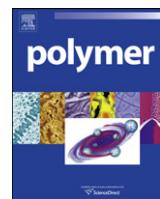




Contents lists available at ScienceDirect



Polymer

journal homepage: www.elsevier.com/locate/polymer

Polymer Vol. 49, No. 26, 8 December 2008

Contents

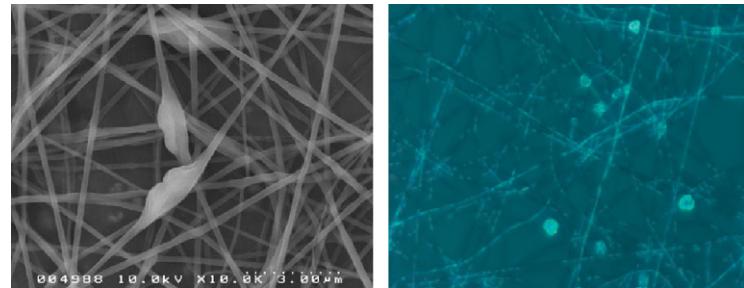
FEATURE ARTICLE

Use of electrospinning technique for biomedical applications

Seema Agarwal^{a,*}, Joachim H. Wendorff, Andreas Greiner^{*}

pp 5603–5621

Philipps-Universität Marburg, Department of Chemistry
and Scientific Center for Materials Science, Hans Meerwein
Strasse, 35032 Marburg, Germany



POLYMER COMMUNICATION

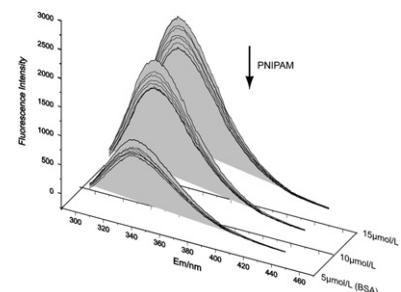
Quantification of the complexation of protein with neutral water borne polymer by fluorescence spectroscopy

Liang Zhang^{a,b}, Bingzhao Wu^{a,b}, Zhiqiang Su^{a,*}, Xiaonong Chen^{b,**}

pp 5622–5625

^a Beijing Key Laboratory on Preparation and Processing of Novel Polymeric Materials,
Beijing University of Chemical Technology, Beijing 100029, China

^b Department of Biomaterials, College of Materials Science and Engineering,
Beijing University of Chemical Technology, Beijing 100029, China

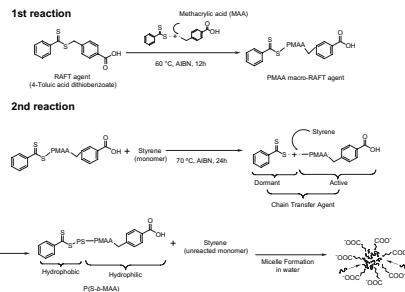


POLYMER PAPERS**Soap-free emulsion polymerization of styrene using poly(methacrylic acid) macro-RAFT agent**

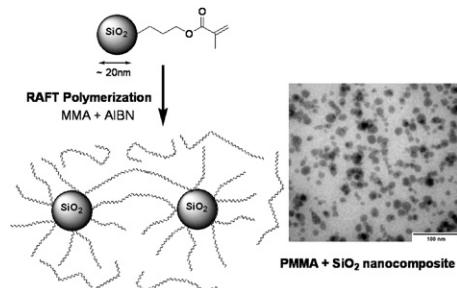
pp 5626–5635

Yeonhwa Wi, Kangseok Lee, Byung Hyung Lee, Soonja Choe*

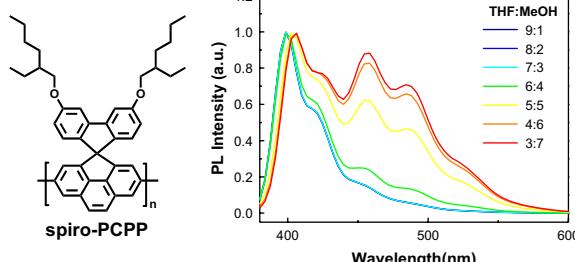
Department of Chemical Engineering, Inha University, 253 Yonghyundong, Namgu, Incheon 402-751, South Korea

**Synthesis of poly(methyl methacrylate)-silica nanocomposites using methacrylate-functionalized silica nanoparticles and RAFT polymerization**

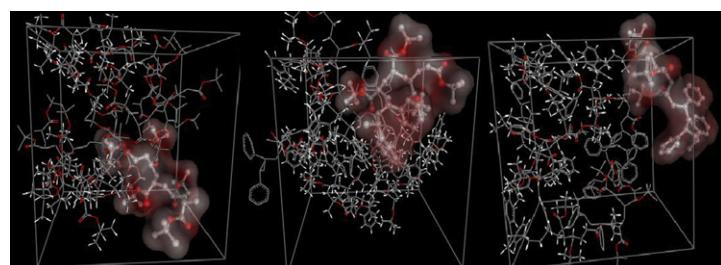
pp 5636–5642

Pavan S. Chinthamanipeta^a, Shuji Kobukata^b, Hiromichi Nakata^c, Devon A. Shipp^{a,*}^a Department of Chemistry and Biomolecular Science, Center for Advanced Materials Processing, Clarkson University, Potsdam, NY 13699-5810, USA^b Tsukuba Research Laboratories, Kuraray Co., LTD. 41, Miyukigaoka, Tsukuba, Ibaraki 305-0841, Japan^c Kuraray Research & Technical Center, Kuraray America Inc., 11500 Bay Area Boulevard, Pasadena, TX 77507, USA**A novel conjugated polymer based on cyclopenta[def]phenanthrene backbone with spiro group**

pp 5643–5649

Suhee Song^a, Youngeup Jin^a, Jinwoo Kim^a, Sung Heum Park^b, Sun Hee Kim^b, Kwanghee Lee^b, Hongsuk Suh^{a,*}^a Department of Chemistry and Chemistry Institute for Functional Materials, Pusan National University, 30 Jangjeon-dong, Geumjeong-gu, Busan 609-735, Republic of Korea^b Department of Materials Science and Engineering, Gwangju Institute of Science and Technology, Gwangju 500-712, Republic of Korea**Dielectric and dynamic-mechanical study of the mobility of poly(t-butylacrylate) chains in diblock copolymers: Polystyrene-b-poly(t-butylacrylate)**

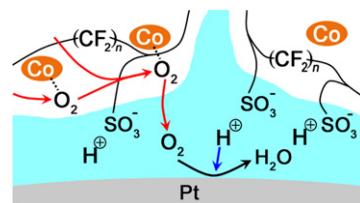
pp 5650–5658

Mario Encinar^a, Eduardo Guzmán^a, Margarita G. Prolongo^b, Ramón G. Rubio^{a,*}, Claudia Sandoval^c, Fernando González-Nilo^d, Ligia Gargallo^c, Deodato Radić^c^a Departamento de Química Física I, Facultad Química, Universidad Complutense, 28040-Madrid, Spain^b Departamento de Materiales y Producción Aeroespacial, ETSI Aeronáuticos, Universidad Politécnica, 28040-Madrid, Spain^c Departamento de Química Física, Facultad de Química, Pontificia Universidad Católica de Chile, Vicuña Mackenna 4860, Casilla 306, Santiago 22, Chile^d Centro de Bioinformática y Simulación Molecular (CBSM), Universidad de Talca, 2 Norte 685, Casilla 721, Talca, Chile

Facilitated oxygen transport through a Nafion membrane containing cobaltporphyrin as a fixed oxygen carrier
Masami Shoji, Kenichi Oyaizu, Hiroyuki Nishide*

pp 5659–5664

Department of Applied Chemistry, Waseda University, Tokyo 169-8555, Japan



Micro-computerized tomographic observation of the spinning apparatus in *Bombyx mori* silkworms
Motoaki Moriya^a, Kosuke Ohgo^b, Yuichi Masubuchi^c, David P. Knight^d, Tetsuo Asakura^{b,*}

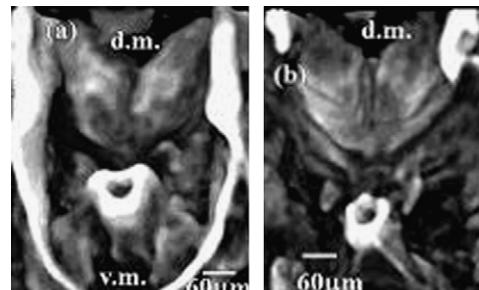
pp 5665–5669

^a Department of Applied Chemistry, Tokyo University of Agriculture and Technology, Koganei, Tokyo 184-8588, Japan

^b Department of Biotechnology, Tokyo University of Agriculture and Technology, Koganei, Tokyo 184-8588, Japan

^c Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan

^d Oxford Biomaterials Ltd, Units 14–15 Galaxy House, New Greenham Business Park, Thatcham RG19 6HR, United Kingdom

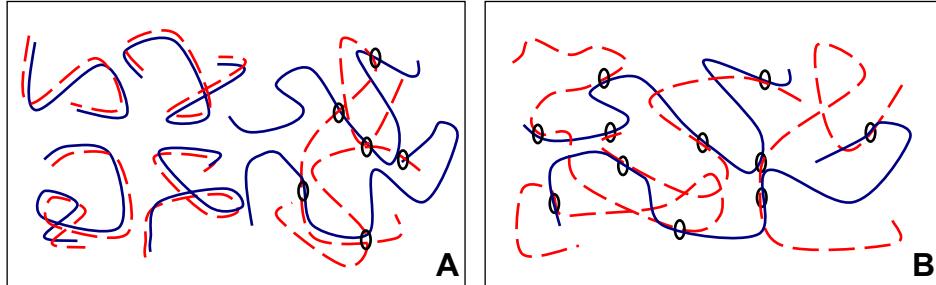


Unique crystallization behavior of poly(L-lactide)/poly(D-lactide) stereocomplex depending on initial melt states
Yong He^{a,b}, Ying Xu^a, Jia Wei^a, Zhongyong Fan^a, Suming Li^{a,b,*}

pp 5670–5675

^a Department of Materials Science, Fudan University, Shanghai 200433, China

^b University Montpellier I, Max Mousseron Institute on Biomolecules, UMR CNRS 5247, Faculty of Pharmacy, 34060 Montpellier, France

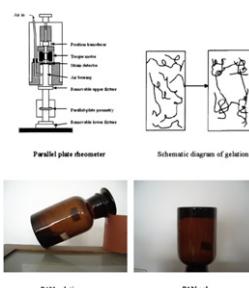


Gelation behavior of polyacrylonitrile solution in relation to aging process and gel concentration
Lianjiang Tan^a, Ding Pan^{a,*}, Ning Pan^b

pp 5676–5682

^a State Key Laboratory for Chemical Fibers Modification and Polymer Materials, Donghua University, Shanghai 201620, People's Republic of China

^b Biological and Agricultural Engineering Department, University of California, CA 95616, USA

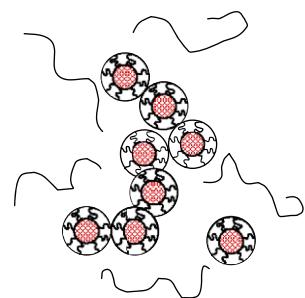


Dispersing hairy nanoparticles in polymer melts

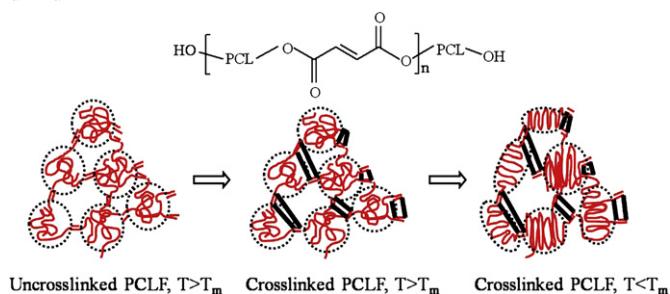
pp 5683–5691

Xiaorong Wang*, Victor J. Foltz, Mindaugas Rackaitis, Georg G.A. Böhm

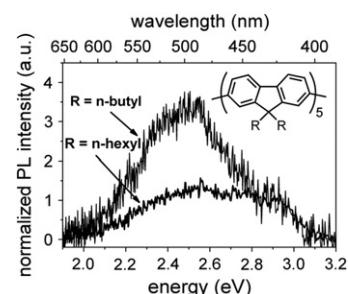
Bridgestone Americas, Center for Research and Technology, 1200 Firestone Parkway, Akron, OH 44317, United States

**Photo-crosslinked poly(ϵ -caprolactone fumarate) networks: Roles of crystallinity and crosslinking density in determining mechanical properties**

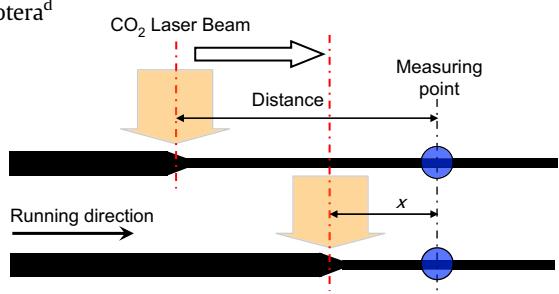
pp 5692–5699

Shanfeng Wang^a, Michael J. Yaszemski^{b,c}, James A. Gruetzmacher^b, Lichun Lu^{b,c,*}^a Department of Materials Science and Engineering, The University of Tennessee, Knoxville, TN 37996, USA^b Department of Orthopedic Surgery, Mayo Clinic College of Medicine, 200 First Street SW, Rochester, MN 55905, USA^c Department of Physiology and Biomedical Engineering, Mayo Clinic College of Medicine, 200 First Street SW, Rochester, MN 55905, USA**Time-resolved photoluminescence study of low-energy emission mechanisms in oligofluorene and polyfluorene films**

pp 5700–5704

Jihoon Kang^a, Jungho Jo^a, Youngeun Jo^a, Sun Young Lee^a, Panagiotis E. Keivanidis^b, Gerhard Wegner^b, Do Y. Yoon^{a,*}^a Department of Chemistry, Seoul National University, Seoul 151-747, Republic of Korea^b Max Planck Institute for Polymer Research, Mainz, Germany**Initial structure development in the CO₂ laser-heated drawing of poly(trimethylene terephthalate) fiber**

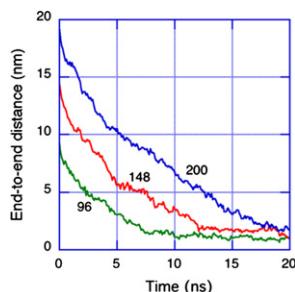
pp 5705–5713

KyoungHou Kim^a, YoungAh Kang^b, Takahisa Murata^b, Soichiro Ikehata^b, Yutaka Ohkoshi^{b,*}, Yasuo Gotoh^b, Masanobu Nagura^b, Mitsuharu Koide^c, Hiroshi Urakawa^c, Masaru Kotera^d^a Collaborative Innovation Center for Nanotech FIBER (nanoFIC), Shinshu University, Ueda Nagano 386-8567, Japan^b Faculty of Textile Science and Technology, Shinshu University, 3-15-1 Tokida Ueda Nagano, Japan^c Faculty of Engineering and Design, Kyoto Institute of Technology, Goshokaidoucho, Matsugasaki, Sakyo-ku, Kyoto 606-8585, Japan^d Department of Chemical Science and Engineering, Faculty of Engineering, Kobe University, Rokko, Nada, Kobe 657-8501, Japan

The dynamic response of isolated polybutadiene chains undergoing thermal retraction from extended conformations**pp 5714–5718**

David E. Hanson*

Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM 87545, USA



*Corresponding author

Full text of this journal is available, on-line from **ScienceDirect**. Visit www.sciencedirect.com for more information.

Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei Compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®



ISSN 0032-3861

Author Index

- Agarwal, S. 5603
Asakura, T. 5665

Chen, X. 5622
Chinthamanipeta, P. S. 5636
Choe, S. 5626

Encinar, M. 5650

Fan, Z. 5670
Foltz, V. J. 5683

Böhm, G. G. A. 5683
Gargallo, L. 5650
González-Nilo, F. 5650
Gotoh, Y. 5705
Greiner, A. 5603
Gruetzmacher, J. A. 5692
Guzmán, E. 5650

Hanson, D. E. 5714
He, Y. 5670

Ikehata, S. 5705

Jin, Y. 5643
Jo, J. 5700
Jo, Y. 5700

Kang, J. 5700
Kang, Y. A. 5705

Keivanidis, P. E. 5700
Kim, J. 5643
Kim, K. H. 5705
Kim, S. H. 5643
Knight, D. P. 5665
Kobukata, S. 5636
Koide, M. 5705
Kotera, M. 5705

Lee, B. H. 5626
Lee, K. 5626, 5643
Lee, S. Y. 5700
Li, S. 5670
Lu, L. 5692

Masubuchi, Y. 5665
Moriya, M. 5665
Murata, T. 5705

Nagura, M. 5705
Nakata, H. 5636
Nishide, H. 5659

Ohgo, K. 5665
Ohkoshi, Y. 5705
Oyaizu, K. 5659

Pan, D. 5676
Pan, N. 5676
Park, S. H. 5643
Prolongo, M. G. 5650

Rackaitis, M. 5683
Radić, D. 5650
Rubio, R. G. 5650

Sandoval, C. 5650
Shipp, D. A. 5636
Shoji, M. 5659
Song, S. 5643
Su, Z. 5622
Suh, H. 5643

Tan, L. 5676

Urakawa, H. 5705

Wang, S. 5692
Wang, X. 5683
Wegner, G. 5700
Wei, J. 5670
Wendorff, J. H. 5603
Wi, Y. 5626
Wu, B. 5622

Xu, Y. 5670

Yaszemski, M. J. 5692
Yoon, D. Y. 5700

Zhang, L. 5622