

Polymer Vol. 50, No. 15, 17 July 2009

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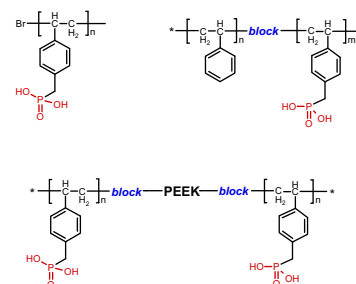
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Phosphonic acid-containing homo-, AB and BAB block copolymers via ATRP designed for fuel cell applications

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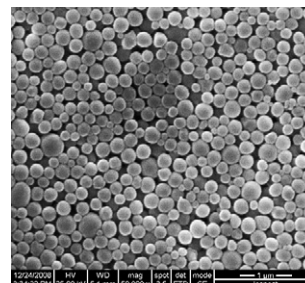


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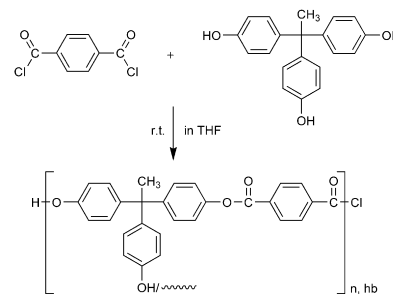


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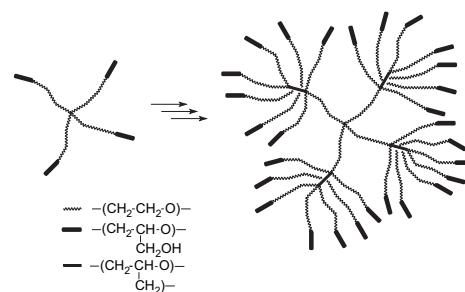
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Zhirong Fan, Albena Lederer, Brigitte Voit*

Leibniz Institute of Polymer Research Dresden, Hohe Strasse 6, 01069 Dresden, Germany

**Synthesis, characterization and properties of functional star and dendritic block copolymers of ethylene oxide and glycidol with oligoglycidol branching units**

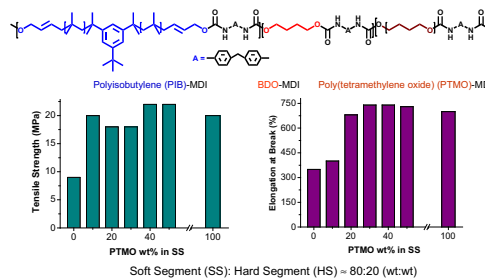
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Andrzej Dworak^{a, b}, Wojciech Watach^{a, *}^a Centre of Polymer and Carbon Materials, Polish Academy of Sciences, M. Curie-Skłodowskiej 34, 41-819 Zabrze, Poland^b University of Opole, Institute of Chemistry, Oleska 48, 45-052 Opole, Poland**Syntheses and characterization of novel biostable polyisobutylene based thermoplastic polyurethanes**

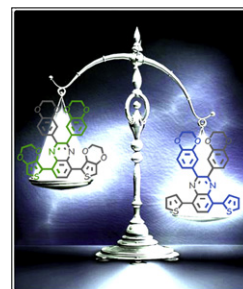
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Umaprasana Ojha, Pallavi Kulkarni, Rudolf Faust*

Department of Chemistry, University of Massachusetts Lowell, One University Avenue, Lowell, MA 01854, United States

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Simge Tarkuc^{a, c}, Yasemin Arslan Udum^b, Levent Toppare^{a, *}^a Department of Chemistry, Middle East Technical University, 06531 Ankara, Turkey^b Institute of Science and Technology, Department of Advanced Technologies, Gazi University, 06570 Ankara, Turkey^c Middle East Technical University Northern Cyprus Campus, Kalkanli, Guzelyurt, TRNC, Mersin 10, Turkey

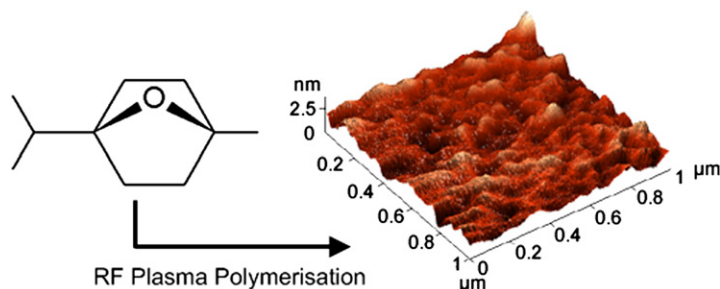
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Christopher D. Easton^a, Mohan V. Jacob^{a,*}, Robert A. Shanks^b

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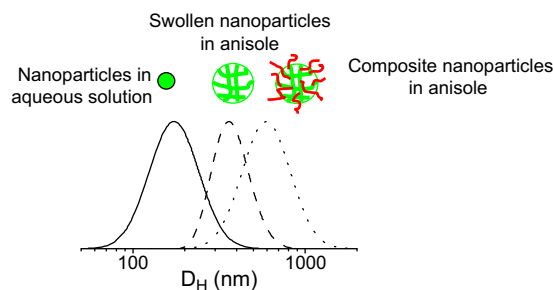
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Haik Feng^{a,b}, Yi Zhao^a, Maxime Pelletier^a, Yi Dan^{b,*}, Yue Zhao^{a,*}

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Ethylene vinyl acetate/layered silicate nanocomposites prepared by a surfactant-free method: Enhanced flame retardant and mechanical properties

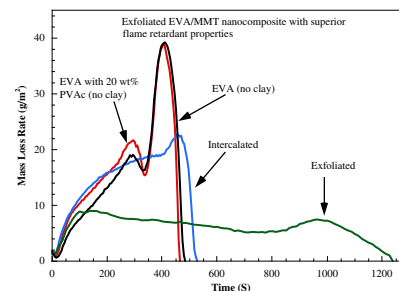
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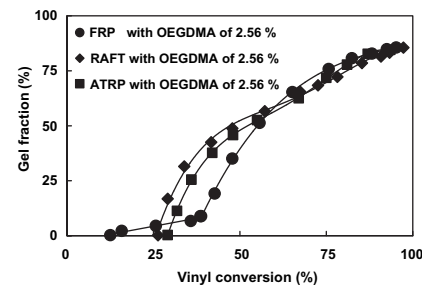
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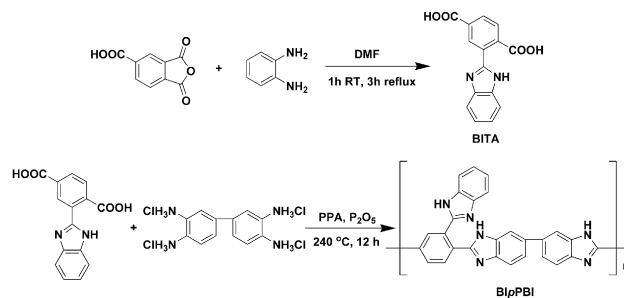


Polybenzimidazole containing benzimidazole side groups for high-temperature fuel cell applications

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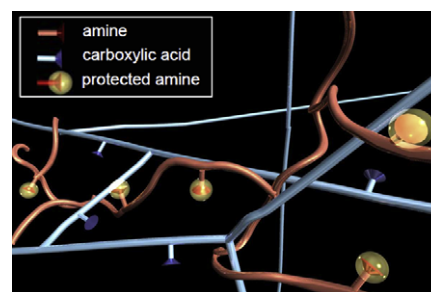

Novel polyion complex with interpenetrating polymer network of poly(acrylic acid) and partially protected poly(vinylamine) using *N*-vinylacetamide and *N*-vinylformamide

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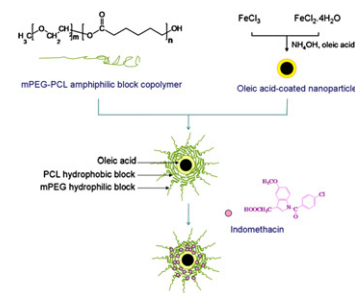
^b Department of Applied Chemistry, Graduate School of Engineering, Osaka University,
2-1 Yamada-oka, Suita, Osaka 565-0871, Japan


Magnetic core-bilayer shell nanoparticle: A novel vehicle for entrapment of poorly water-soluble drugs

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Synthesis and characterization of PVB/silica nanofibers by electrospinning process

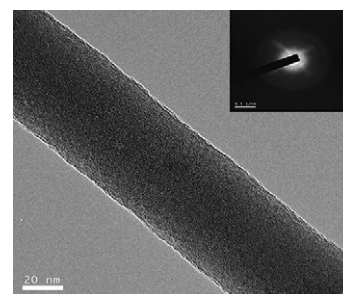
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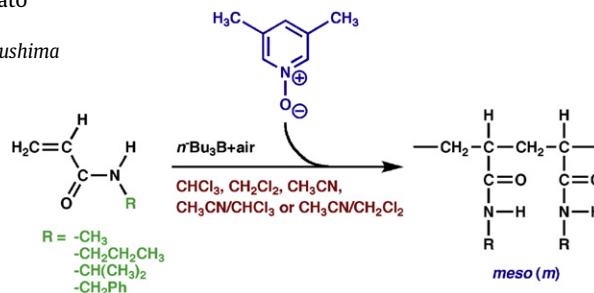
^c Department of Environment and Energy, National University of Tainan, Taiwan



Metal-free isotactic-specific radical polymerization of *N*-alkylacrylamides with 3,5-dimethylpyridine *N*-oxide: The effect of the *N*-substituent and solvent on the isotactic specificity pp 3522–3527

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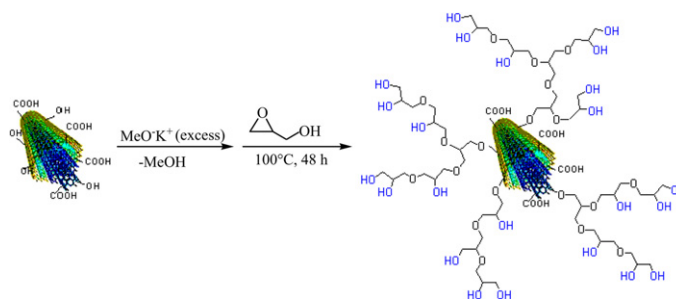
Carbon nanotubes-graft-polyglycerol: Biocompatible hybrid materials for nanomedicine pp 3528–3536

Mohsen Adeli^{a, b, *}, Narjes Mirab^a, Mohammad Shafiee Alavidjeh^c, Zahra Sobhani^c, Fatemeh Atyabi^c

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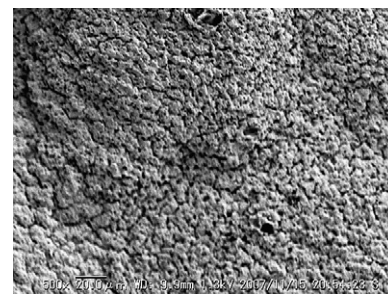
^c Department of Pharmaceutical Sciences, Faculty of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran



Simultaneous and sequential micro-porous semi-interpenetrating polymer network hydrogel films for drug delivery and wound dressing applications pp 3537–3546

T. Thimma Reddy, Atsushi Takahara*

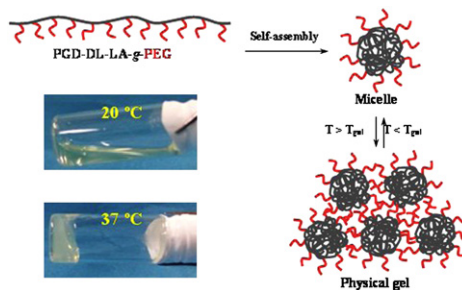
Institute for Materials Chemistry and Engineering, Kyushu University, 744 Motooka, Nishi-ku, Fukuoka 819-0395, Japan



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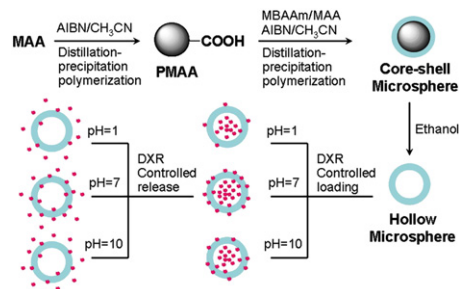
Koji Nagahama, Yuichiro Imai, Teppei Nakayama, Junpei Ohmura, Tatsuro Ouchi, Yuichi Ohya*

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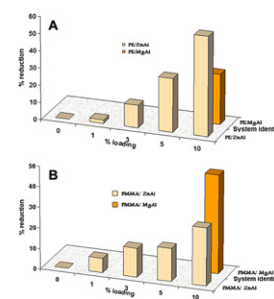
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Xiaoying Yang^{a,*}, Liting Chen^a, Bo Huang^b, Feng Bai^b, Xinlin Yang^{b,*}^a School of Pharmaceutical Sciences, Tianjin Medical University, Tianjin 300070, China^b Key Laboratory of Functional Polymer Materials, Ministry of Education, Institute of Polymer Chemistry, Nankai University, Tianjin 300071, China

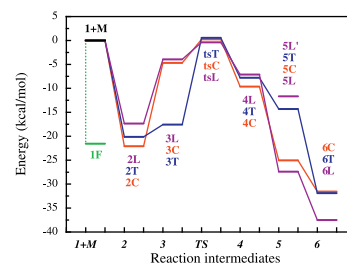
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Charles Manzi-Nshuti^a, Ponusa Songtipya^{b,c}, E. Manias^b, Maria M. Jimenez-Gasco^c, Jeanne M. Hossenlopp^a, Charles A. Wilkie^{a,*}^a Department of Chemistry and Fire Retardant Research Facility, Marquette University, Milwaukee, WI 53201-1881, USA^b Department of Materials Science and Engineering, Penn State University, University Park, PA, USA^c Plant Pathology Department, Penn State University, University Park, PA, USA

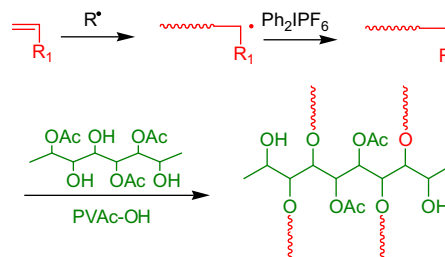
A density functional theory study of the mechanisms of scandium-alkoxide initiated coordination–insertion ring-opening polymerization of cyclic esters

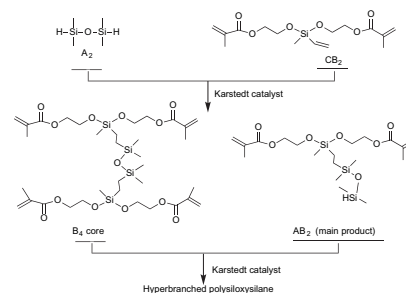
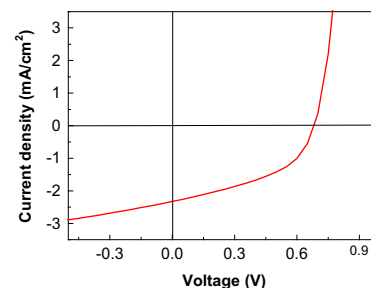
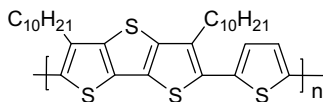
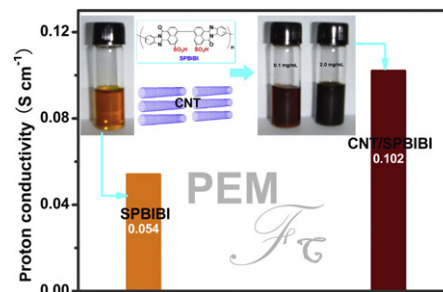
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Synthesis of a graft polymer PVAc-g-[P(AN-r-BVE)-b-PCHO] in “one-step” by radical/cationic transformation polymerization and coupling reaction

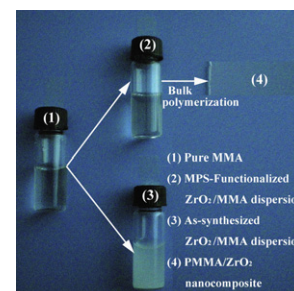
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Renfu Lai^a, Haiqing Guo^{a,*}, Mikuharu Kamachi^b^a Beijing National Laboratory for Molecular Sciences, State Key Laboratory of Rare Earth Materials Chemistry and Applications, College of Chemistry and Molecular Engineering, Peking University, Beijing 100871, China^b Department of Applied Physics and Chemistry, Fukui University of Technology, 3-6-1 Gakuen, Fukui 910-0028, Japan

Synthesis, characterization and UV curing kinetics of hyperbranched polysiloxysilanes from A₂ and CB₂ type monomers pp 3587–3594Sheng-Jie Wang^{a,b,*}, Xiao-Dong Fan^b, Jie Kong^{b,**}, Jian-Ren Lu^c^a Center for Bioengineering and Biotechnology, China University of Petroleum, Qingdao 266555, PR China^b Department of Applied Chemistry, School of Science, Northwestern Polytechnical University, Xi'an 710072, PR China^c Biological Physics Group, School of Physics and Astronomy, University of Manchester, Schuster Building, Manchester M139JP, UK**Synthesis of a soluble conjugated copolymer based on dialkyl-substituted dithienothiophene and its application in photovoltaic cells** pp 3595–3599Shiming Zhang^{a,b}, Chao He^c, Yao Liu^{a,b}, Xiaowei Zhan^{a,*}, Junwu Chen^{c,**}^a Beijing National Laboratory for Molecular Sciences and CAS Key Laboratory of Organic Solids, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, China^b Graduate School of Chinese Academy of Sciences, Beijing 100039, China^c Institute of Polymer Optoelectronic Materials & Devices, South China University of Technology, Guangzhou 510640, China**Dispersions of carbon nanotubes in sulfonated poly[bis(benzimidazobenzisoquinolinones)] and their proton-conducting composite membranes** pp 3600–3608Nanwen Li^{a,b}, Feng Zhang^{a,b}, Junhua Wang^{a,b}, Shenghai Li^a, Suobo Zhang^{a,*}^a State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, Jilin, China^b Graduate School of Chinese Academy of Sciences, China**Surface mechanical properties of transparent poly(methyl methacrylate)/zirconia nanocomposites prepared by *in situ* bulk polymerization** pp 3609–3616

Yiqing Hu, Shuxue Zhou*, Limin Wu

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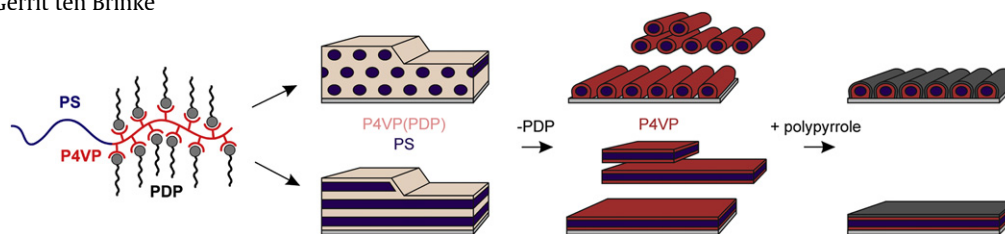


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Wendy van Zoelen, Sasa Bondzic, Tatiana Fernández Landaluze, Johan Brondijk, Katja Loos, Arend-Jan Schouten, Petra Rudolf, Gerrit ten Brinke*

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Transport properties of organic vapours in silicone/clay nanocomposites

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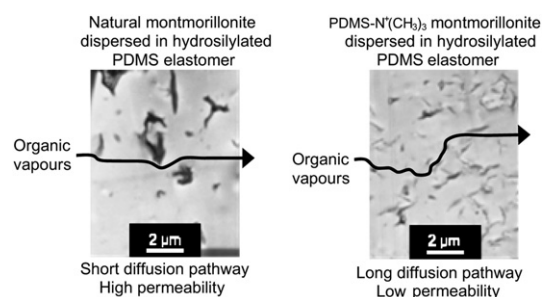
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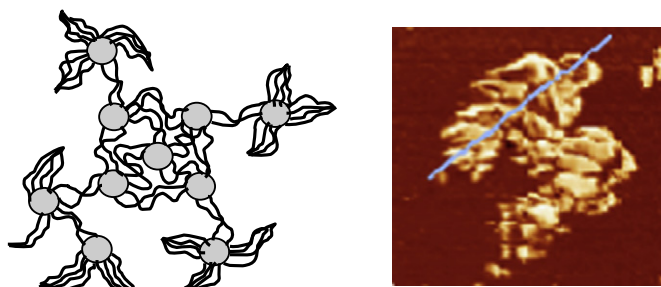


Self-assemblies formed by four-arm star copolymers with amphiphilic diblock arms in aqueous solutions

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Macroporous polymers from particle-stabilized emulsions

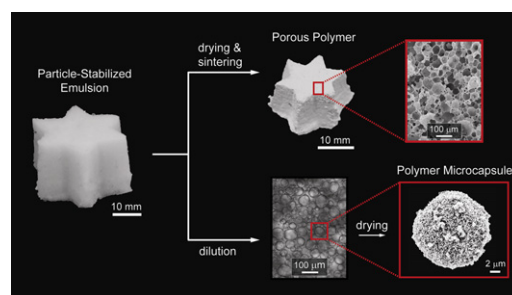
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Ilke Akartuna^{a,*}, Elena Tervoort^a, Joanna C.H. Wong^b, André R. Studart^c, Ludwig J. Gauckler^a

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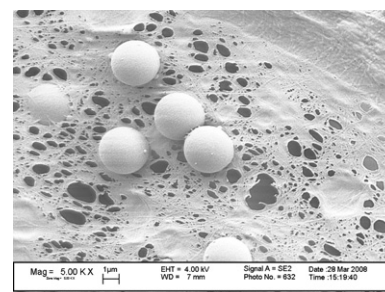
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Sanghyun Hong^a, Jinho Hong^a, Dongsoo Jung^b, Sang Eun Shim^{a,*}^a Department of Chemical Engineering, Inha University, 253 Yonghyundong, Namgu, Incheon 402-751, South Korea^b Department of Mechanical Engineering, Inha University, 253 Yonghyundong, Namgu, Incheon 402-751, South Korea

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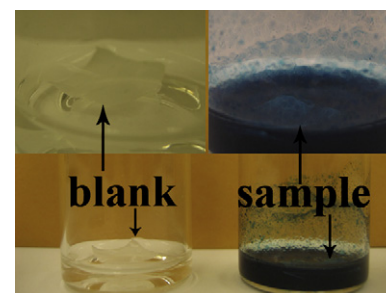
Keyur Desai^a, Kevin Kit^{a,*}, Jiajie Li^b, P. Michael Davidson^b, Svetlana Zivanovic^b, Harry Meyer^c^a Department of Material Science and Engineering, University of Tennessee, Knoxville, TN 37996, USA^b Department of Food Science and Technology, University of Tennessee, Knoxville, TN 37996, USA^c HTML Share user facility, Oak Ridge National Laboratory, Oak Ridge, TN 37831, USA

Organic compatible polyacrylamide hydrogel fibers

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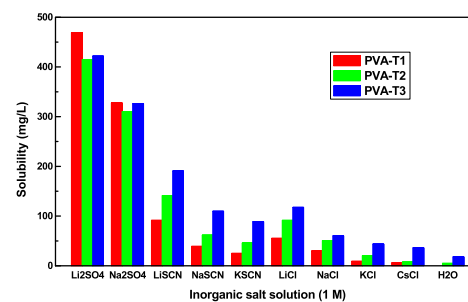
Ping Lu, You-Lo Hsieh^{*}

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Novel PVA-based polymers showing an anti-Hofmeister Series property

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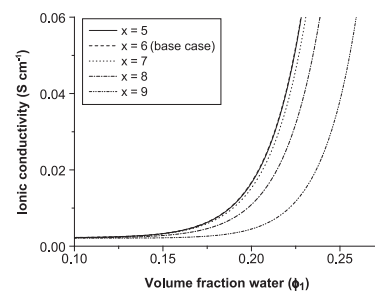
Jianquan Wang^{a,b,*}, Mitsuru Satoh^b^a School of Materials Science and Engineering, Beijing Institute of Technology, Beijing 100081, People's Republic of China^b Department of Chemistry and Materials Science, Tokyo Institute of Technology, Tokyo 152-8550, Japan

Ionic conductivities of perfluorosulfonic acid membrane by group contribution method

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Dong Wook Sung, Young Gyun Kim, Young Chan Bae*

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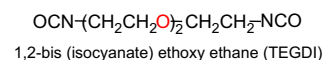
Synthesis and properties of highly hydrophilic polyurethane based on diisocyanate with ether group

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Ken Kojio^{a,*}, Yoshitaka Mitsui^a, Mutsuhisa Furukawa^b

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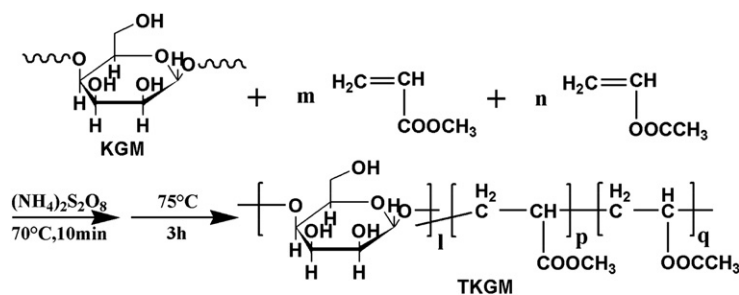


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Changgang Xu, Xuegang Luo*, Xiaoyan Lin, Xiurong Zhuo, Lili Liang

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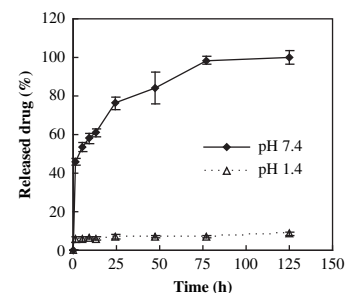
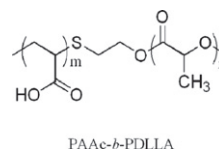


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Ya-Nan Xue, Zhen-Zhen Huang, Jian-Tao Zhang, Min Liu, Min Zhang, Shi-Wen Huang*, Ren-Xi Zhuo*

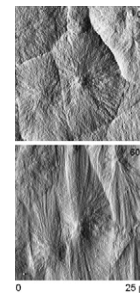
Key Laboratory of Biomedical Polymers, Ministry of Education, Department
of Chemistry, Wuhan University, Wuhan 430072, PR China



Plastic deformation of spherulitic semi-crystalline polymers: An *in situ* AFM study of polybutene under tensile drawing pp 3714–3723

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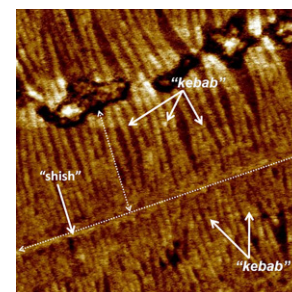


Oriented crystallization of isotactic polystyrene in films prepared by friction transfer pp 3724–3729

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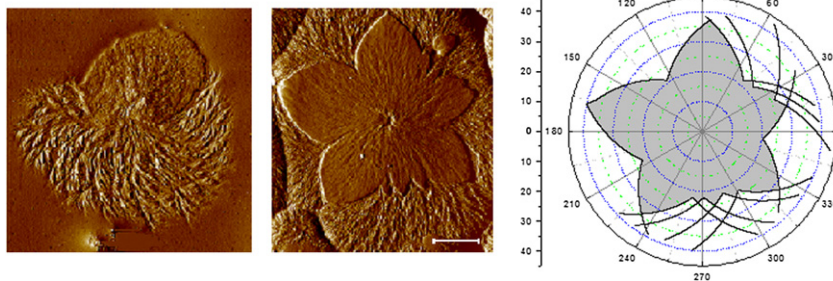


The observation of rapid surface growth during the crystallization of polyhydroxybutyrate pp 3730–3738

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Characterization of latex-based isotactic polypropylene/clay nanocomposites pp 3739–3746

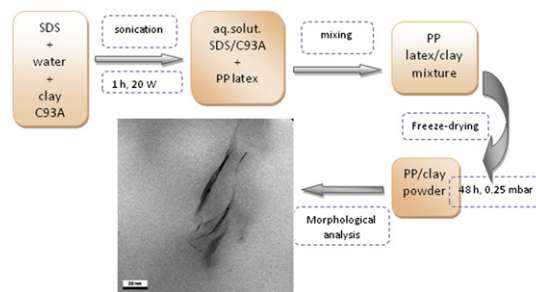
Luljeta Raka^{a,*}, Gordana Bogojeva-Gaceva^b, Kangbo Lu^{c,d}, Joachim Loos^{c,d}

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Effect of melting and crystallization on the conductive network in conductive polymer composites

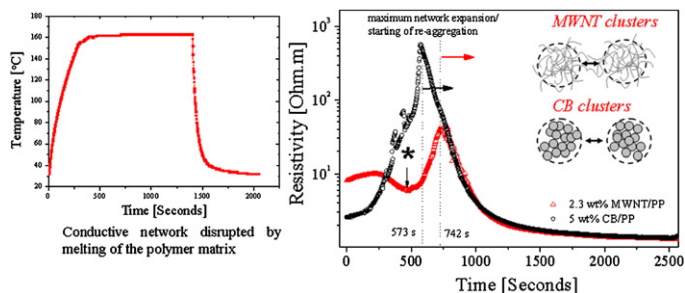
pp 3747–3754

Hua Deng^a, Tetyana Skipa^c, Rui Zhang^a, Dirk Lellinger^c, Emiliano Bilotti^a, Ingo Alig^c, Ton Peijs^{a, b, *}

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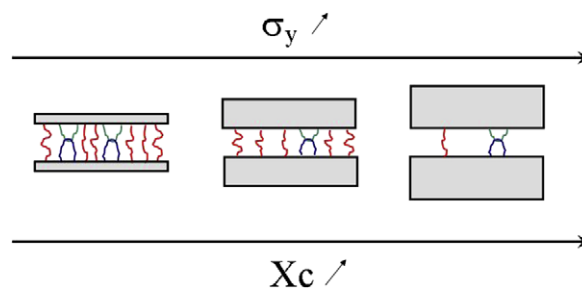


Polyethylene yielding behaviour: What is behind the correlation between yield stress and crystallinity?

pp 3755–3761

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MATEIS – CNRS UMR5510, Bâtiment Blaise Pascal, INSA-Lyon, F-69621, Villeurbanne, France



Chemical crosslinking and biophysical properties of electrospun hyaluronic acid based ultra-thin fibrous membranes

pp 3762–3769

Shanshan Xu^a, Junxing Li^a, Aihua He^{a, b, *}, Wenwen Liu^c, Xingyu Jiang^c, Jianfen Zheng^a, Charles C. Han^{a, *}, Benjamin S. Hsiao^{d, e}, Benjamin Chu^{d, e}, Dufei Fang^e

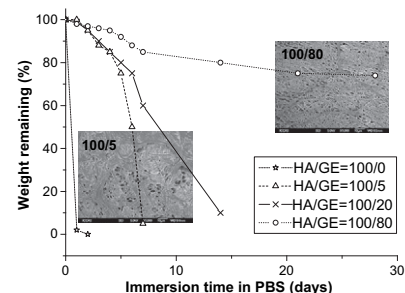
^a State Key Laboratory of Polymer Physics and Chemistry, Joint Laboratory of Polymer Science and Materials, Beijing National Laboratory for Molecular Sciences, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, China

^b Key Laboratory of Rubber-Plastics (Ministry of Education), College of Polymer Science and Engineering, Qingdao University of Science and Technology, Qingdao 266042, China

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A new approach for morphology control of poly(butylene adipate-co-terephthalate) and soy protein blends

pp 3770–3777

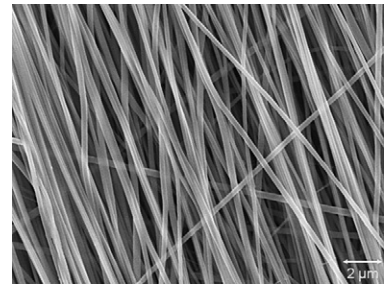
Feng Chen, Jinwen Zhang^{*}

Materials Science Program & Composite Materials and Engineering Center, Washington State University, Pullman, WA 99164-1806, USA



Fabrication and characterization of aligned nanofibrous PLGA/Collagen blends as bone tissue scaffolds

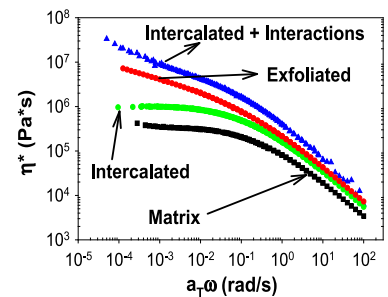
pp 3778–3785

Moncy V. Jose^a, Vinoy Thomas^b, Derrick R. Dean^{a, b, *}, Elijah Nyairo^c^a Department of Materials Science and Engineering, University of Alabama at Birmingham, Birmingham, AL 35294, USA^b Center for Nanoscale Materials and Biointegration (CNMB), Department of Physics, University of Alabama at Birmingham, Birmingham, AL 35294, USA^c Department of Physical Sciences, Alabama State University, Montgomery, AL 36101, USA**Role of polymer–clay interactions and nano-clay dispersion on the viscoelastic response of supercritical CO₂ dispersed polyvinylmethylether (PVME)–Clay nanocomposites**

pp 3786–3796

Mihai Manitiu, Steven Horsch, Esin Gulari, Rangaramanujam M. Kannan^{*}

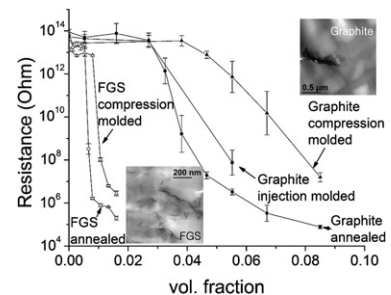
Wayne State University, Chemical Engineering and Materials Science, Detroit, MI 48202, USA

**Processing-property relationships of polycarbonate/graphene composites**

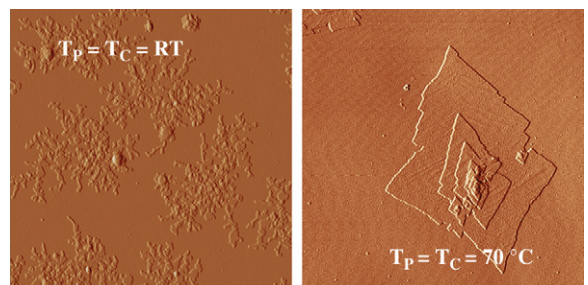
pp 3797–3809

Hyunwoo Kim, Christopher W. Macosko^{*}

Department of Chemical Engineering and Materials Science, University of Minnesota, 421 Washington Ave. SE, Minneapolis, MN 55455-0132, USA

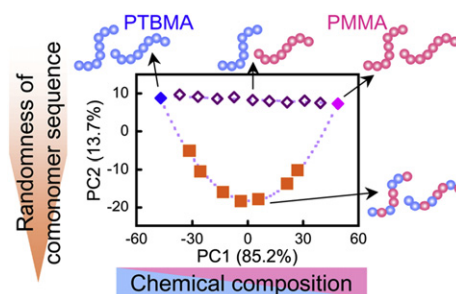
**The effect of temperature on nascent morphology of polyethylene polymerized over solution-phase flat model catalysts**

pp 3810–3818

Shidong Jiang^a, Bin Kong^a, Wei Han^b, Peter C. Thüne^b, Xiaozhen Yang^a, Joachim Loos^{b, **, *}, Shouke Yan^{a, c, *}^a State Key Laboratory of Polymer Physics and Chemistry, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, PR China^b Department of Chemical Engineering and Chemistry, Eindhoven University of Technology, 5600 MB Eindhoven, The Netherlands^c State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, China

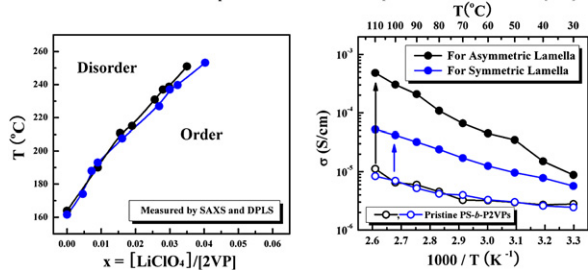
Multivariate analysis of ^{13}C NMR spectra of methacrylate copolymers and homopolymer blends

pp 3819–3821

Hikaru Momose^{a,b}, Kosuke Hattori^a, Tomohiro Hirano^a, Koichi Ute^{a,*}^a Department of Chemical Science and Technology, The University of Tokushima, 2-1 Minami-Josanjima, Tokushima 770-8506, Japan^b Research and Development Administration Department, Mitsubishi Rayon Co. Ltd., 1-6-41 Konan, Minato-ku, Tokyo 108-8506, Japan

Transition behavior and ionic conductivity of lithium perchlorate-doped polystyrene-*b*-poly(2-vinylpyridine)

pp 3822–3827

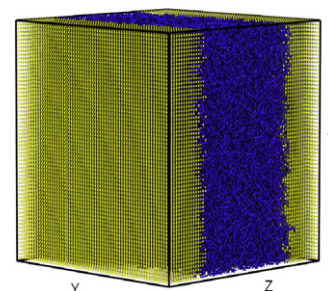
Bokyung Kim^a, Hyungju Ahn^a, Jong Hak Kim^a, Du Yeol Ryu^{a,*}, Jehan Kim^b^a Department of Chemical and Biomolecular Engineering, Yonsei University, 134 Shinchon-dong, Seodaemun-gu, Seoul 120-749, Republic of Korea^b Beamline Department, Pohang Accelerator Laboratory, Pohang 790-784, Republic of KoreaTransition Behavior of LiClO₄-doped PS-*b*-P2VPLiClO₄-doped PS-*b*-P2VP of [LiClO₄]/[2VP] = 0.09

Understanding crystal nucleation in solution-segregated polymers

pp 3828–3834

Liyun Zha, Wenbing Hu*

Department of Polymer Science and Engineering, State Key Laboratory of Coordination Chemistry, School of Chemistry and Chemical Engineering, Nanjing University, 210093 Nanjing, China

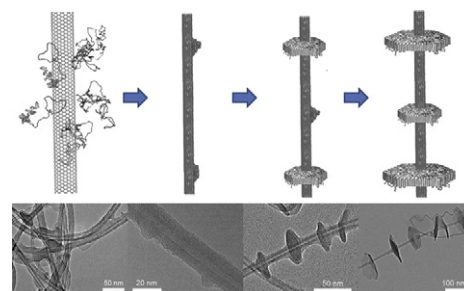


Formation of polymer/carbon nanotubes nano-hybrid shish-kebab via non-isothermal crystallization

pp 3835–3840

Ling Zhang*, Tao Tao, Chunzhong Li

Key Laboratory for Ultrafine Materials of Ministry of Education, School of Materials Science and Engineering, East China University of Science & Technology, POB 258, 130 Meilong, Shanghai 200237, People's Republic of China



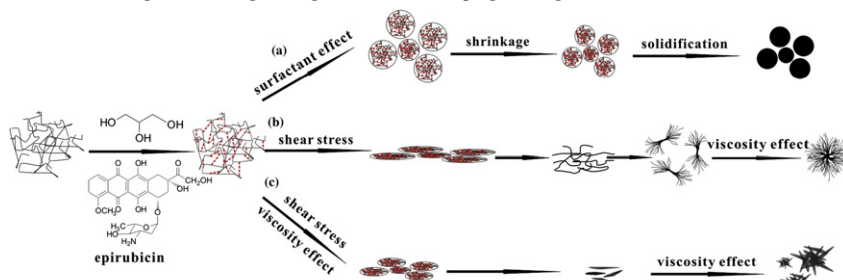
Non-spherical racemic polylactide microarchitectures formation via solvent evaporation method

pp 3841–3850

Zhimin Zhou^{a, b}, Jun Xu^b, Xiaoqing Liu^b, Xuemin Li^a, Siyue Li^b, Kun Yang^b, Xiaofeng Wang^b, Min Liu^b, Qiqing Zhang^{a, b, *}

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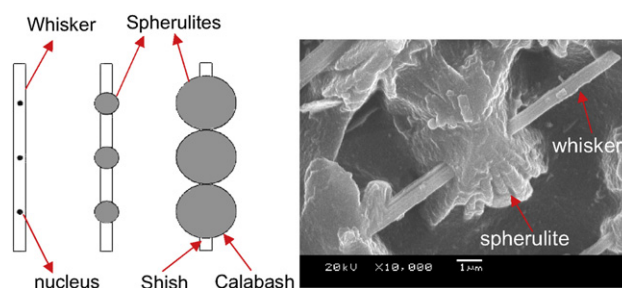


Interfacial enhancement by shish–calabash crystal structure in polypropylene/inorganic whisker composites

pp 3851–3856

Nanying Ning, Feng Luo, Ke Wang, Rongni Du, Qin Zhang, Feng Chen, Qiang Fu^{*}

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Study of peptide fingerprints of parasite proteins and drug–DNA interactions with Markov-Mean-Energy invariants of biopolymer molecular-dynamic lattice networks

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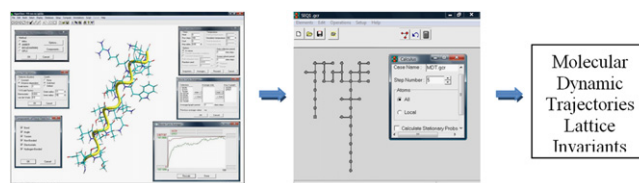
Lázaro Guillermo Pérez-Montoto^{a, b}, María Auxiliadora Dea-Ayuela^c, Francisco J. Prado-Prado^{a, b}, Francisco Bolas-Fernández^d, Florencio M. Ubeira^a, Humberto González-Díaz^{a, *}

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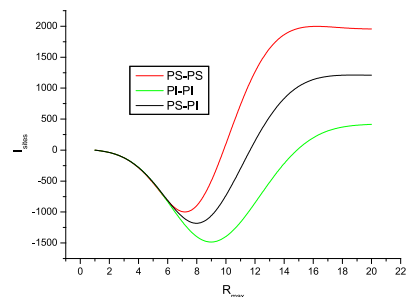
^d Department of Parasitology, Faculty of Pharmacy, Complutense University, 28040 Madrid, Spain



Prediction of polymer mixture compatibility by Monte Carlo simulation of intermolecular binary interactions

pp 3871–3876

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ISSN 0032-3861

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