

Polymer Vol. 49, No. 15, 7 July 2008

Contents

FEATURE ARTICLE

Polymer nanotechnology: Nanocomposites

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POLYMER COMMUNICATION

A novel supramolecular shape memory material based on partial α -CD-PEG inclusion complex

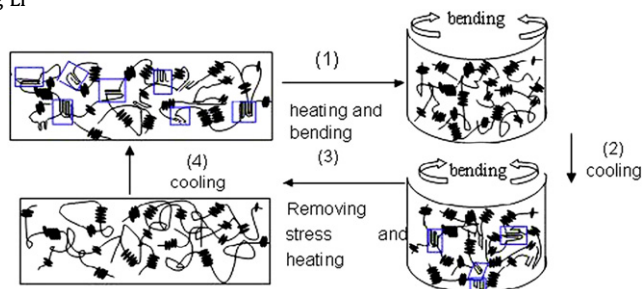
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^b Chengdu Institute of Biology, Chinese Academy of Sciences, Chengdu 610041, China

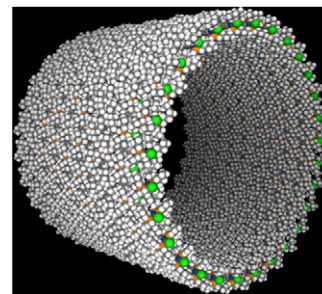
^c School of Pharmacy and Pharmacology, University of KwaZulu-Natal, Durban 4000, South Africa



POLYMER PAPERS

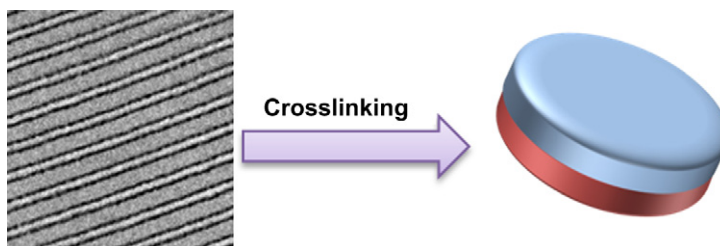
Self-assembly of nanostructured polymetallaynesI. Fratoddi ^{a,*}, C. Gohlke ^b, C. Cametti ^c, M. Diociaiuti ^d, M.V. Russo ^a^a Department of Chemistry, University of Rome "Sapienza", P.le A. Moro 5, 00185 Rome, Italy^b Department of Biomedical Engineering, University of California, Irvine, USA^c Department of Physics, University of Rome "Sapienza", P.le A. Moro 5, 00185 Rome, Italy and INFM-CRS-SOFT, Unità di Roma1, Italy^d Department of Technology and Health, Istituto Superiore di Sanità, Viale Regina Margherita 299, 00161 Rome, Italy

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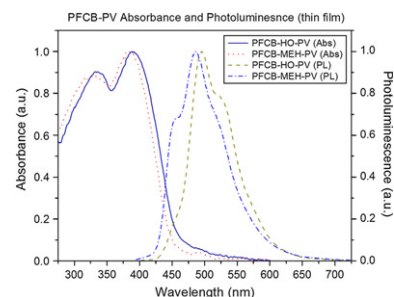
**Controlled crosslinking of polybutadiene containing block terpolymer bulk structures: A facile way towards complex and functional nanostructures**Andreas Walther ^{*}, Astrid Gödel, Axel H. E. Müller ^{*}

Makromolekulare Chemie II and Bayreuther Zentrum für Kolloide und Grenzflächen, Universität Bayreuth, D-95440 Bayreuth, Germany

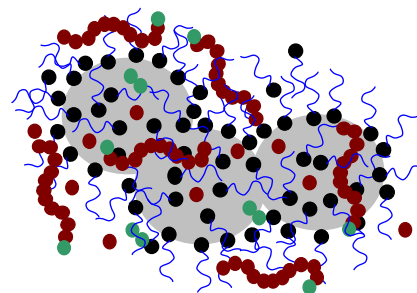
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**Synthesis and characterization of highly fluorescent phenylene vinylene containing perfluorocyclobutyl (PFCB) aromatic ether polymers**Andrew R. Neilson ^a, Steven M. Budy ^a, John M. Ballato ^b, Dennis W. Smith, Jr. ^{a,*}^a Clemson University, Department of Chemistry, Clemson, SC 29634-0973, United States^b Clemson University, School of Materials Science and Engineering, Center for Optical Materials Science and Engineering Technologies (COMSET), Clemson, SC 29634-0973, United States

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**Surfactant-enhanced free radical polymerization of styrene in emulsion gels**Gu Xu ^{a,b}, Frank D. Blum ^{a,c,*}^a Department of Chemistry, Missouri University of Science and Technology, Rolla, MO 65409-0010, United States^b Brewer Science Inc., 2401 Brewer Drive, Rolla, MO 65401, United States^c Department of Materials Science and Engineering, Missouri University of Science and Technology, Rolla, MO 65409-0010, United States

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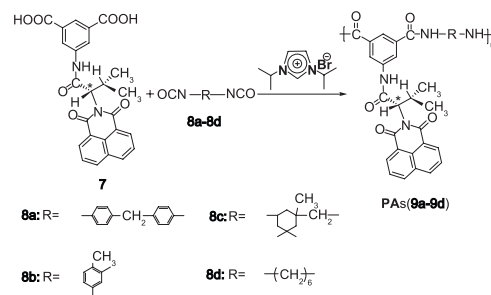


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Shadpour Mallakpour*, Mehdi Taghavi

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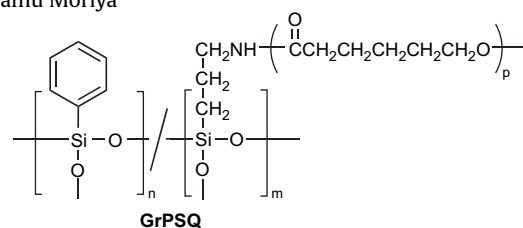
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Mikihiro Kashio^a, Toshio Sugizaki^a, Shin-ichi Yamamoto^b, Tomonori Matsuoka^b, Osamu Moriya^{b,*}

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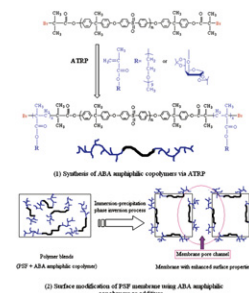


Amphiphilic ABA copolymers used for surface modification of polysulfone membranes, Part 1: Molecular design, synthesis, and characterization

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Jianyu Wang, Youyi Xu, Liping Zhu*, Jianhua Li, Baoku Zhu

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Growth mechanism and pH-regulation characteristics of composite latex particles prepared from Pickering emulsion polymerization of aniline/ZnO using different hydrophilicities of oil phases

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Jauder Jeng^a, Tai-You Chen^b, Chia-Fen Lee^c, Nai-Yun Liang^d, Wen-Yen Chiu^{a,b,e,*}

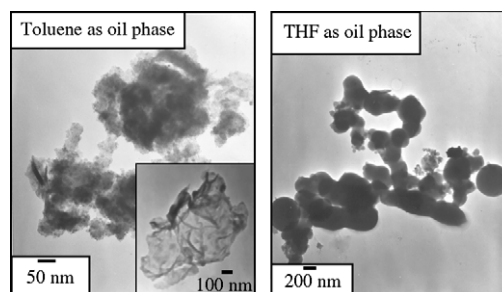
^a Institute of Polymer Science and Engineering, National Taiwan University, Taipei, 106 Taiwan, ROC

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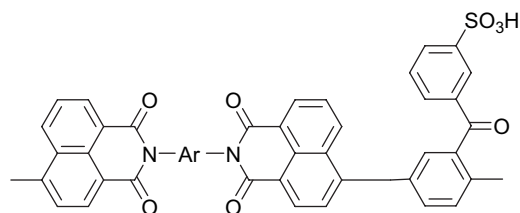
^d Taiwan Textile Research Institute, Taipei, 236 Taiwan, ROC

^e Department of Materials Science and Engineering, National Taiwan University, Taipei, Taiwan, ROC

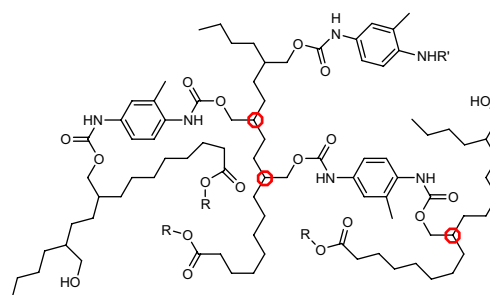


Synthesis of sulfonated poly(arylene-co-naphthalimide)s as novel polymers for proton exchange membranes

pp 3272–3278

Feng Zhang ^{a,b}, Zhiming Cui ^b, Nanwen Li ^{a,b}, Lei Dai ^a, Suobo Zhang ^{a,*}^a State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, China^b Graduate School of Chinese Academy of Sciences, Beijing 100039, China**Characterisation of polyurethane networks based on vegetable derived polyol**

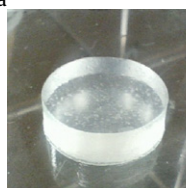
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M. Carme Coll Ferrer ^a, David Babb ^b, Anthony J. Ryan ^{a,*}^a Department of Chemistry, The University of Sheffield, Brookhill, S3 7HF Sheffield, UK^b Polyurethanes R&D, The Dow Chemical Company, 2301 Brazosport Boulevard, B-4810 building, Freeport, Tx 77541, USA**Photo-oxidation in an ¹⁸O₂ atmosphere: A powerful tool to elucidate the mechanism of UV-visible light oxidation of polymers – Application to the photodegradation of MDMO-PPV**

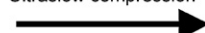
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Sylvain Chambon ^{a,b}, Matthieu Manceau ^{a,b}, Muriel Firon ^a, Stéphane Cros ^a, Agnès Rivaton ^b, Jean-Luc Gardette ^{b,*}^a INES, DRI/LITEN/DTS/LCS, 73370 Le Bourget du Lac, France^b LPMM Laboratoire de Photochimie Moléculaire et Macromoléculaire, UMR Université Blaise Pascal/CNRS 6505, 63177 Aubière cedex, France**Markedly compressible behaviors of gellan hydrogels in a constrained geometry at ultraslow strain rates**

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Kenji Urayama ^{a,*}, Yuta Taoka ^a, Kunio Nakamura ^b, Toshikazu Takigawa ^a^a Department of Materials Chemistry, Kyoto University, Kyoto 615-8510, Japan^b Department of Food Science, Rakuno Gakuen University, Hokkaido 069-8501, Japan

Ultraslow compression

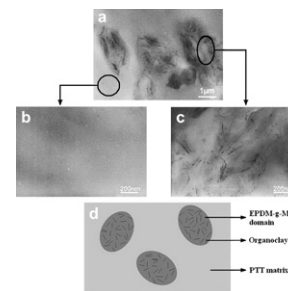
Strain rate: ca. 10⁻⁵ s⁻¹

Effects of organoclay platelets on morphology and mechanical properties in PTT/EPDM-g-MA/organoclay ternary nanocomposites

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Cure behavior of epoxy/MWCNT nanocomposites: The effect of nanotube surface modification

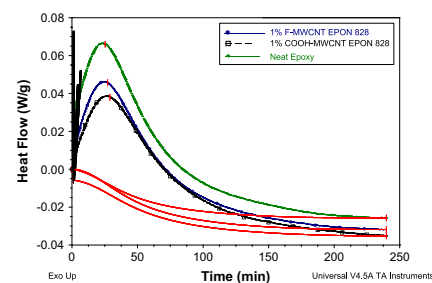
pp 3310–3317

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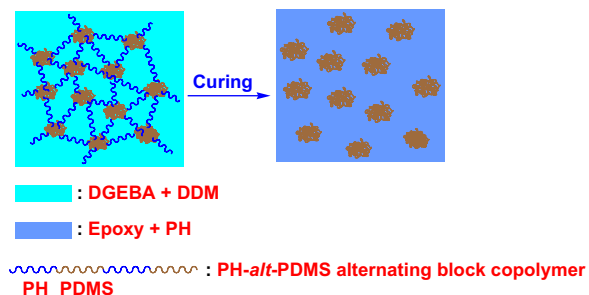


Poly(hydroxyether of bisphenol A)-block-polydimethylsiloxane alternating block copolymer and its nanostructured blends with epoxy resin

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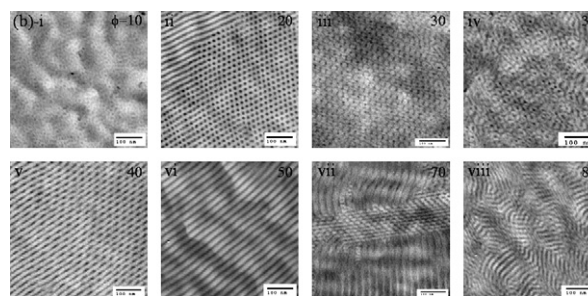


The effects of the selectivity of the toluene/ethanol mixture on the micellar and the ordered structures of an asymmetric poly(styrene-*b*-4-vinylpyridine)

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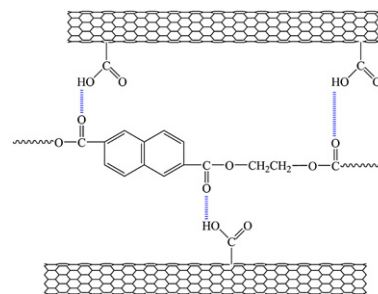
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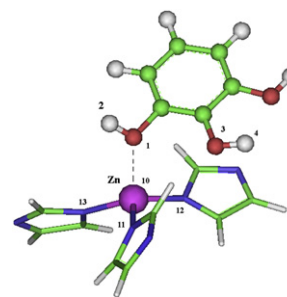


Effect of modified carbon nanotube on the properties of aromatic polyester nanocompositesJun Young Kim ^{a,*}, Sang Il Han ^a, Seungpyo Hong ^b^a Material Laboratory, Corporate R&D Center, Samsung SDI Co., Ltd., 575 Shin-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-731, Republic of Korea^b Department of Biopharmaceutical Sciences, University of Illinois, Chicago, IL 60612, USA

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**Theoretical study on potency and selectivity of novel non-peptide inhibitors of matrix metalloproteinases MMP-1 and MMP-3**Dailin Li ^a, Qingchuan Zheng ^a, Xuexun Fang ^b, Haitao Ji ^b, Jingang Yang ^b, Hongxing Zhang ^{a,*}^a State Key Laboratory of Theoretical and Computational Chemistry, Institute of Theoretical Chemistry, Jilin University, Changchun 130023, PR China^b Key Laboratory for Molecular Enzymology and Enzyme Engineering of Ministry of Education, Jilin University, Changchun 130023, PR China

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