i>S. Peterson, L. Jong</i>	
Relating Mechanical Behavior to Polyamide/Clay Nanocomposites Morphology	670
<i>E. Reynaud, D. Schmidt, V. Appaji, H. Patel</i>	
Olefin Polymerization Behavior of a Chiral, C_2-Symmetric Ni a-Diimine Complex	671
<i>J. Rose, A. Cherian, G. Coates</i>	
Modulation of Enzyme Substrate Selectivity Using Cationic Polymers	673
<i>R. Roy, B. Sandanaraj, A. Klaikherd, S. Thayumanavan</i>	
F MALDI MS Results for Polyphosphonate and Polyphosphate Ester-Amides Containing the Antiviral Acyclovir	675
<i>T. Sabir, C. Carraher Jr.</i>	

Synthesis of Polyphosphate and Polyphosphonate Amide Esters Containing the Antiviral Acyclovir	679
<i>T. Sabir, C. Carraher Jr.</i>	
Influence of Selective Sulfonation on Acrylic Graft Copolymer Morphology	682
<i>T. Saito, B. Mather, F. Beyer, T. Long</i>	
Rigid Amorphous Fraction in Polymer Nano-Composites	684
<i>A. Sargsyan, A. Tonoyan, S. Davtyan, C. Schick</i>	
Synthesis and Characterization of Polylactide Macroinitiator and Amphiphilic Diblock Copolymer	685
<i>S. Shi, Y. Xia, J. Liu, X. Chen</i>	
Studies of Structural and Electrical Modification in Poly (ethyleneterephthalate) Induced by 120 MeV Silicon Ion Beam	687
<i>V. Singh, P. Kulriya, T. Singh, A. Srivastava</i>	
Study on Self-Assembled Suprastructure of Amide Dendron in Different Organic Solvents using SAXS and SANS	689
<i>H. Song, H. Jeon, M. Kang, C. Kim</i>	
Enhancement of Long-term Stability of CaS:Eu²⁺ by the Surface Coating with PMMA/Silica Nanocomposite for the LED Application	691
<i>J. Song, M. Jeon, J. Kim, C. Kim</i>	
Effects of the Addition of Long Chain Alkyl Amines and Carboxylic Acids on the Dynamic Mechanical Properties of Styrene-co-Methacrylate Ionomers	693
<i>J. Song, K. Ko, J. Kim</i>	
Synthesis of Functionalized Amphiphilic Scorpion-like Macromolecules for Biomedical Applications	695
<i>S. Sparks, J. Wang, L. del Rosario, K. Uhrich</i>	
Effect of Salt Addition on the Properties and Structure of Laponite/PEO Multilayered Films	697
<i>E. Stefanescu, W. Daly, I. Negulescu, J. Garno, G. Schmidt</i>	
Preparation and Properties of iPP/boehmite Nanocomposites	699
<i>R. Streller, R. Mulhaupt</i>	
Synthesis and Study of Alkyne-Functionalized Amphiphilic Diblock Copolymer Assemblies for Metal Incorporation	701
<i>A. Sundararaman, J. Garber, E. Robertson, R. Grubbs</i>	
Preparation of Porous Materials by High Temperature Water Treatment of PVC	703
<i>S. Takayama, M. Kimata, H. Tagaya</i>	
Electrospinning of Polyisobutylene Thermoplastic Elastomers	705
<i>S. Taghizadeh, R. Faust, J. Mead</i>	
Facile Preparation of Poly(ethylene glycol)-Functionalized, Water-Soluble, Multiwalled Carbon Nanofibers	707
<i>K. Tse, X. Tang, M. Häußler, J. Lam, E. Hammel, B. Tang</i>	
Synthesis of Ferrocene-Containing Polyacetylenes via Click Chemistry and their Use as Precursor for Magnetic Ceramics	709
<i>C. Jim, A. Qin, J. Lam, M. Häußler, B. Tang</i>	
Telechelic Poly(NIPAAm) by RAFT Polymerization	711
<i>L. Tao, H. Maynard</i>	

Synthesis and Thermal Properties of Trehalose-Based Synthetic Polymers with Flexible Oligo (dimethylsiloxane) Units	712
<i>N. Teramoto, M. Unosawa, M. Shibata</i>	
Application Possibilities of Preparative Size Exclusion Chromatography in a HTE Workflow	714
<i>H. Thijs, M. Meier, H. Van Erp, U. Schubert</i>	
Synthesis of Poly(Dimethylsiloxane-alt-Ethylene Glycol) for Hydrogel Applications	716
<i>E. Thursby, M. Tapsak</i>	
Preparation and Characterization of the Perlite/Poly(vinyl alcohol) and Organic Modified Montmorillonite (OMMT)/Poly(vinyl alcohol) Composites	718
<i>H. Tian, H. Tagaya</i>	
Novel Release System with Enzymatic Trigger	720
<i>J. Tiller, G. Metral, J. Wentland</i>	
Novel Anti-Cancer Orthopedic Materials: Nanostructured Selenium	722
<i>P. Tran, T. Webster</i>	
Synthesis of Aminoxy End-Functionalized Polymers by RAFT Polymerization for Bioconjugate Formation	724
<i>V. Vazquez-Dorbatt, H. Maynard</i>	
Self-Assembling Nanoporous Structure for Sensing the Biomolecules	725
<i>L. Wang, G. Walker, D. Waldeck</i>	
Functionalized Poly(carbonate-co-ester)s for the Preparation of Covalently-Labeled Nanoparticles	726
<i>J. Wolinsky, M. Grinstaff</i>	
Melting and Reorganization of Polymer Crystals Studied by Fast Scanning Calorimetry	727
<i>A. Wurm, A. Minakov, C. Schick</i>	
Network-structured Composites of Waterborne Polyurethane Grafted Nitro-lignin as Center	728
<i>W. Xia, G. Cui, H. Zhang, J. Huang</i>	
Bulky Chromophore Incorporated into the Methacrylate/Silica Hybrid Matrix of the NLO Materials by a Free-Radical Polymerization	730
<i>G. Xie, D. Sun</i>	
Preparation and Performance Research of Caboxymethyl Chitin/Chitosan Sponge	733
<i>Y. Xu, L. Wang, C. Zhan, H. Zheng</i>	
Studies on Properties of Core-shell Acrylic-Polyurethane Emulsion Modified by Epoxy Resin	735
<i>Y. Yi, F. Ye, H. Chou, H. Zheng, J. Guan, B. Li</i>	
Novel Dental Restorative Composites Prepared From an Organic Matrix Without an Additional Diluent	738
<i>S. Yoo, M. Jeon, C. Kim</i>	
Actuation Factors for Controlling Performance of Ionic Polymer Metal Composite Actuator	740
<i>B. Yoon, J. Lee, H. Wang, S. Lee, S. Park, J. Jho</i>	
Preparation of Low Density Porous Materials using Polyethylene and Organic Crystals Diluents	742
<i>J. Yoon, A. Lesser, T. McCarthy</i>	

Effects of Incorporated of VLDPE on the Mechanical Properties of Polypropylene/clay Nanocomposites	744
<i>J. Shim, J. Joo, J. Choi, K. Yoo, J. Yoon</i>	
High Flux Nanofiltration Membranes Based on Interfacially Polymerized Polyimide on Nanofibrous Scaffolds	746
<i>K. Yoon, C. Pang, B. Hsiao, B. Chu</i>	
Donor-Acceptor Functionalized PPV Di-Block Copolymers for Plastic Solar Cells	748
<i>D. Zepeda, J. Gutierrez, J. Ferraris</i>	
Synthesis and STM Study of Porphyrins with Sulfur Linkers Attached on the Porphyrin Ring Antipodally	750
<i>W. Zhang, W. Xi, P. Burn, J. Davis</i>	
Properties of Ultra-Thin Conjugated Monolayer Films	752
<i>X. Zhang, S. Unarunotai, M. Schultz, J. Moore, J. Rogers</i>	
Hydrogel-Based Biodegradable Bone Replacement Material	753
<i>D. Zhao, G. Liu, E. Saiz, A. Tomsia</i>	
Swelling Kinetics of Physically Crosslinked Carboxymethyl Chitosan/Poly(vinyl alcohol) Hydrogels	755
<i>G. He, H. Zheng, R. Zhao</i>	
Preparation and Characterization of Galactosylated Chitosan Nanoparticles as a Targeting Drug Carrier	757
<i>F. Zheng, K. Ling, J. Li, J. Chen</i>	
Preparation and Characteristics of Dual-Crosslinked Carboxymethyl Chitosan (CMC) Microcapsules	759
<i>Z. Hua, H. Jintao, Q. Xuan</i>	
Preparation and Characterization of the Hydrogel of Carboxymethyl Chitin Grafted Acrylic Acid	761
<i>H. Zheng, X. Zou, F. He</i>	
Preparation of Polystyrene/Polyurethane Core/shell Nanoparticles by Emulsion Polymerization of Styrene Using Anionic Polyurethane as the Surfactant	763
<i>Y. Zhu, Y. Chen, L. Zhang, H. Zheng</i>	
Shear-induced Crystallization of Olefin Block Copolymer via In-Situ Synchrotron X-Ray Studies	765
<i>F. Zuo, Y. Mao, J. Keum, B. Hsiao, H. Chen, D. Chiu, S. Lai</i>	
Taking Advantage of Charge in the Design of Functional Biomaterials: From Gene Delivery Vectors to Nanofiber Drug Delivery	767
<i>J. Layman, M. Hunley, T. Long</i>	
Electrospun Enzyme-Carrying Polyurethane Nanofibers for Use in Biosensors	769
<i>R. Narayanan, S. Wu, D. Reneker, P. Wang</i>	
Engineering Ligands for Characterizing Biomaterials Using Combinatorial Phage Display	770
<i>M. Roy, E. Amis, M. Becker</i>	
Multivalent Peptide Dendrimers for Targeting	772
<i>B. Helms, I. Van Baal, P. De Graaf-Heuvelmans, M. Merkx, E. Meijer</i>	
Highly Effective Biomimetic Contact Biocidal Polyurethanes as Polymeric Surface Modifiers (PSMs)	774
<i>P. Kurt, L. Wood, D. Ohman, L. Gamble, D. Wynne</i>	

Biocompatible H-bonded Polymer Multilayers: Tuning of Film Destruction	776
<i>I. Erel-Unal, S. Sukhishvili</i>	
Inhibition of Alzheimer Amyloid Aggregation with Sulfated Glycopolymers	777
<i>Y. Miura, K. Yamamoto, K. Kobayashi</i>	
Laser Light Scattering Study on Aggregates in Traditional Chinese Medicine	779
<i>Y. Zhuang, J. Yan, W. Zhu, L. Chen, X. Xu, D. Liang</i>	
Broadband Dielectric Spectroscopy on the Molecular Dynamics in Thin Polymer Layers	781
<i>F. Kremer, A. Serghei</i>	
Model Studies of the Effects of Confinement and Nanocomposite Formation on Polymer Glass Transition Temperature and Physical Aging	782
<i>J. Torkelson, R. Priestley, P. Rittigstein, M. Mundra, L. Broadbelt, W. Jager, C. Roth</i>	
Dynamics of Confined Polymer Films Measured via Thermal Wrinkling	784
<i>K. Page, D. Patton, R. Huang, C. Stafford</i>	
Confinement Effects on the Structure and Dynamics in Intercalated Polymer/Layered Silicates Nanohybrids	786
<i>S. Anastasiadis, K. Chrissopoulou, A. Afratis, S. Fotiadou, E. Giannelis, B. Frick</i>	
Glass Transition and Dielectric Relaxation of Thin Films of Labeled Polymers	788
<i>K. Fukao, A. Harada, R. Priestley, J. Torkelson</i>	
Structure Property Relationships of Polymeric Nanocomposites based on Polyhedral Oligomeric Silsesquioxanes	789
<i>N. Hao, M. Bohning, A. Schonhals</i>	
Glass Transition Behavior of Polymer Nanocomposites	791
<i>S. Harton, H. Yang, T. Koga, S. Kumar</i>	
Methods for Porosity Characterization of Porous SiLK Dielectric Films	793
<i>B. Landes, C. Mohler, G. Meyers, B. Kern, S. Maganov, J. Quintana, S. Weigand</i>	
Bridged Oxycarbosilane Polymers: Porous Organosilicates are not Necessarily Fragile	794
<i>R. Miller, G. Dubois, T. Magbitang, W. Volksen, R. Dauskardt, M. Gage</i>	
Challenges of Plasma Damage of Low Dielectric Constant Materials	795
<i>M. Baklanov, A. Urbanowicz, S. Vanhaelemeersch</i>	
Neutron and X-Ray Measurements of Pore Size Distributions in Low-k Thin Films	796
<i>B. Bauer, R. Hedden, M. Silverstein, H. Lee, C. Soles, D. Liu, E. Lin, W. Wu</i>	
Nanoimprint Patterning of High Modulus, Spin-On Organosilicate Glasses: The Impact on Pattern Quality and Porosity	798
<i>H. Ro, H. Lee, A. Karim, D. Gidley, D. Yoon, C. Soles</i>	
Thermally Cross-linkable Cycloliner Polycarbosilanes (CLPCS) as Low-k Materials	800
<i>J. Rathore, L. Interrante</i>	
Nano-Porous SiwOxCyHz Thin Film Deposited by Plasma as Low k for Microelectronics	802
<i>L. Favennec, V. Jousseume, A. Zenasni, G. Gerbaud, P. Maury</i>	
Nanoporous Thin Films Based on Norbornene Copolymers	803
<i>S. Oh, K. Char</i>	
Homogeneous Primary Crystal Nucleation: The Case for the Fringed Micelle	805
<i>B. Crist</i>	

Growth Kinetics of Polymer Crystals in Bulk	807
<i>T. Cho, W. Stille, G. Strobl</i>	
What Can Molecular Simulation Reveal About the Crystallization and Structure of Semicrystalline Polymers	808
<i>G. Rutledge</i>	
New Paradigms for Polymer Crystallization	810
<i>M. Muthukumar</i>	
Chain-Folding via Intramolecular Crystal Nucleation: Theory and Simulations	811
<i>W. Hu</i>	
Molecular Simulation of the Effect of Olefin Block Copolymer Microstructure on Lamellar Thickness	812
<i>J. Weinhold, G. Marchand, S. Chum</i>	
On the Nucleation of Chain-Folded Crystals: Insights from MD Simulation	815
<i>H. Meyer</i>	
Integrin-Specific Bioadhesive Polymer Brushes on Titanium Implants to Engineer Cell Responses and Osseointegration	816
<i>A. Garcia, T. Petrie, K. Burns, J. Raynor, D. Collard</i>	
Osteogenic Differentiation of Mesenchymal Stem Cells on Biomaterialized Collagenous Scaffolds for Bone Tissue Engineering	817
<i>H. Castano-Izquierdo, C. Mao</i>	
Mapping Cell Distribution in Amorphous Scaffolds using Confocal Microscopy	819
<i>J. Sun, N. Lin, M. Cicerone, S. Lin-Gibson</i>	
Understanding How Materials Properties Can Be Used to Control Cellular Behavior	821
<i>L. Pakstis, D. Pochan, J. Dunkers</i>	
Phosphorylation of Reflectin Proteins Associated with Changes in Adaptive Reflectance in the Swuid, Loligo pealeii	823
<i>M. Izumi, J. Weaver, D. Morse</i>	
Identifying "Optimal" Biomaterial Properties Using Well-Defined Material Gradients	824
<i>M. Becker, K. Aamer, N. Gallant, A. Morgan, C. Simon Jr., K. Roskov, Y. Yang</i>	
Shape Effects of Nanoparticles Conjugated with Cell-Penetrating Peptide (HIV Tat PTD) on CHO Cell Uptake	825
<i>K. Zhang, Z. Chen, D. Germack, Y. Zhang, H. Fang, J. Taylor, K. Wooley</i>	
Micropatterned Self-Assembled Monolayer Gradient Libraries	826
<i>K. Genson, M. Fasolka</i>	
Elucidating the Effect of Cooling Rate on the Morphologies of Polyhydroxyalkanoates	827
<i>Y. Xie, Y. Akpalu</i>	
Direct Evidence of Coexisting Amorphous, Mesomorphic and Crystalline Phases in PEN from Dielectric Spectroscopy	829
<i>M. Wubbenhorst</i>	
Using the Beta-Relaxation as a Probe to Follow Real-Time Polymer Crystallization in Model Aliphatic Polyesters	831
<i>M. Soccio, A. Nogales, N. Lotti, T. Ezquerra</i>	

Role of Relaxation Studies in Determining Phase Structure of Semicrystalline Polymers	832
<i>P. Cebe, H. Chen</i>	
Rate-Dependence of Yielding in Ethylene-Methacrylic Acid Copolymers	834
<i>R. Scogna, R. Register</i>	
Mechanical Response of Rubber at High Strain Rates	836
<i>M. Roland, R. Bogoslovov, J. Pathak, J. Twigg, P. Mott</i>	
Stress Development and Relaxation in Crosslinked Dimethacrylate Polymers	838
<i>H. Lu, M. Trujillo-Lemon, J. Ge, S. Newman, J. Stansbury</i>	
Relaxation Properties of Poly (ethylene oxide) Copolymer Networks: Influence of Short-Chain Pendant Groups	840
<i>M. Borns, S. Kalakkunnath, M. Danquah, V. Kusuma, B. Freeman, D. Kalika</i>	
Designing Constricted Microchannels to Selectively Entrap Soft Particles	842
<i>G. Zhu, A. Alexeev, A. Balazs</i>	
Highly Porous POSS-Polymer Nanocomposites Synthesized within High Internal Phase Emulsions	844
<i>J. Normatov, M. Silverstein</i>	
Porous Clay Aerogel/Polymer Composites	846
<i>D. Schiraldi, M. Gawryla, J. Johnson III, J. Griebel</i>	
No Soap Required! Particle-Stabilised Emulsion Templates for Reinforced Highly Porous Polymer Foams	848
<i>A. Menner, M. Shaffer, A. Bismarck</i>	
Structural Color from Layer-by-Layer Assembled Nanoporous Multilayers	849
<i>Z. Wu, D. Lee, R. Cohen, M. Rubner</i>	
New Concentrated Emulsion Templating Strategies as a Route to Highly Porous Polymer Composite Foams	850
<i>A. Menner, N. Graeber, A. Bismarck</i>	
Templating 3D Titania Photonic Crystals from Holographically Patterned Microporous Polymers by Electrodeposition	851
<i>Y. Xu, Y. Dan, J. Moon, X. Zhu, A. Johnson, S. Yang</i>	
Chitosan-Clay Aerogel via Water Based System	853
<i>T. Ponyomma, S. Chirachanchai</i>	
Heterogeneous Distribution of Entanglements in the Polymer Melt and its Influence on Crystallization	855
<i>S. Rastogi, D. Lippits, S. Talebi, B. Wang</i>	
Crystallization of Polypropylenes Containing Halogens: Precise vs. Random Placement	857
<i>R. Alamo, K. Jeon, E. Boz, A. Nemeth, K. Wagener</i>	
Temperature and Molecular Weight Dependence of Crystal Growth Rate for Chain Folding Crystallization	859
<i>N. Okui, S. Umemoto</i>	
Crystallization and Thickening Kinetics of Monolayer PEO Lamellae on Mica Surfaces	860
<i>E. Chen, D. Zhu, Y. Liu, A. Shi, S. Cheng</i>	
Semicrystalline and Superlattice Structures in Linear and Branched Oligomers	862
<i>X. Zeng, F. Xie, G. Ungar, S. King</i>	

Growth of a Polymer Crystal From Ultrathin Film: Thickness Diffusion Field with Effective Diffusion Coefficient	864
<i>K. Taguchi, A. Toda, Y. Miyamoto</i>	
Upper Superheating Limit in Polymer Crystals Studied by Ultrafast Nanocalorimetry	865
<i>A. Minakov, A. Wurm, C. Schick</i>	
Reaching Elementary Processes in Polymer Crystallization Via Growth Twins in Isotactic Poly(vinylcyclohexane) Single Crystals	867
<i>D. Alcazar, B. Lotz, E. Thomas, A. Kawaguchi, A. Thierry, S. Cheng</i>	
Dissolution of Poly(vinyl alcohol) Hydrogels Quantified Using UV-Vis Spectrophotometry	868
<i>C. Marcias, H. Bodugoz-Senturk, O. Muratoglu</i>	
Effect of Salt Addition on the Properties and Structure of Laponite/PEO Multilayered Films	869
<i>E. Stefanescu,, I. Negulescu, W. Daly, G. Schmidt</i>	
Superhydrophobic Polymer Derived Ceramic Fibers	871
<i>S. Sarka, A. Chunder, W. Fei, L. An, L. Zhai</i>	
Tuning pH Swelling and Permeability of Hydrogen-Bonded Multilayer Capsules via Polymer Hydrophobicity	873
<i>V. Kozlovskaya, S. Sukhishvili</i>	
Unique Nanostructure through PEGylation of Hyperbranched Fluoropolymer (HBFP) Scaffolds	874
<i>W. Du, Y. Li, C. Cheng, K. Powell, K. Wooley</i>	
Versatile Surface Coatings Composed of New Inorganic/Organic Hybrid Materials	875
<i>D. Kessler, P. Theato</i>	
Water Assisted Injection Molding of Glass Fiber Reinforced PA-6 Composites	877
<i>S. Liu, C. Shih</i>	
Synthesis of AB₂-Type Star-Shaped Ethylene-Styrene Block Copolymers by Combining Pd-Diimine Catalyzed Ethylene Living Polymerization with ATRP	879
<i>X. Tang, Z. Ye</i>	
Rapid Fabrication of Micro-Blocks onto Glass Substrates by Soft-Mold Roller Embossing	881
<i>S. Liu, Y. Chang, C. Chang, S. Yang, K. Hsieh</i>	
Effect of Pressure on the Dynamic Heterogeneity of Compatible Polymer Blends	883
<i>G. Floudas, K. Mpoukouvalas, A. Gitsas</i>	
Importance of Thermodynamic Interactions in the Dynamics of Miscible Polymer Blends	884
<i>M. Dadmun, S. Kamath, M. Arlen, W. Hamilton</i>	
Dynamics of Polycyclohexylmethacrylate, Neat and in Blends with Poly-<i>a</i>-Methylstyrene	886
<i>M. Roland, R. Casalini</i>	
Polystyrene Single Chain Relaxation in a Model Asphalt Mixture	888
<i>L. Zhang, M. Greenfield</i>	
Solvent Effects on Polyelectrolyte Charge and Conformation in Solution	890
<i>S. Dou, R. Colby</i>	

Counterion Effects on Ion Mobility and Mobile Ion Concentration of Doped Polyphosphazene and Polyphosphazene Ionomers	892
<i>R. Klein, D. Welna, A. Weikel, H. Allcock, J. Runt</i>	
Molecular Dynamics, Ion Mobility and Mobile Ion Concentration in Poly(ethylene oxide)-based Polyurethane Ionomers	894
<i>D. Fragiadakis, S. Dou, R. Colby, J. Runt</i>	
β-Lactoglobulin Fibers under Capillary Flow	896
<i>V. Castelletto, I. Hamley</i>	
Bamboo is a Suitable Substrate for Polymerizations When Swollen with Supercritical CO₂	897
<i>X. Eastman, A. Lesser, T. McCarthy</i>	
Degradation of Amorphous Tie Chains During Hydrolysis of Cotton Cellulose	900
<i>C. Stephens, P. Whitmore, H. Morris</i>	
Bubble Formation Mechanism in Polymer Foaming on Paper Board	903
<i>K. Annapragada, S. Banerjee, T. Patterson</i>	
Coupled Electrospinning of Continuous Poly (vinylidene fluoride-co-hexafluoropropylene) Nanofiber Yarns	904
<i>T. Song, X. Li</i>	
Hysteresis and Stress Relaxation Studies for a Fibrous Collagen Material: Chrome-free Leather	905
<i>C. Liu</i>	
The Effects of Molecular Weight and Crystallization Conditions on High Pressure Crystallized Ultra-high Molecular Weight Polyethylene	907
<i>E. Oral, O. Muratoglu</i>	
Effect of Sol Molecular Weight on the Mechanical Properties and Sol Migration in Polymer Gels	908
<i>R. Mrozek, P. Cole, J. Lenhart</i>	
Ionomer Stabilized Noble Metal Colloids for Catalytic Applications	910
<i>S. Mayavan, N. Choudhury, N. Dutta</i>	
Controlled Release of Micro-Encapsulated Cross-Linker in Powder Coatings	912
<i>D. Senatore, A. Cate, J. Laven, R. Van Benthem, G. De With</i>	
Encapsulation of Dodecanol, an Insect Pheromone Component, by Coacervation of Acacia Gum and Gelatin and its Release Therefrom	914
<i>X. Gu, J. Lian, X. Zhu, W. Liu, X. Kong</i>	
Effect of Salt's Nature on Thermal Stabilities of Poly(styrene-co-butyl acrylate) (PSBA) /Clay Systems	916
<i>N. Cherifi, L. Billon, C. Dupin, S. Djadoun</i>	
Enhanced Water Permeability Through Hydrophobic Polymers Comprising Metal Oxide Ceramic Fillers	918
<i>T. Zimrin, S. Margel, Y. Haruvy</i>	
Turbidity Controlled by Poly-Aluminum-Chloride (PAC) in Enhanced Filtration Process	920
<i>Y. Gao, W. Li, J. He</i>	
Towards Spin on Barrier Layers	922
<i>M. Memesa, Y. Cheng, J. Perlich, P. Muller-Buschbaum, J. Gutmann</i>	

Fabrication of Double-Surface Reflective and Conductive Metallized Polymeric Films via Surface Modification	924
<i>Z. Wu, S. Qi, J. Zhan, R. Jin, D. Wu</i>	
Fabrication of Double-Surface-Silvered Polyimide Films Using ODPA/ODA as the Polymer Matrix	926
<i>R. Jin, S. Qi, Z. Wu, D. Wu</i>	
Enhancement Corrosion Resistance of (3-glycidoxylpropyl) Silsesquioxane Hybrid Films and its Validation by Gas-Molecule Diffusion Coefficients Using MD Simulation	928
<i>L. Hu, W. Zhao, Q. Guo</i>	
Light Scattering Study of Well-Defined Flexible Polyelectrolytes with Two Cationic Sites per Monomeric Unit	930
<i>M. Osa, G. Mountrichas, K. Hong, S. Pispas, P. Britt, J. Mays</i>	
Limitations of Order in Sphere-Forming Block Copolymer Thin Films Aligned Under Shear	931
<i>A. Marencic, M. Wu, R. Register, P. Chaikin</i>	
Mechanistic Aspects of the Threading of Polymers in Processive Rotaxane Catalysts	933
<i>J. Elemans, R. Coumans, P. Ramos, A. Deutman, A. Rowan, R. Nolte</i>	
Microbiological Study of Lubricant System for Magnetic Tape Industry	935
<i>M. Farahat, A. Nix, B. Brunson, D. Nikles</i>	
Morphological Effect on Conductance of Polymer/MWNT Nanofiber Mats	937
<i>D. Stevens, S. Ojha, S. McCullen, W. Roberts, T. Hoffman, R. Gorga, L. Clarke</i>	
Nanoclay Effect on Relaxation and Thermo-Mechanical Properties of Polymer Nanocomposites	939
<i>K. Mya, C. Ling, P. Pallathadka, C. He</i>	
Photoheometry: A Tool for Characterizing High-Performance Adhesives and Coatings	941
<i>J. Schall, A. Jacobine, J. Woods, R. Coffey</i>	
The Preparation of UV-Curable Silver Paste Utilized to Make the EMI Shielding Films	943
<i>C. Huang, C. Chan, M. Jiang, J. Hsu, Y. Tsai, J. Han, K. Hsieh</i>	
Thermal and Dielectric Behavior of [Ethylene-Methacrylic Acid]/ Graphite Composite Materials	945
<i>M. Rogers, K. Mauritz</i>	
Temperature Variations of Segmental and Chain Dynamics: Why are They Different?	947
<i>A. Sokolov</i>	
Molecular Mobility of Poly(phenyl methyl siloxane) Investigated by Thermal, Dielectric and Neutron Spectroscopy	948
<i>A. Schonhals, C. Schick, H. Huth, B. Frick, M. Mayorova, R. Zorn</i>	
Are Density Fluctuations Controlling the Breadth of the Segmental Relaxation in Glass-forming Liquids and Polymers?	950
<i>W. Liu, R. Colby, E. Clark, J. Lipson</i>	
Comparison of United Atom Force Field Performance with Respect to Polymer Dynamics	952
<i>E. Boland, J. Liu, J. Maranas</i>	

Thermal Stability and Relaxation of Polymeric Nanolmprinted Structures	955
<i>K. Alvine, Y. Ding, H. Ro, B. Okerberg, J. Douglas, A. Karim, D. Hines, C. Soles</i>	
Importance of Polymer-Polymer Interfaces on the Glass Transition Temperature in Polymer Multilayer Films and Nanostructured Blends	957
<i>C. Roth, J. Torkelson</i>	
Two Dimensional Viscoelastic Behavior of Poly (1-alkylene-co-maleic acid) at the Air/Water Interface	959
<i>C. Kim, A. Esker, H. Yu</i>	
"Smart" Polymers and Their Use for Glucose Monitoring in Human Plasma	960
<i>K. Medlock, G. Worsley, G. Tourniaire, F. Sartain, H. Harmer, M. Thatcher, A. Horgan, J. Pritchard</i>	
Surface-Tethered Poly(acrylic acid) Brushes as Functional Thin Film for Biosensor Application	962
<i>V. Hoven, P. Akkahat</i>	
Microgels and Linear Polymers as Polymeric Supramolecular Receptors for Proteins	964
<i>A. Tominey, J. Liese, D. Ewen, A. Kraft</i>	
Electrospinning and Surface Properties of Chitosan/PEO Nanofibers	966
<i>K. Desai, K. Kit, J. Li, S. Zivanovic, M. Davidson</i>	
Functional Nanoparticles from DNA Block Copolymers	968
<i>F. Alemdaroglu, A. Herrmann</i>	
Self-Assembly of an Amphiphilic Random Polymer Bearing Donor-Acceptor Type Azo Chromophores	971
<i>Y. Deng, Y. He, X. Wang</i>	
Synthesis and Characterization of Magnetic Composites Based on cis- Polyisoprene and CoFe₂O₄ Nanoparticles	973
<i>J. Rubim, G. Jacintho, P. Suarez, P. Kosaka, D. Petri</i>	
Super Highly Oxygen Permeable Silicone Hydrogels	974
<i>Y. Lai, W. Lang, E. Quinn, D. Ruscio</i>	
Crosslinking and Stabilization of TiO₂ Nanoparticle Filled Polymeric Membranes for Gas Separations	976
<i>L. Shao, J. Samseth, M. Hagg</i>	
Polyimides and Their Derivatives for Gas Separation Applications	979
<i>J. Klaehn, C. Orme, T. Luther, E. Peterson, J. Urban-Klaehn</i>	
Polymorphism and Elasticity in Polymers	981
<i>F. Auriemma, C. De Rosa, O. Ballesteros, S. Esposito</i>	
Role of Stereochemistry in Diffusion of Polypropylene Melts: Comparison of Simulation and Experiment	983
<i>N. Waheed, E. Von Meerwall, W. Mattice</i>	
Nanocomposites of Polyurethane Elastomers for High-Rate and Large-Strain Applications	985
<i>J. Huang, S. Liff, G. McKinley, M. Boyce</i>	
Spectroscopic Study of Polymer Crystallization and Orientation in Nanorods	987
<i>H. Wu, W. Wang, H. Yang, Z. Su</i>	
Time Dependent Thermal Conductivity in the Polyalphaolefine (PAO) Oils	989
<i>H. Hong, B. Wright, X. Wang, W. Roy</i>	

Study of the Thermal Stability and Kinetics of Decomposition of Poly(3,5-dimethylphenyl acrylate)	991
<i>N. Hamidi, R. Massoudi</i>	

Twinkling Fractal Theory of the Glass Transition and Yield	994
<i>R. Wool</i>	

Author Index