

# Macromolecules

February 12, 2013  
Volume 46, Issue 3  
Pages 573-1260

## Articles

### ***Copolymers Structures Tailored for the Preparation of Nanocapsules***

Johannes Fickert, Christian Wohnhaas, Andrey Turshatov, Katharina Landfester, and Daniel Crespy  
pp 573–579

**Publication Date (Web):** January 22, 2013 (Article)

**DOI:** 10.1021/ma302013s

 Section:

Plastics Manufacture and Processing

### ***Thermoresponsive Poly(N-C3 glycine)s***

Joshua W. Robinson, Christian Secker, Steffen Weidner, and Helmut Schlaad  
pp 580–587

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma302412v

 Section:

Chemistry of Synthetic High Polymers

### ***Side-Chain Liquid Crystalline Polyacetylenes with Increasing Length of Alkyl Tails: From Highly Ordered Smectic to Smectic C Phase***

Zhen-Qiang Yu, Jacky W. Y. Lam, Cai-Zhen Zhu, Er-Qiang Chen, and Ben Zhong Tang  
pp 588–596

**Publication Date (Web):** January 22, 2013 (Article)

**DOI:** 10.1021/ma302540k

 Section:

Physical Properties of Synthetic High Polymers

### ***Monitoring ROMP Crossover Chemistry via ESI-TOF MS***

Steffen Kurzhals, Claudia Enders, and Wolfgang H. Binder  
pp 597–607

**Publication Date (Web):** January 30, 2013 (Article)

**DOI:** 10.1021/ma302555q

 Section:

Chemistry of Synthetic High Polymers

### ***Functional Phthalaldehyde Polymers by Copolymerization with Substituted Benzaldehydes***

Joshua A. Kaitz and Jeffrey S. Moore  
pp 608–612

**Publication Date (Web):** February 4, 2013 (Article)

**DOI:** 10.1021/ma302575s



Section:  
Chemistry of Synthetic High Polymers

### ***Compositional Influence on the Regioregularity and Device Parameters of a Conjugated Statistical Copolymer***

Lisa M. Kozycz, Dong Gao, and Dwight S. Seferos

pp 613–621

**Publication Date (Web):** January 28, 2013 (Article)

**DOI:** 10.1021/ma302605e



Section:  
Chemistry of Synthetic High Polymers

### ***Biosourced Amphiphilic Degradable Elastomers of Poly(glycerol sebacate): Synthesis and Network and Oligomer Characterization***

Demetris Kafouris, Fotis Kossivas, Christakis Constantinides, Nhu Quynh Nguyen, Chrys Wesdemiotis, and Costas S. Patrickios

pp 622–630

**Publication Date (Web):** January 22, 2013 (Article)

**DOI:** 10.1021/ma3016882



Section:  
Synthetic Elastomers and Natural Rubber

### ***Catalytic Ring-Opening Copolymerization of Limonene Oxide and Phthalic Anhydride: Toward Partially Renewable Polyesters***

Elham Hosseini Nejad, Anita Paoniasari, Carlo G. W. van Melis, Cor E. Koning, and Rob Duchateau

pp 631–637

**Publication Date (Web):** January 16, 2013 (Article)

**DOI:** 10.1021/ma301904y



Section:  
Chemistry of Synthetic High Polymers

### ***Synthesis of Azetidinium-Functionalized Polymers Using a Piperazine Based Coupler***

Subrata Chattopadhyay, Helmut Keul, and Martin Moeller

pp 638–646

**Publication Date (Web):** January 17, 2013 (Article)

**DOI:** 10.1021/ma302008s



Section:  
Chemistry of Synthetic High Polymers

### ***Ferrocenyl Glycidyl Ether: A Versatile Ferrocene Monomer for Copolymerization with Ethylene Oxide to Water-Soluble, Thermoresponsive Copolymers***

Christine Tonhauser, Arda Alkan, Martina Schömer, Carsten Dingels, Sandra Ritz, Volker Mailänder, Holger Frey, and Frederik R. Wurm

pp 647–655

**Publication Date (Web):** January 11, 2013 (Article)

**DOI:** 10.1021/ma302241w



Section:  
Chemistry of Synthetic High Polymers

### ***Ruthenium-Catalyzed Cascade Metathetical Cyclopolymerization of Bisnorbornenes with Flexible Linkers***

Lei Zhu, Nai-Ti Lin, Zhen-Yu Xie, Shern-Long Lee, Shou-Ling Huang, Jian-He, Yang, Yu-Der, Lee, Chun-hsien Chen, Chung-Hsuan Chen, and Tien-Yau Luh

pp 656–663

**Publication Date (Web):** January 15, 2013 (Article)

**DOI:** 10.1021/ma302293q



Section:  
Chemistry of Synthetic High Polymers

### ***Poly(vinylidene chloride)-Based Amphiphilic Block Copolymers***

Emilie Velasquez, Gaëlle Pembouong, Jutta Rieger, François Stoffelbach, Olivier Boyron, Bernadette Charleux, Franck D'Agosto, Muriel Lansalot, Pierre-Emmanuel Dufils, and Jérôme Vinas

pp 664–673

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma302339x



Section:  
Chemistry of Synthetic High Polymers

### ***Polynorbornene Copolymer with Side-Chain Iridium(III) Emitters and Carbazole Hosts: A Single Emissive Layer Material for Highly Efficient Electrophosphorescent Devices***

Jun Ha Park, Tae-Wook Koh, Jin Chung, Sung Hoon Park, Maengsun Eo, Youngkyu Do, Seunghyup Yoo, and Min Hyung Lee

pp 674–682

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma302342p



Section:  
Chemistry of Synthetic High Polymers

### ***Improving the “Livingness” of ATRP by Reducing Cu Catalyst Concentration***

Yu Wang, Nicolai Soerensen, Mingjiang Zhong, Hendrik Schroeder, Michael Buback, and Krzysztof Matyjaszewski

pp 683–691

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma3024393



Section:  
Chemistry of Synthetic High Polymers

### ***Studies of Ring-Opening Reactions of Styrene Oxide by Chromium Tetraphenylporphyrin Initiators. Mechanistic and Stereochemical Considerations***

Nicole D. Harrold, Yang Li, and Malcolm H. Chisholm

pp 692–698

**Publication Date (Web):** January 27, 2013 (Article)

DOI: 10.1021/ma302492p

 Section:

Chemistry of Synthetic High Polymers

***Functional Poly( $\epsilon$ -caprolactone)s via Copolymerization of  $\epsilon$ -Caprolactone and Pyridyl Disulfide-Containing Cyclic Carbonate: Controlled Synthesis and Facile Access to Reduction-Sensitive Biodegradable Graft Copolymer Micelles***

Wei Chen, Yan Zou, Junna Jia, Fenghua Meng, Ru Cheng, Chao Deng, Jan Feijen, and Zhiyuan Zhong  
pp 699–707

**Publication Date (Web):** January 30, 2013 (Article)

DOI: 10.1021/ma302499a

 Section:

Chemistry of Synthetic High Polymers

***Tetrathiafulvalene (TTF)-Functionalized Thiophene Copolymerized with 3,3'-Didodecylquaterthiophene: Synthesis, TTF Trapping Activity, and Response to Trinitrotoluene***

Jasmine Sinha, Stephen J. Lee, Hoyoul Kong, Thomas W. Swift, and Howard E. Katz  
pp 708–717

**Publication Date (Web):** January 15, 2013 (Article)

DOI: 10.1021/ma3019365

 Section:

Chemistry of Synthetic High Polymers

***Conjugated NDI-Donor Polymers: Exploration of Donor Size and Electrostatic Complementarity***

Paul M. Alvey, Robert J. Ono, Christopher W. Bielawski, and Brent L. Iverson  
pp 718–726

**Publication Date (Web):** February 4, 2013 (Article)

DOI: 10.1021/ma302340u

 Section:

Physical Properties of Synthetic High Polymers

***New Fused Bis-Thienobenzothiophene Copolymers and Their Use in Organic Solar Cells and Transistors***

Laure Biniek, Bob C. Schroeder, Jenny E. Donaghey, Nir Yaacobi-Gross, Raja Shahid Ashraf, Ying W. Soon, Christian B. Nielsen, James R. Durrant, Thomas D. Anthopoulos, and Iain McCulloch  
pp 727–735

**Publication Date (Web):** January 31, 2013 (Article)

DOI: 10.1021/ma302390z

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

***New Cleavable Photoinitiator Architecture with Huge Molar Extinction Coefficients for Polymerization in the 340–450 nm Range.***

Mohamad-Ali Tehfe, Frédéric Dumur, Bernadette Graff, Jean-Louis Clément, Didier Gimes, Fabrice Morlet-Savary, Jean-Pierre Fouassier, and Jacques Lalevée  
pp 736–746

**Publication Date (Web):** January 11, 2013 (Article)

**DOI:** 10.1021/ma3024359

 Section:

Chemistry of Synthetic High Polymers

### ***Cross-Linked Liquid Crystalline Polyimides with Siloxane Units: Their Morphology and Thermal Diffusivity***

Yu Shoji, Ryohei Ishige, Tomoya Higashihara, Junko Morikawa, Toshimasa Hashimoto, Atsushi Takahara, Junji Watanabe, and Mitsuru Ueda

pp 747–755

**Publication Date (Web):** January 30, 2013 (Article)

**DOI:** 10.1021/ma302486s

 Section:

Chemistry of Synthetic High Polymers

### ***Furan-Containing Singlet Oxygen-Responsive Conjugated Polymers***

Esra Altinok, Simone Friedle, and Samuel W. Thomas, III

pp 756–762

**Publication Date (Web):** January 25, 2013 (Article)

**DOI:** 10.1021/ma3025656

 Section:

Chemistry of Synthetic High Polymers

### ***A Benzoselenadiazole-Based Low Band Gap Polymer: Synthesis and Photovoltaic Application***

Erjun Zhou, Junzi Cong, Kazuhito Hashimoto, and Keisuke Tajima

pp 763–768

**Publication Date (Web):** February 4, 2013 (Article)

**DOI:** 10.1021/ma302596k

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

### ***From a Water-Immiscible Monomer to Block Copolymer Nano-Objects via a One-Pot RAFT Aqueous Dispersion Polymerization Formulation***

L. P. D. Ratcliffe, A. J. Ryan, and S. P. Armes

pp 769–777

**Publication Date (Web):** January 17, 2013 (Article)

**DOI:** 10.1021/ma301909w

 Section:

Chemistry of Synthetic High Polymers

### ***Novel Synthetic Strategy for the Sulfonation of Polybutadiene and Styrene-Butadiene Copolymers***

Antonio Buonerba, Vito Speranza, and Alfonso Grassi

pp 778–784

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma301972m

 Section:

Chemistry of Synthetic High Polymers

## ***Thermally Stable Bulk Heterojunction Solar Cells Based on Cross-Linkable Acrylate-Functionalized Polythiophene Diblock Copolymers***

Farid Ouhib, Mirco Tomassetti, Jean Manca, Fortunato Piersimoni, Donato Spoltore, Sabine Bertho, Hans Moons, Roberto Lazzaroni, Simon Desbief, Christine Jerome, and Christophe Detrembleur  
pp 785–795

**Publication Date (Web):** January 11, 2013 (Article)

**DOI:** 10.1021/ma3020905

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

## ***Poly(butylene 2,5-furan dicarboxylate), a Biobased Alternative to PBT: Synthesis, Physical Properties, and Crystal Structure***

Jianhui Zhu, Jiali Cai, Wenchun Xie, Pin-Hsuan Chen, Massimo Gazzano, Mariastella Scandola, and Richard A. Gross  
pp 796–804

**Publication Date (Web):** January 24, 2013 (Article)

**DOI:** 10.1021/ma3023298

 Section:

Plastics Manufacture and Processing

## ***Understanding the Controlled Polymerization of Methyl Methacrylate with Low Concentrations of 9-(4-Vinylbenzyl)-9H-carbazole Comonomer by Nitroxide-Mediated Polymerization: The Pivotal Role of Reactivity Ratios***

Benoît H. Lessard, Yohann Guillauneuf, Manoj Mathew, Kun Liang, Jean-Louis Clement, Didier Gigmes, Robin A. Hutchinson, and Milan Marić  
pp 805–813

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma3023525

 Section:

Chemistry of Synthetic High Polymers

## ***A Facile Approach for Controlled Modification of Chitosan under $\gamma$ -Ray Irradiation for Drug Delivery***

Wei Huang, Yingjie Wang, Shuang Zhang, Li Huang, Daoben Hua, and Xiulin Zhu  
pp 814–818

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma302434c

 Section:

Pharmaceuticals

## ***Successive Synthesis of Miktoarm Star Polymers Having up to Seven Arms by a New Iterative Methodology Based on Living Anionic Polymerization Using a Trifunctional Lithium Reagent***

Shotaro Ito, Raita Goseki, Takashi Ishizone, Saeko Senda, and Akira Hirao  
pp 819–827

**Publication Date (Web):** January 16, 2013 (Article)

**DOI:** 10.1021/ma3024975

 Section:

Chemistry of Synthetic High Polymers

### ***Effect of Supercooling on Crystallization of Polyamide 11***

Ayret Mollova, René Androsch, Daniela Mileva, Christoph Schick, and Aida Benhamida  
pp 828–835

**Publication Date (Web):** January 16, 2013 (Article)

**DOI:** 10.1021/ma302238r

 Section:

Physical Properties of Synthetic High Polymers

### ***Crystalline and Noncrystalline Forms of Poly(9,9-diheptylfluorene)***

Matti Knaapila, Mika Torkkeli, Frank Galbrecht, and Ullrich Scherf  
pp 836–843

**Publication Date (Web):** January 24, 2013 (Article)

**DOI:** 10.1021/ma3023124

 Section:

Physical Properties of Synthetic High Polymers

### ***Computational Study on the Effect of Substituents on the Structural and Electronic Properties of Thiophene–Pyrrole-Based $\pi$ -Conjugated Oligomers***

Harikrishna Sahu and Aditya N. Panda  
pp 844–855

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma3024409

 Section:

Physical Properties of Synthetic High Polymers

### ***Sorption and Diffusion of n-Alkyl Acetates in Poly(methyl acrylate)/Silica Nanocomposites***

Dustin W. Janes and Christopher J. Durning  
pp 856–866

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma301990u

 Section:

Plastics Manufacture and Processing

### ***Self-Assembly and Transport Limitations in Confined Nafion Films***

Miguel A. Modestino, Devproshad K. Paul, Shudipto Dishari, Stephanie A. Petrina, Frances I. Allen, Michael A. Hickner, Kunal Karan, Rachel A. Segalman, and Adam Z. Weber  
pp 867–873

**Publication Date (Web):** January 23, 2013 (Article)

**DOI:** 10.1021/ma301999a

 Section:

Electrochemical, Radiational, and Thermal Energy Technology

### ***Diffusion of Aromatic Solutes in Aliphatic Polymers above Glass Transition Temperature***

Xiaoyi Fang, Sandra Domenek, Violette Ducruet, Matthieu Réfrégiers, and Olivier Vitrac  
pp 874–888

**Publication Date (Web):** January 17, 2013 (Article)

DOI: 10.1021/ma3022103



Physical Properties of Synthetic High Polymers

### ***Sulfur-Cured Natural Rubber Elastomer Networks: Correlating Cross-Link Density, Chain Orientation, and Mechanical Response by Combined Techniques***

Arnaud Vieyres, Roberto Pérez-Aparicio, Pierre-Antoine Albouy, Olivier Sanseau, Kay Saalwächter, Didier R. Long, and Paul Sotta

pp 889–899

**Publication Date (Web):** January 31, 2013 (Article)

DOI: 10.1021/ma302563z



Synthetic Elastomers and Natural Rubber

### ***Opening and Closing of Nanocavities under Cyclic Loading in a Soft Nanocomposite Probed by Real-Time Small-Angle X-ray Scattering***

Huan Zhang, Arthur K. Scholz, Fabien Vion-Loisel, Yannick Merckel, Mathias Brieu, Hugh Brown, Stéphane Roux, Edward J. Kramer, and Costantino Creton

pp 900–913

**Publication Date (Web):** January 24, 2013 (Article)

DOI: 10.1021/ma302325w



Synthetic Elastomers and Natural Rubber

### ***Ionic Conductivity of Low Molecular Weight Block Copolymer Electrolytes***

Rodger Yuan, Alexander A. Teran, Inna Gurevitch, Scott A. Mullin, Nisita S. Wanakule, and Nitash P. Balsara

pp 914–921

**Publication Date (Web):** February 4, 2013 (Article)

DOI: 10.1021/ma3024552



Physical Properties of Synthetic High Polymers

### ***Directed Self-Assembly of Block Copolymers on Sparsely Nanopatterned Substrates***

Peng Chen, Haojun Liang, Ru Xia, Jiasheng Qian, and Xiaoshuang Feng

pp 922–926

**Publication Date (Web):** January 28, 2013 (Article)

DOI: 10.1021/ma301203a



Physical Properties of Synthetic High Polymers

### ***Role of Interfacial Structure of Water in Polymer Surface Wetting***

Mengjin Xu, Chen Zhang, Zhongjie Du, and Jianguo Mi

pp 927–934

**Publication Date (Web):** February 1, 2013 (Article)

DOI: 10.1021/ma301526a





### ***Control of Morphology in Pattern Directed Dewetting of a Thin Polymer Bilayer***

Sudeshna Roy, Debarati Biswas, Namrata Salunke, Ajit Das, Pavanaphani Vutukuri, Ravdeep Singh, and Rabibrata Mukherjee

pp 935–948

**Publication Date (Web):** February 4, 2013 (Article)

**DOI:** 10.1021/ma3018525

 Section:

Surface Chemistry and Colloids

### ***Ion Motion in Anion and Proton-Conducting Triblock Copolymers***

Melanie L. Disabb-Miller, Zachary D. Johnson, and Michael A. Hickner

pp 949–956

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma301947t

 Section:

Plastics Manufacture and Processing

### ***Order–Disorder Transition of Nanocomposites: Polystyrene-block-Poly(methyl methacrylate) with Palladium Nanoparticles***

Yue Zhao, Kenji Saijo, and Takeji Hashimoto

pp 957–970

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma302070r

 Section:

Physical Properties of Synthetic High Polymers

### ***Structural Evolution of Ethylene–Octene Copolymers upon Stretching and Unloading***

Yingying Sun, Lianlian Fu, Zhonghua Wu, and Yongfeng Men

pp 971–976

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma3020933

 Section:

Synthetic Elastomers and Natural Rubber

### ***Quantification of Temperature-Dependent Order in Graphoepitaxially Aligned Monolayer and Bilayer Films of Cylindrical Morphology Block Copolymer***

Vindhya Mishra and Edward J. Kramer

pp 977–987

**Publication Date (Web):** January 15, 2013 (Article)

**DOI:** 10.1021/ma302111c

 Section:

Physical Properties of Synthetic High Polymers

## ***X-ray Crystal Structures, Packing Behavior, and Thermal Stability Studies of a Homologous Series of n-Alkyl-Substituted Polyhedral Oligomeric Silsesquioxanes***

Youssef El Aziz, Alan R. Bassindale, Peter G. Taylor, Richard A. Stephenson, Michael B. Hursthouse, Ross W. Harrington, and William Clegg

pp 988–1001

**Publication Date (Web):** February 4, 2013 (Article)

**DOI:** 10.1021/ma302229v

 Section:

Organometallic and Organometalloidal Compounds

## ***Temperature Dependence of the Diffusion Coefficient of PCBM in Poly(3-hexylthiophene)***

Neil D. Treat, Thomas E. Mates, Craig J. Hawker, Edward J. Kramer, and Michael L. Chabinyo

pp 1002–1007

**Publication Date (Web):** January 24, 2013 (Article)

**DOI:** 10.1021/ma302337p

 Section:

Physical Properties of Synthetic High Polymers

## ***Electrochemical Deposition of Hollow N-Substituted Polypyrrole Microtubes from an Acoustically Formed Emulsion***

Conor P. McCarthy, Niall B. McGuinness, Patrick B. Carolan, Catherine M. Fox, Bernadette E. Alcock-Earley, Carmel B. Breslin, and A. Denise Rooney

pp 1008–1016

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma302493e

 Section:

Electrochemistry

## ***Photoinduced Deformation of Rigid Azobenzene-Containing Polymer Networks***

Nobuhiko Hosono, Mayumi Yoshikawa, Hidemitsu Furukawa, Kenro Totani, Kyoko Yamada, Toshiyuki Watanabe, and Kazuyuki Horie

pp 1017–1026

**Publication Date (Web):** January 18, 2013 (Article)

**DOI:** 10.1021/ma302157u

 Section:

Physical Properties of Synthetic High Polymers

## ***Nonuniform Hydration and Odd–Even Effects in Polyelectrolyte Multilayers under a Confining Pressure***

Wiebe M. de Vos, Laura L. E. Mears, Robert M. Richardson, Terence Cosgrove, Robert Barker, and Stuart W. Prescott

pp 1027–1034

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma3021773

 Section:

Physical Properties of Synthetic High Polymers

## ***Transition between Phantom and Affine Network Model Observed in Polymer Gels with Controlled Network Structure***

Yuki Akagi, Jian Ping Gong, Ung-il Chung, and Takamasa Sakai

pp 1035–1040

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma302270a

 Section:

Physical Properties of Synthetic High Polymers

## ***Hydration States of Poly(N-isopropylacrylamide) and Poly(N,N-diethylacrylamide) and Their Monomer Units in Aqueous Solutions with Lower Critical Solution Temperatures Studied by Infrared Spectroscopy***

Chihiro Hashimoto, Akiyoshi Nagamoto, Takashi Maruyama, Naomi Kariyama, Yuma Irisa, Akifumi Ikehata, and Yukihiko Ozaki

pp 1041–1053

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma302317m

 Section:

Physical Properties of Synthetic High Polymers

## ***UV Light and Temperature Responsive Supramolecular ABA Triblock Copolymers via Reversible Cyclodextrin Complexation***

Bernhard V. K. J. Schmidt, Martin Hetzer, Helmut Ritter, and Christopher Barner-Kowollik

pp 1054–1065

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma302386w

 Section:

Chemistry of Synthetic High Polymers

## ***Polyurea–Urethane Supramolecular Thermo-Reversible Networks***

Yiping Ni, Frédéric Becquart, Jianding Chen, and Mohamed Taha

pp 1066–1074

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma302421r

 Section:

Chemistry of Synthetic High Polymers

## ***Precise Synthesis and Characterization of Tadpole-Shaped Polystyrenes with High Purity***

Yuya Doi, Yutaka Ohta, Masahide Nakamura, Atsushi Takano, Yoshiaki Takahashi, and Yushu Matsushita

pp 1075–1081

**Publication Date (Web):** January 18, 2013 (Article)

**DOI:** 10.1021/ma302511j

 Section:

Chemistry of Synthetic High Polymers

## ***Sequential Association of Anionic/Thermosensitive Diblock Copolymers with Cationic Surfactants***

Evdokia K. Oikonomou, Georgios Bokias, Ilias Iliopoulos, and Joannis K. Kallitsis  
pp 1082–1092

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma302535k

 Section:

Physical Properties of Synthetic High Polymers

### ***Toward Tertiary Amine-Modulated Acid-Triggered Hydrolysis of Copolymers Containing Pendent Ortho Ester Groups***

Cheng-Cheng Song, Cui-Cui Su, Jing Cheng, Fu-Sheng Du, De-Hai Liang, and Zi-Chen Li  
pp 1093–1100

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma301964n

 Section:

Chemistry of Synthetic High Polymers

### ***Structural Study on the UCST-Type Phase Separation of Poly(N-isopropylacrylamide) in Ionic Liquid***

Hanako Asai, Kenta Fujii, Takeshi Ueki, Shota Sawamura, Yutaro Nakamura, Yuzo Kitazawa, Masayoshi Watanabe, Young-Soo Han, Tae-Hwan Kim, and Mitsuhiro Shibayama  
pp 1101–1106

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma3020273

 Section:

Physical Properties of Synthetic High Polymers

### ***Probing the Mesh Formed by the Semirigid Polyelectrolytes***

K. Salamon, D. Aumiler, G. Pabst, and T. Vuletić  
pp 1107–1118

**Publication Date (Web):** January 28, 2013 (Article)

**DOI:** 10.1021/ma3021486

 Section:

Industrial Carbohydrates

### ***SEC Gradients: An Alternative Approach to Polymer Gradient Chromatography. Separation of Poly(methyl methacrylate-stat-methacrylic acid) by Chemical Composition***

Helena Maier, Frank Malz, Günter Reinhold, and Wolfgang Radke  
pp 1119–1123

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma3023553

 Section:

Physical Properties of Synthetic High Polymers

### ***Water-Soluble Chiral Polyisocyanides Showing Thermoresponsive Behavior***

Guixia Hu, Wen Li, Yulong Hu, Anqiu Xu, Jiatao Yan, Lianxiao Liu, Xiacong Zhang, Kun Liu, and Afang Zhang

pp 1124–1132

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma302536t

 Section:

Chemistry of Synthetic High Polymers

### ***Imidazole Polymers Derived from Ionic Liquid 4-Vinylimidazolium Monomers: Their Synthesis and Thermal and Dielectric Properties***

Thomas W. Smith, Meng Zhao, Fan Yang, Darren Smith, and Peggy Cebe

pp 1133–1143

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma300862t

 Section:

Chemistry of Synthetic High Polymers

### ***Rheology–Structure Interrelationships of Hydroxypropylcellulose Liquid Crystal Solutions and Their Nanocomposites under Flow***

Veronica V. Makarova, Maria Yu. Tolstykh, Stephen J. Picken, Eduardo Mendes, and Valery G. Kulichikhin

pp 1144–1157

**Publication Date (Web):** February 1, 2013 (Article)

**DOI:** 10.1021/ma301095t

 Section:

Physical Properties of Synthetic High Polymers

### ***Ring Conformations in Bidisperse Blends of Ring Polymers***

M. Lang

pp 1158–1166

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma301359b

 Section:

Physical Properties of Synthetic High Polymers

### ***Mussel-Inspired Histidine-Based Transient Network Metal Coordination Hydrogels***

Dominic E. Fullenkamp, Lihong He, Devin G. Barrett, Wesley R. Burghardt, and Phillip B. Messersmith

pp 1167–1174

**Publication Date (Web):** January 18, 2013 (Article)

**DOI:** 10.1021/ma301791n

 Section:

Physical Properties of Synthetic High Polymers

### ***Polymerized Ionic Liquids with Enhanced Static Dielectric Constants***

U Hyeok Choi, Anuj Mittal, Terry L. Price, Jr., Harry W. Gibson, James Runt, and Ralph H. Colby

pp 1175–1186

**Publication Date (Web):** January 28, 2013 (Article)

**DOI:** 10.1021/ma301833j

 Section:

Chemistry of Synthetic High Polymers

## ***Determination of Tube Theory Parameters Using a Simple Grid Model as an Example***

Alexei E. Likhtman, Mohamad S. Talib, Bart Vorselaars, and Jorge Ramirez

pp 1187–1200

**Publication Date (Web):** February 4, 2013 (Article)

**DOI:** 10.1021/ma302103p

 Section:

Physical Properties of Synthetic High Polymers

## ***Morphology, Phase Behavior, and Relaxation Processes in a Series of Aromatic–Aliphatic Thermotropic Polymer Biomaterials***

Christopher S. Lovell, Michael E. Ries, Ian M. Ward, Horacio Montes de Oca, and David Farrar

pp 1201–1211

**Publication Date (Web):** January 31, 2013 (Article)

**DOI:** 10.1021/ma302338e

 Section:

Physical Properties of Synthetic High Polymers

## ***Charge-Transfer Complexation Mechanism of Poly(4-vinylpyridine)/[6,6]-Phenyl-C<sub>61</sub>-butyric Acid Methyl Ester in DMF Solution***

Guangmin Wei, Dongdong Yao, Zhiyong Li, Ye Huang, He Cheng, and Charles C. Han

pp 1212–1220

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma3020504

 Section:

Physical Properties of Synthetic High Polymers

## ***Controlling Grafted Polymers inside Cylindrical Tubes***

Tongchuan Suo, Tyler N. Shendruk, Owen A. Hickey, Gary W. Slater, and Mark D. Whitmore

pp 1221–1230

**Publication Date (Web):** January 23, 2013 (Article)

**DOI:** 10.1021/ma302302t

 Section:

Physical Properties of Synthetic High Polymers

## ***Rationalizing Polymer Swelling and Collapse under Attractive Cosolvent Conditions***

Jan Heyda, Anja Muzdalo, and Joachim Dzubiella

pp 1231–1238

**Publication Date (Web):** January 14, 2013 (Article)

**DOI:** 10.1021/ma302320y

 Section:

Physical Properties of Synthetic High Polymers

## ***“Raindrop” Coalescence of Polymer Chains during Coil–Globule Transition***

Anna Lappala and Eugene M. Terentjev

pp 1239–1247

**Publication Date (Web):** January 18, 2013 (Article)

**DOI:** 10.1021/ma302364f

Section:

Physical Properties of Synthetic High Polymers

### ***Semianalytical Mean-Field Model for Starlike Polymer Brushes in Good Solvent***

Holger Merlitz, Wei Cui, Chen-Xu Wu, and Jens-Uwe Sommer

pp 1248–1252

**Publication Date (Web):** January 18, 2013 (Article)

**DOI:** 10.1021/ma302417j

Section:

Physical Properties of Synthetic High Polymers

### ***Notes***

### ***Synthesis of Phenyleneethynylene-Doped Poly(p-phenylenebutadiynylene)s for Live Cell Imaging***

Tereza Vokatá and Joong Ho Moon

pp 1253–1259

**Publication Date (Web):** January 25, 2013 (Note)

**DOI:** 10.1021/ma3019975

Section:

Chemistry of Synthetic High Polymers

### ***Additions and Corrections***

### ***Correction to “Polymer-Grafted Magnetic Nanoparticles in Nanocomposites: Curvature Effects, Conformation of Grafted Chain, and Bimodal Nanotriggering of Filler Organization by Combination of Chain Grafting and Magnetic Field”***

Anne-Sophie Robbes, Fabrice Cousin, Florian Meneau, Florent Dalmas, Ralf Schweins, Didier Gigmes, and Jacques Jestin

pp 1260–1260

**Publication Date (Web):** January 14, 2013 (Addition/Correction)

**DOI:** 10.1021/ma400056a

Section:

Physical Properties of Synthetic High Polymers