

**Polymer Vol. 51, No. 14, 24 June 2010**

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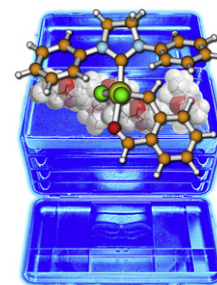
**FEATURE ARTICLE**

**The ROMP toolbox upgraded**

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Anita Leitgeb, Julia Wappel, Christian Slugovc\*

*Institute for Chemistry and Technology of Materials (ICTM), Graz University of Technology, Stremayrgasse 16, A-8010 Graz, Austria*



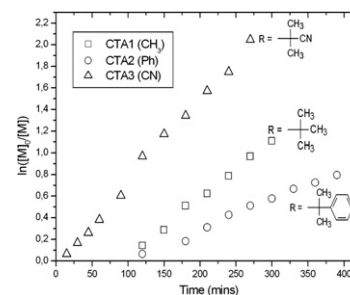
**POLYMER COMMUNICATIONS**

**RAFT polymerization of N,N-diethylacrylamide: Influence of chain transfer agent and solvent on kinetics and induction period**

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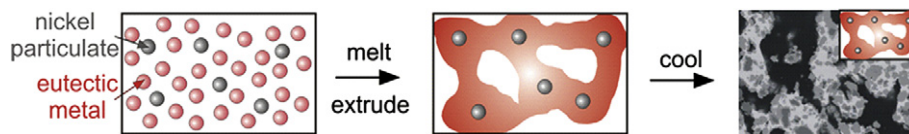
Xuewei Zhang, Olivia Giani, Sophie Monge\*, Jean-Jacques Robin

*Institut Charles Gerhardt Montpellier UMR5253 CNRS-UM2-ENSCM-UM1, Equipe Ingénierie et Architectures Macromoléculaires, Université Montpellier II cc1702, Place Eugène Bataillon. 34095 Montpellier Cedex 5, France*



**Highly conductive, melt processable polymer composites based on nickel and low melting eutectic metal**

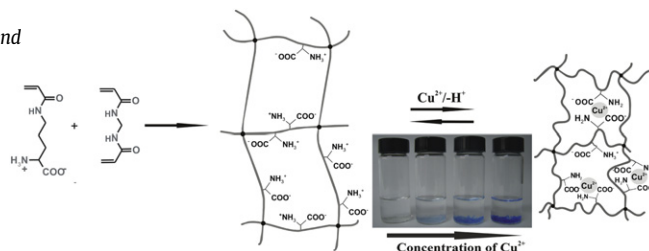
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Randy A. Mrozek<sup>a,b,\*</sup>, Phillip J. Cole<sup>b,c</sup>, Lisa A. Mondy<sup>b</sup>, Rekha R. Rao<sup>b</sup>, Lothar F. Bieg<sup>b</sup>, Joseph L. Lenhart<sup>a,b,\*\*</sup><sup>a</sup> U.S. Army Research Laboratory, Aberdeen, MD 21005, United States<sup>b</sup> Sandia National Laboratories, Albuquerque, NM 87185, United States<sup>c</sup> Northrop Grumman A&AS, Arlington, VA 22209, United States**POLYMER PAPERS****New poly(*N*- $\delta$ -acryloyl ornithine) gels cross-linked with *N,N'*-methylenebisacrylamide. Sorption properties**

pp 2959–2964

Marcin Karbarz<sup>\*</sup>, Krystyna Pyrzynska, Jan Romanski, Janusz Jurczak, Zbigniew Stojek

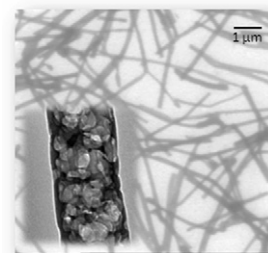
Department of Chemistry, Warsaw University, Pasteura 1, PL-02-093 Warsaw, Poland

**Design of mesoporous carbon fibers from a poly(acrylonitrile) based block copolymer by a simple templating compression moulding process**

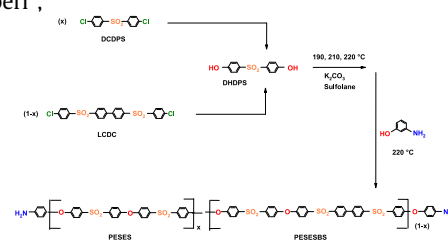
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Jean-Michel Thomassin, Antoine Debuigne, Christine Jérôme, Christophe Detrembleur<sup>\*</sup>

Center for Education and Research on Macromolecules (CERM), University of Liège, Sart-Tilman B6a, 4000 Liège, Belgium

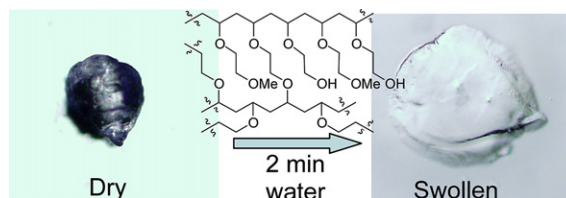
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Antonino Mamo<sup>a,\*</sup>, Alessandro Aureliano<sup>a</sup>, Salvatore Battiatto<sup>b</sup>, Gianluca Cicala<sup>a</sup>, Filippo Samperi<sup>b</sup>, Andrea Scamporrino<sup>a</sup>, Antonino Recca<sup>a</sup><sup>a</sup> Department of Chemistry and Physics Methodologies for Engineering (DMFCI), University of Catania, Viale A. Doria 6, 95125 Catania, Italy<sup>b</sup> Institute of Chemistry and Technology of Polymers (ICTP)-Sez. Catania, CNR, Via Gaufami 18, 95126 Catania, Italy

**Synthesis of beaded poly(vinyl ether) solid supports with unique solvent compatibility**

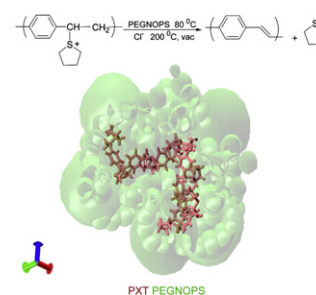
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Barnaby W. Greenland<sup>a</sup>, Shuyuan Liu<sup>a</sup>, Gabriel Cavalli<sup>a</sup>, Esat Alpay<sup>b</sup>, Joachim H.G. Steinke<sup>a,\*</sup><sup>a</sup> Department of Chemistry, Imperial College London, South Kensington Campus, London, SW7 2AZ, UK<sup>b</sup> Department of Chemical Engineering and Chemical Technology, Imperial College London, South Kensington Campus, London, SW7 2AZ, UK**Macro-counterions in a precursor to poly(phenylene vinylene): Toward defect-free luminescent films**

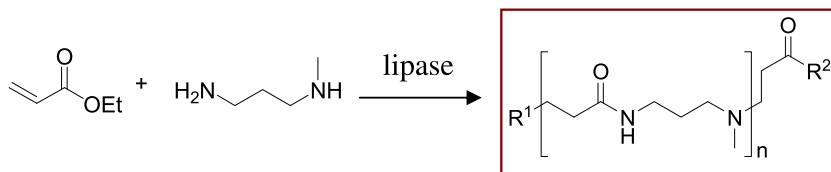
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Lara A. Al-Hariri, Joseph B. Schlenoff\*

Department of Chemistry and Biochemistry, The Florida State University, Tallahassee, FL 32306, USA

**Lipase-catalyzed synthesis and characterization of a novel linear polyamidoamine oligomer**

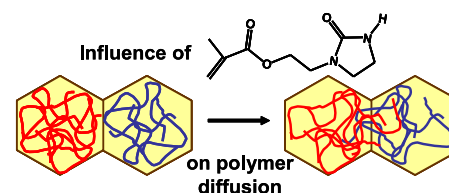
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Leandro N. Monsalve<sup>a</sup>, M. Kaniz Fatema<sup>b</sup>, Hiroshi Nonami<sup>b</sup>, Rosa Erra-Balsells<sup>c</sup>, Alicia Baldessari<sup>a,\*</sup><sup>a</sup> Laboratorio de Biotatálisis, Departamento de Química Orgánica y UMYMFOR, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, C1428EGA Buenos Aires, Argentina<sup>b</sup> Plant Biophysics/Biochemistry Research Laboratory, College of Agriculture, Ehime University, 3-5-7 Tarumi, Matsuyama 790-8566, Japan<sup>c</sup> CIHIDECAR, Departamento de Química Orgánica, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, C1428EGA Buenos Aires, Argentina**Influence of a hydrogen-bonding co-monomer on polymer diffusion in poly(butyl acrylate-co-methyl methacrylate) latex films**

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Seungmin Hong, Mohsen Soleimani, Yuanqin Liu, Mitchell A. Winnik\*

Department of Chemistry, University of Toronto, 80 St George St, Toronto, ON, Canada M5S 3H6

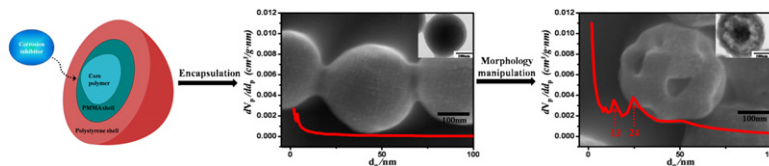


## Polymer hollow particles: Encapsulation of phosphoric acid partial esters and morphology manipulation

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Ji Hoon Park, Kyoo Young Kim, Jong Myung Park\*

Graduate Institute of Ferrous Technology, Pohang University of Science and Technology, Pohang 790-784, Republic of Korea

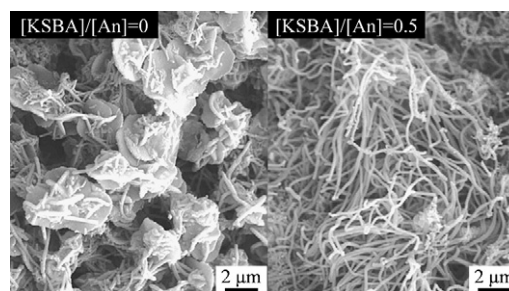


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Jun Kyu Park, Sang Soo Jeon, Seung Soon Im\*

Department of Fiber and Polymer Engineering, Hanyang University, 17 Haengdang-dong, Seoul 133-791, Republic of Korea



## Tailoring side chains of low band gap polymers for high efficiency polymer solar cells

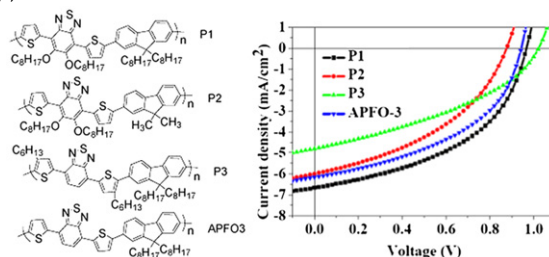
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Weiwei Li<sup>a,b</sup>, Ruiping Qin<sup>c</sup>, Yi Zhou<sup>b</sup>, Mattias Andersson<sup>b</sup>, Fenghong Li<sup>b</sup>, Chi Zhang<sup>a</sup>, Binsong Li<sup>a</sup>, Zhengping Liu<sup>c</sup>, Zhishan Bo<sup>a,\*</sup>, Fengling Zhang<sup>b,\*\*</sup>

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<sup>b</sup> Department of Physics, Chemistry and Biology, Linköping University, SE-58183 Linköping, Sweden

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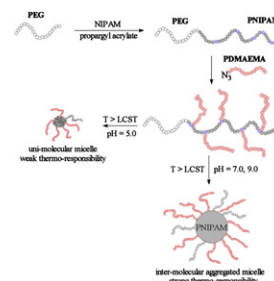


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Bo-Yu Zhang, Wei-Dong He\*, Wen-Tao Li, Li-Ying Li, Ke-Ren Zhang, Hao Zhang

Department of Polymer Science and Engineering, CAS Key Laboratory of Soft Matter Chemistry, University of Science and Technology of China, Hefei, Anhui 230026, China

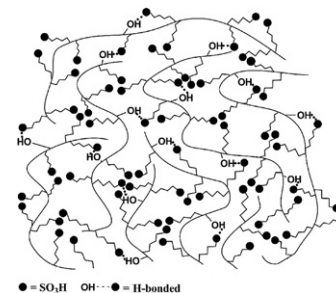


**Novel side-chain-type sulfonated hydroxynaphthalene-based poly(aryl ether ketone) with H-bonded for proton exchange membranes**

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Jing Zhu, Ke Shao, Gang Zhang, Chengji Zhao, Yang Zhang, Hongtao Li, Miaomiao Han, Haidan Lin, Dan Xu, Hubei Yu, Hui Na\*

Alan G MacDiarmid Institute, College of Chemistry, Jilin University, Changchun 130012, People's Republic of China



**Studies of UV crosslinked poly(N-vinylpyrrolidone) hydrogels by FTIR, Raman and solid-state NMR spectroscopies**

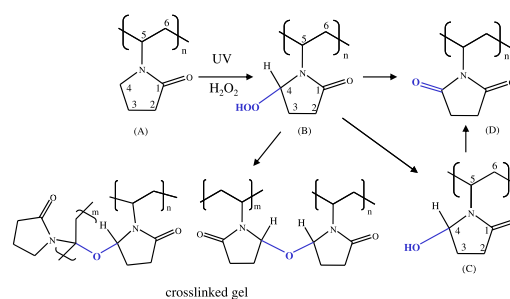
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Xingfeng Zhu<sup>a</sup>, Ping Lu<sup>a</sup>, Wei Chen<sup>b,c</sup>, Jian Dong<sup>a,b,\*</sup>

<sup>a</sup> School of Chemistry and Chemical Engineering, Shaoxing University, Shaoxing 312000, China

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<sup>c</sup> Department of Polymer Science and Engineering, Nanjing University, Nanjing 210093, China



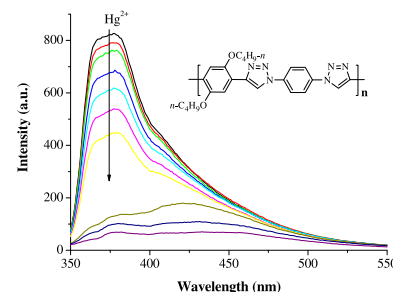
**Polymer-based fluorescence sensor incorporating triazole moieties for Hg<sup>2+</sup> detection via click reaction**

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Xiaobo Huang<sup>a</sup>, Jie Meng<sup>a</sup>, Yu Dong<sup>a</sup>, Yixiang Cheng<sup>a,\*</sup>, Chengjian Zhu<sup>b,\*\*</sup>

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<sup>b</sup> State Key Laboratory of Coordination Chemistry, School of Chemistry and Chemical Engineering, Nanjing University, Nanjing 210093, China

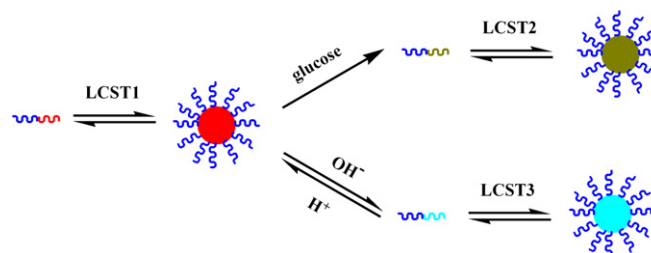


**Phenylboronic acid as a sugar- and pH-responsive trigger to tune the multiple micellization of thermo-responsive block copolymer**

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Qiao Jin, Li-Ping Lv, Gong-Yan Liu, Jian-Ping Xu, Jian Ji\*

MOE Key Laboratory of Macromolecular Synthesis and Functionalization, Department of Polymer Science and Engineering, Zhejiang University, Hangzhou 310027, PR China



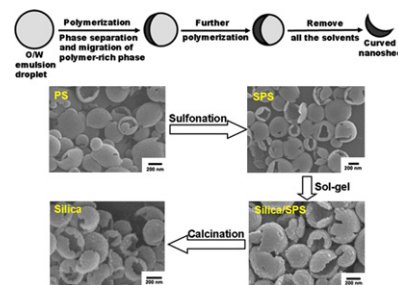
## Facile preparation of curved polymer composite nanosheets

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Ying Wu<sup>a,b</sup>, Liyan Huang<sup>a</sup>, Zhengping Liu<sup>a,\*</sup>, Zhenzhong Yang<sup>b,\*\*</sup>

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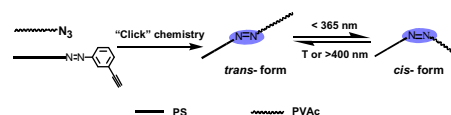


## Synthesis and characterization of azobenzene-functionalized poly(styrene)-*b*-poly(vinyl acetate) via the combination of RAFT and “click” chemistry

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Xiaoqiang Xue, Jian Zhu, Zhengbiao Zhang, Zhenping Cheng, Yingfeng Tu, Xiulin Zhu<sup>\*</sup>

Key Laboratory of Organic Synthesis of Jiangsu Province, College of Chemistry, Chemical Engineering and Materials Science of Soochow (Suzhou) University, Suzhou 215123, PR China

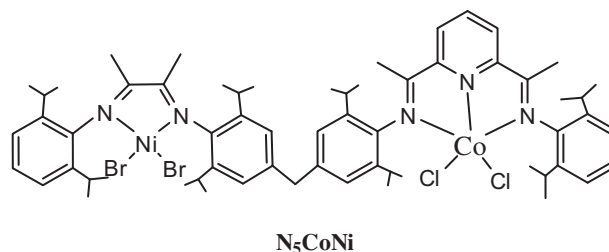


## Selective activation of metallic center in heterobinuclear cobalt and nickel complex in ethylene polymerization

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Tianxu Sun, Qi Wang<sup>\*</sup>, Zhiqiang Fan

MOE Key Laboratory of Macromolecular Synthesis and Functionalization, Department of Polymer Science and Engineering, Zhejiang University, Hangzhou 310027, China



## Benzo[1,2-b:4,5-b']dithiophene-based copolymers applied in bottom-contact field-effect transistors

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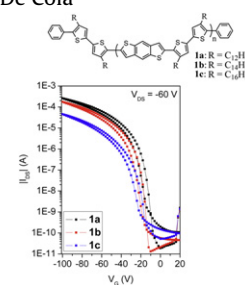
Mark A.M. Leenen<sup>a,b</sup>, Fabio Cucinotta<sup>b</sup>, Wojciech Pisula<sup>c,d</sup>, Jürgen Steiger<sup>a</sup>, Ralf Anselmann<sup>a</sup>, Heiko Thiem<sup>a,\*</sup>, Luisa De Cola<sup>b</sup>

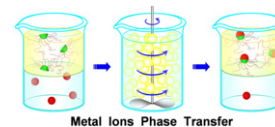
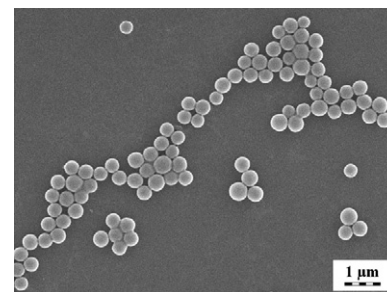
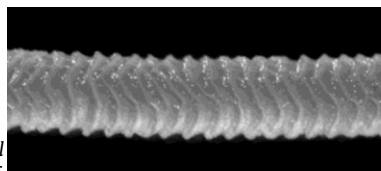
<sup>a</sup> Evonik Degussa GmbH, Creavis – Technologies and Innovation, Paul-Baumann-Straße 1, D-45764 Marl, Germany

<sup>b</sup> Physikalisches Institut and Center for Nanotechnology, CeNTech, Universität Münster, Mendelstraße 7, D-48149 Münster, Germany

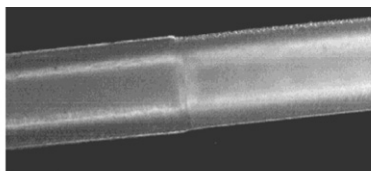
<sup>c</sup> Max Planck Institute for Polymer Research, Ackermannweg 10, D-55128 Mainz, Germany

<sup>d</sup> Evonik Degussa GmbH, Process Technology & Engineering, Process Technology – New Processes, Rodenbacher Chaussee 4, D-63457 Hanau-Wolfgang, Germany

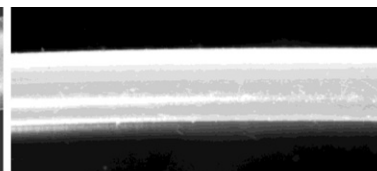


**Star-shaped macromolecules with calixarene core and neutral amphiphilic block copolymer arms: New hosts for ions** pp 3108–3115A.V. Tenkovtsev<sup>a</sup>, M.M. Dudkina<sup>a</sup>, L.I. Scherbinskaya<sup>a</sup>, V. Aseyev<sup>b,\*</sup>, H. Tenhu<sup>b</sup><sup>a</sup> Institute of Macromolecular Compounds, Russian Academy of Sciences, Bolshoy pr. V.O. 31, 199004 St. Petersburg, Russia<sup>b</sup> Laboratory of Polymer Chemistry, Department of Chemistry, University of Helsinki, P.O. Box 55, FIN-00014 UH, Finland**Monodisperse magnetic composite poly(glycidyl methacrylate)/La<sub>0.75</sub>Sr<sub>0.25</sub>MnO<sub>3</sub> microspheres by the dispersion polymerization** pp 3116–3122Daniel Horák<sup>a,\*</sup>, Miroslava Trchová<sup>a</sup>, Milan J. Beneš<sup>a</sup>, Miroslav Veverka<sup>b</sup>, Emil Pollert<sup>b</sup><sup>a</sup> Institute of Macromolecular Chemistry AS CR, Heyrovského nám. 2, 162 06 Prague 6, Czech Republic<sup>b</sup> Institute of Physics AS CR, Cukrovarnická 10, 162 53 Prague 6, Czech Republic**Fluorine-containing arborescent polystyrene-graft-polyisoprene copolymers as polymer processing additives** pp 3123–3129Mario Gauthier<sup>a,\*</sup>, Wai-Yau Lin<sup>a</sup>, Steven J. Teertstra<sup>a</sup>, Costas Tzoganakis<sup>b</sup><sup>a</sup> Institute for Polymer Research, Department of Chemistry, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada<sup>b</sup> Department of Chemical Engineering, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada

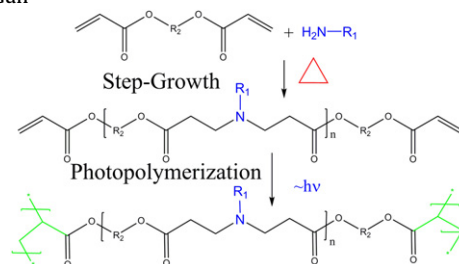
Sharkskin



Mild CMF



Smooth surface

**The effect of chemistry on the polymerization, thermo-mechanical properties and degradation rate of poly(β-amino ester) networks** pp 3130–3138David L. Safranski<sup>a,\*</sup>, Martha A. Lesniewski<sup>a</sup>, Birgitta S. Caspersen<sup>b</sup>, Victor M. Uriarte<sup>c</sup>, Ken Gall<sup>a,d</sup><sup>a</sup> School of Materials Science and Engineering, Georgia Institute of Technology, 771 Ferst Drive, Atlanta, GA 30332, USA<sup>b</sup> School of Chemical and Biomolecular Engineering, Georgia Institute of Technology, 311 Ferst Drive, Atlanta, GA 30332, USA<sup>c</sup> Department of Mechanical Engineering, Florida International University, 10555 W Flagler Street, Miami, FL 33174, USA<sup>d</sup> Woodruff School of Mechanical Engineering, Georgia Institute of Technology, 801 Ferst Drive, Atlanta, GA 30332, USA

## Dielectric characteristics of polyimide CP2

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J. David Jacobs<sup>a,b</sup>, Mike J. Arlen<sup>a,c,d</sup>, David H. Wang<sup>a,e</sup>, Zoubeida Ounaies<sup>f</sup>, Rajiv Berry<sup>a</sup>, Loon-Seng Tan<sup>a</sup>, Patrick H. Garrett<sup>g</sup>, Richard A. Vaia<sup>a,\*</sup>

<sup>a</sup> Air Force Research Laboratory, Materials and Manufacturing Directorate, Nanostructured and Biological Materials Branch, Wright-Patterson AFB, OH 45433, USA

<sup>b</sup> Universal Technology Corporation, 1270 North Fairfield Rd., Dayton, OH 45432, USA

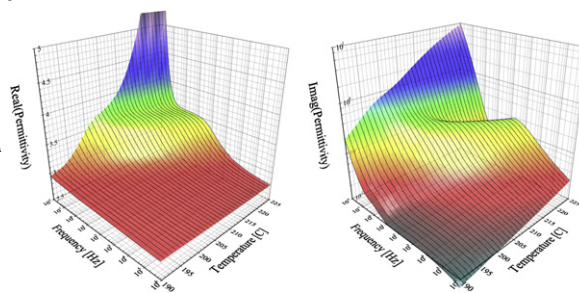
<sup>c</sup> Department of Polymers Science and Engineering, University of Akron, Akron, OH 44325, USA

<sup>d</sup> Now with: Luna Innovations, 1 Riverside Circle, Suite 400, Roanoke, VA 24016, USA

<sup>e</sup> University of Dayton Research Institute, 300 College Park, Dayton, OH 45469, USA

<sup>f</sup> Department of Aerospace Engineering, Texas A&M University, College Station, TX 77843, USA

<sup>g</sup> Department of Electrical Engineering, University of Cincinnati, Cincinnati, OH 45221, USA

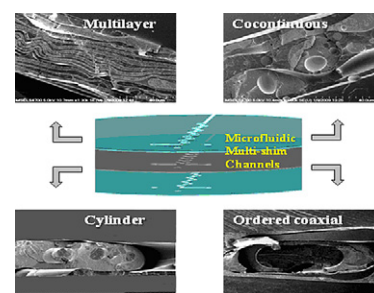


## Forced assembly and mixing of melts via planar polymer micro-mixing

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Doyoung Moon, Kalman B. Migler\*

Polymers Division, National Institute Standards and Technology, Gaithersburg, MD 20899, United States



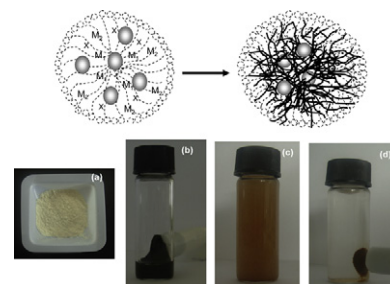
## Multiresponsive polymeric particles with tunable morphology and properties based on acrylonitrile (AN) and 4-vinylpyridine (4-VP)

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Nurettin Sahiner<sup>a,b,\*</sup>, Pinar Ilgin<sup>a</sup>

<sup>a</sup> Canakkale Onsekiz Mart University, Faculty of Sciences and Arts, Chemistry Department, Terzioğlu Campus, 17020-Canakkale, Turkey

<sup>b</sup> Nanoscience and Technology Research and Application Center (NANORAC), Terzioğlu Campus, 17020-Canakkale, Turkey



## Aqueous electrospinning of wheat gluten fibers with thiolated additives

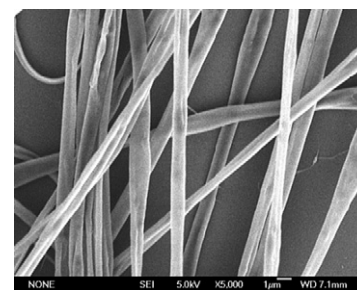
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Jing Dong<sup>a</sup>, Alexandru D. Asandei<sup>b,c</sup>, Richard S. Parnas<sup>a,b,\*</sup>

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<sup>b</sup> University of Connecticut, Institute of Materials Science, Storrs, CT 06269, USA

<sup>c</sup> Department of Chemistry, University of Connecticut, Storrs, CT 06269, USA





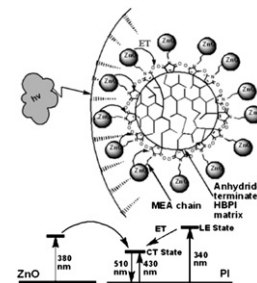
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Hong Gao<sup>a</sup>, Daisuke Yorifuji<sup>a</sup>, Junji Wakita<sup>a</sup>, Zhen-Hua Jiang<sup>b</sup>, Shinji Ando<sup>a,\*</sup>

<sup>a</sup> Department of Chemistry and Materials Science, Tokyo Institute of Technology, 2-12-1-E4-5 Ookayama, Meguro-ku, Tokyo 152-8552, Japan

<sup>b</sup> Alan G. MacDiarmid Institute, College of Chemistry, Jilin University, Qianjin Street 2699, Changchun 130012, PR China



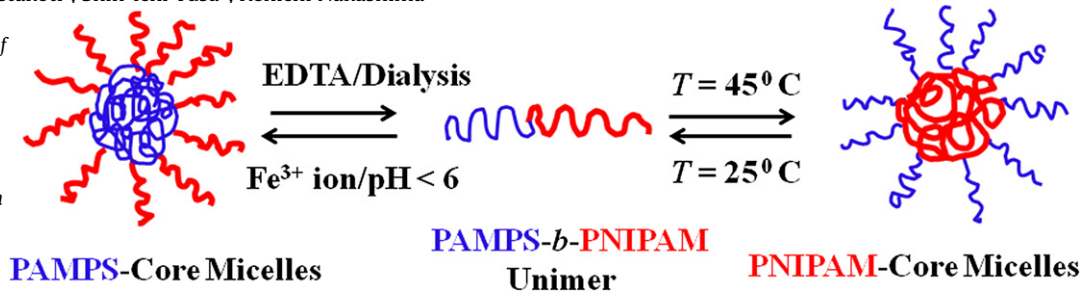
**Stimuli-induced core-corona inversion of micelles of water-soluble poly(sodium 2-(acrylamido)-2-methyl propanesulfonate-*b*-*N*-isopropylacrylamide)**

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Sudhina Guragain<sup>a</sup>, Bishnu P. Bastakoti<sup>a</sup>, Shin-ichi Yusa<sup>b</sup>, Kenichi Nakashima<sup>a,\*</sup>

<sup>a</sup> Department of Chemistry, Faculty of Science and Engineering, Saga University, 1 Honjo-machi, Saga 840-8502, Japan

<sup>b</sup> Department of Materials Science and Chemistry, University of Hyogo, 2167 Shosha, Himeji 671-2280, Japan

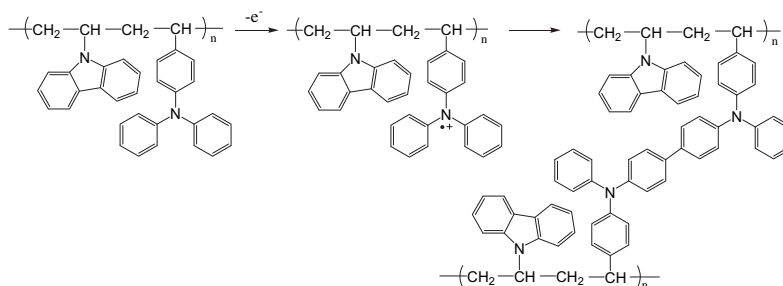


**Electrocoupling process and electrochemical deposition of poly(9-vinylcarbazole-co-4-vinyltriphenylamine) films**

pp 3187–3195

Guswandhi Nursalim, Yun Chen<sup>\*</sup>

Department of Chemical Engineering, National Cheng Kung University, Tainan 701, Taiwan

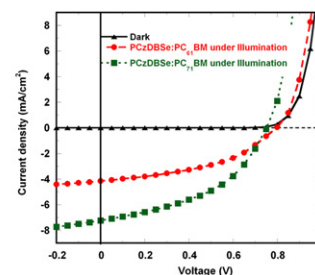
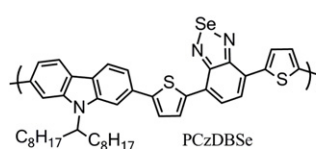


**Novel conjugated alternating copolymer based on 2,7-carbazole and 2,1,3-benzoselenadiazole**

pp 3196–3202

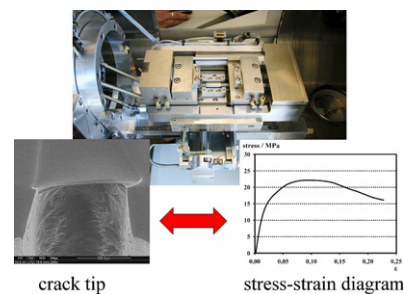
Wei Zhao, Wanzhu Cai, Ruixia Xu, Wei Yang<sup>\*</sup>, Xiong Gong, Hongbin Wu<sup>\*</sup>, Yong Cao

Institute of Polymer Optoelectronic Materials and Devices, Key Laboratory of Specially Functional Materials, Ministry of Education, South China University of Technology, Guangzhou 510640, PR China

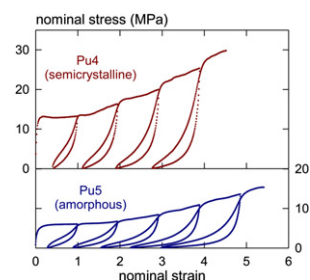


**Tensile tests in the environmental scanning electron microscope (ESEM) – Part I: Polypropylene homopolymers**

pp 3203–3212

P. Poelt<sup>a,\*</sup>, A. Zankel<sup>a</sup>, M. Gahleitner<sup>b</sup>, E. Ingolic<sup>a</sup>, C. Grein<sup>b</sup><sup>a</sup> Institute for Electron Microscopy, Graz University of Technology, Steyrerg. 17, A-8010 Graz, Austria<sup>b</sup> Borealis Polyolefine GmbH, St.-Peter Str. 25, A-4021 Linz, Austria**Elasticity and inelasticity of thermoplastic polyurethane elastomers: Sensitivity to chemical and physical structure**

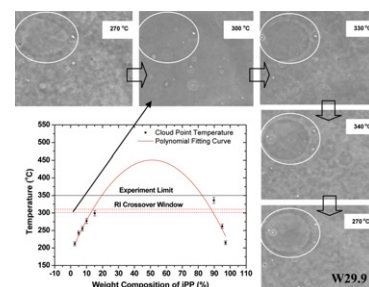
pp 3213–3224

C.P. Buckley<sup>a,\*</sup>, C. Prisacariu<sup>b</sup>, C. Martin<sup>c</sup><sup>a</sup> Department of Engineering Science, University of Oxford, Parks Road, Oxford OX1 3PJ, UK<sup>b</sup> Institute of Macromolecular Chemistry “Petru Poni”, Aleea Grigore Ghica Voda, Nr. 41A, Iasi 700487, Romania<sup>c</sup> Manchester Materials Science Centre, University of Manchester, Grosvenor Street, Manchester M1 7HS, UK**Refractive index crossover and the phase diagram of an iPP/PEOc blend**

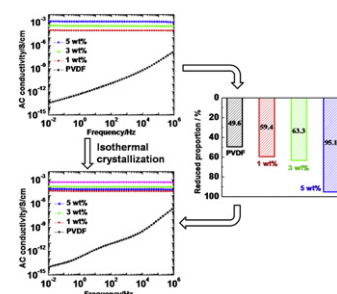
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Yonghua Yao, Xia Dong<sup>\*</sup>, Chenggui Zhang, Fasheng Zou, Charles C. Han<sup>\*</sup>

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

**Suppression of AC conductivity by crystalline transformation in poly(vinylidene fluoride)/carbon nanofiber composites**

pp 3230–3237

Li-Li Sun<sup>a,b</sup>, Bin Li<sup>b</sup>, Yan Zhao<sup>a</sup>, Wei-Hong Zhong<sup>b,\*</sup><sup>a</sup> School of Materials Science and Engineering, Beihang University, Beijing 100191, China<sup>b</sup> School of Mechanical and Materials Engineering, Washington State University, Pullman WA 99164, USA



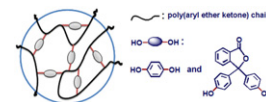
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Hao Yu<sup>a</sup>, Linghua Wang<sup>b</sup>, Zhonggang Wang<sup>a,\*</sup>, Xiyou Han<sup>b</sup>, Mingshan Zhao<sup>b</sup>

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<sup>b</sup> Photonics Research Center, School of Physics & Optoelectronic Engineering, Dalian University of Technology, Dalian 116023, PR China



## The toughening mechanism of polypropylene/calcium carbonate nanocomposites

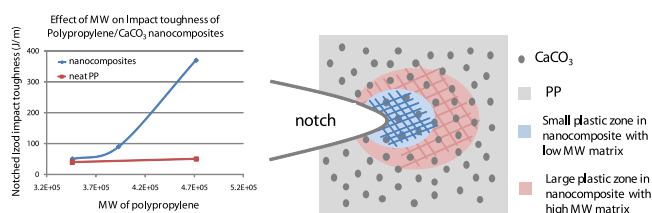
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Yong Lin<sup>a</sup>, Haibin Chen<sup>b</sup>, Chi-Ming Chan<sup>a,c,\*</sup>, Jingshen Wu<sup>b</sup>

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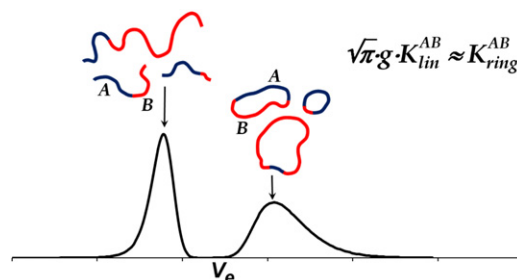
High impact toughness due to the synergetic effect of well-dispersed nanoparticles and high molecular weight (MW) matrix

## Theory of chromatography of ring-shaped block copolymers

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Alexei A. Gorbunov<sup>\*</sup>, Andrey V. Vakhrushev

Institute for Highly Pure Biopreparations, 7 Pudozhskaya, 197110, St. Petersburg, Russia



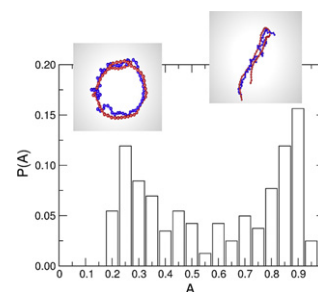
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C.F. Narambuena<sup>a,b,\*</sup>, E.P.M. Leiva<sup>a</sup>, M. Chávez-Páez<sup>b</sup>, E. Pérez<sup>b</sup>

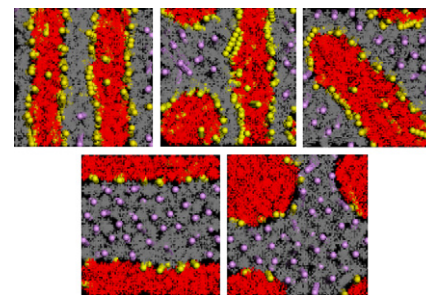
<sup>a</sup> Departamento de Matemática y Física, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Haya de la Torre y Medina Allende, Ciudad Universitaria, 5000 Córdoba, Argentina

<sup>b</sup> Instituto de Física, Universidad Autónoma de San Luis Potosí, Av. Manuel Nava 6, Zona Universitaria, 78290 San Luis Potosí, SLP, México

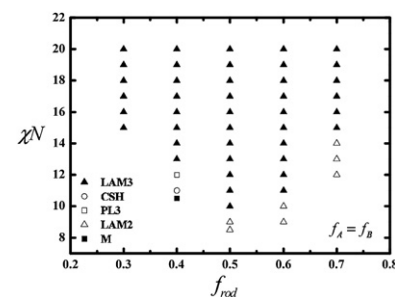


**Mono- or bidisperse nanorods mixtures in diblock copolymers**

pp 3303–3314

Linli He<sup>a</sup>, Linxi Zhang<sup>b,\*</sup>, Haojun Liang<sup>c</sup><sup>a</sup> Department of Physics, Zhejiang University, Hangzhou 310027, PR China<sup>b</sup> Department of Physics, Wenzhou University, Wenzhou 325027, PR China<sup>c</sup> Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, 230026, PR China**Self-assembly of linear ABC coil-coil-rod triblock copolymers**

pp 3315–3319

Yingdong Xia<sup>a</sup>, Jizhong Chen<sup>a,\*</sup>, Zhaoyan Sun<sup>a</sup>, Tongfei Shi<sup>a</sup>, Lijia An<sup>a,\*\*</sup>, Yuxi Jia<sup>b</sup><sup>a</sup> State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, 5625 Renmin street, Changchun 130022, China<sup>b</sup> School of Materials Science and Engineering, Shandong University, Jinan 250061, China

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ISSN 0032-3861

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