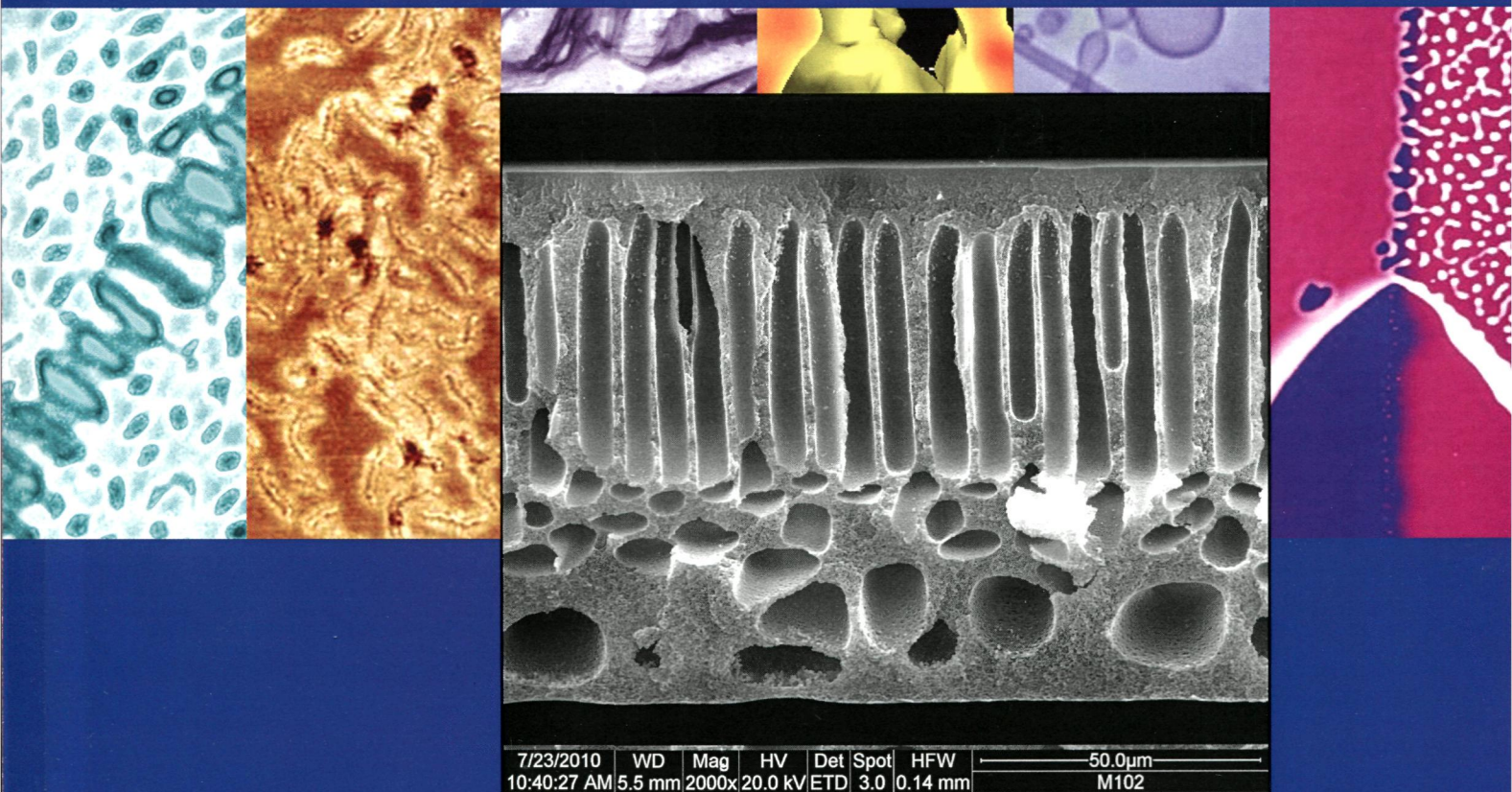




polymer



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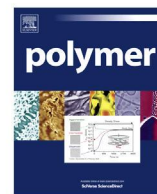
Special Issue: Polymer Membranes

Guest Editor

Mathias Ulbricht

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Mathias Ulbricht

Lehrstuhl für Technische Chemie II and Center for Nanointegration Duisburg-Essen,
Universität Duisburg-Essen, 45117 Essen, Germany

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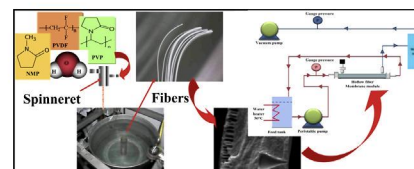
A. Figoli^{a,*}, S. Simone^a, A. Criscuoli^a, S.A. AL-Jlil^b, F.S. Al Shabouna^b, H.S. Al-Romaih^b, E. Di Nicolò^c,
O.A. Al-Harbi^b, E. Drioli^{a,d}

^aInstitute on Membrane Technology (ITM-CNR), Via P. Bucci 17/c, I-87030 Rende, CS, Italy

^bNational center for water technology, King Abdulaziz City for Science and Technology (KACST),
Saudi Arabia

^cSolvay Specialty Polymers, R&D Center, Bollate, Italy

^dDepartment of Chemical Engineering and Materials, University of Calabria, Via P. Bucci Cubo 42/A,
Rende, CS, Italy

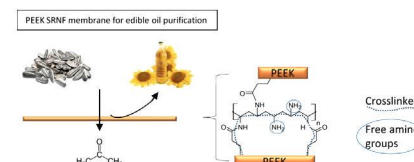

SRNF membranes for edible oil purification: Introducing free amines in crosslinked PEEK to increase membrane hydrophilicity

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Katrien Hendrix^a, Simon Vandoorne^a, Guy Koeckelberghs^b, Ivo F. J. Vankelecom^{a,*}

^aCentre for Surface Chemistry and Catalysis, Department of Molecular and Microbial Systems, Katholieke
Universiteit Leuven, Kasteelpark Arenberg 23, PO Box 2461, 3001 Heverlee, Belgium

^bLaboratory for Polymer Synthesis, Department of Chemistry, Katholieke Universiteit Leuven,
Celestijnenlaan 200F, PO Box 2404, 3001 Heverlee, Belgium



Structural influence of hydrophobic diamine in sulfonated poly(sulfide sulfone imide) copolymers on medium temperature PEM fuel cell

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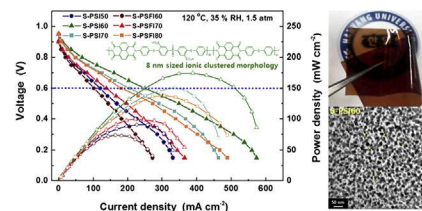
Kang Hyuck Lee^a, So Young Lee^a, Dong Won Shin^a, Chenyi Wang^a, Sang-Hyun Ahn^b,
Kee-Jung Lee^b, Michael D. Guiver^{a,c}, Young Moo Lee^{a,b,*}

^aWCU Department of Energy Engineering, Hanyang University, Seoul 133-791, Republic of Korea

^bDepartment of Chemical Engineering, Hanyang University, Seoul 133-791, Republic of Korea

^cNational Research Council, Ottawa, Ontario K1A 0R6, Canada

The S-PSI60 having 8 nm sized ionic clustered morphology showed 250 mA cm⁻² of current density at 0.6 V and 175 mW cm⁻² of maximum power density at 120 °C, 35% RH, 1.5 atm.



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Ali R. Behzad^d, Ulla Vainio^e, Klaus-Viktor Peinemann^f, Suzana P. Nunes^{a,*}

^aWater Desalination and Reuse Center, King Abdullah University of Science and Technology (KAUST), Thuwal 23955-6900, Saudi Arabia

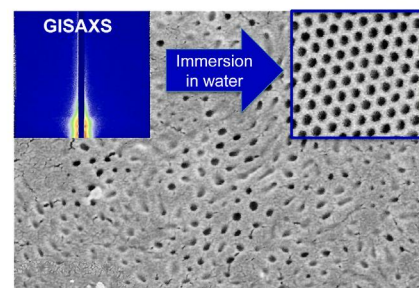
^bDepartment of Material Science and Engineering, Cornell University, Ithaca, NY 14853-1501, USA

^cCornell High Energy Synchrotron Source, Cornell University, Ithaca, NY 14853-1501, USA

^dImaging and Characterization Lab, King Abdullah University of Science and Technology, King Abdullah University of Science and Technology (KAUST), Thuwal 23955-6900, Saudi Arabia

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^fAdvanced Membrane and Porous Materials Center, King Abdullah University of Science and Technology (KAUST), Thuwal 23955-6900, Saudi Arabia

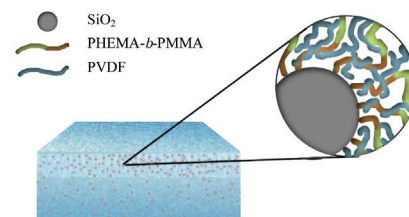


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Suo-Hong Zhi, Jun Xu, Ran Deng, Ling-Shu Wan, Zhi-Kang Xu^{*}

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

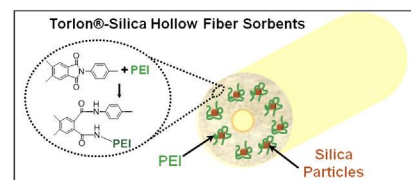


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William J. Koros^{*}

School of Chemical & Biomolecular Engineering, Georgia Institute of Technology, 311 Ferst Drive,
Atlanta, GA 30332, USA



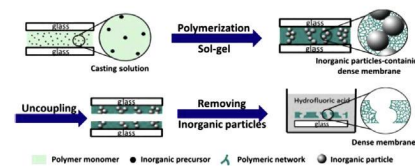
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^a Key Laboratory for Green Chemical Technology, School of Chemical Engineering and Technology, Tianjin University, Tianjin 300072, China

^b Collaborative Innovation Center of Chemical Science and Engineering (Tianjin), Tianjin 300072, China

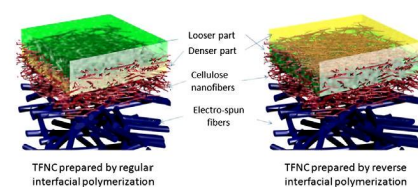


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Department of Chemistry, State University of New York at Stony Brook, Stony Brook, NY 11794-3400, USA



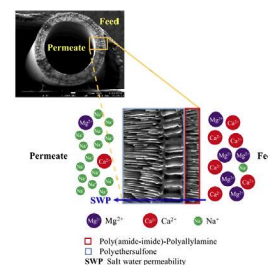
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Laurentia Setiawan^a, Lei Shi^{a,b}, Rong Wang^{a,b,*}

^a Singapore Membrane Technology Centre, Nanyang Technological University, 639798 Singapore, Singapore

^b School of Civil and Environmental Engineering, Nanyang Technological University, 639798 Singapore, Singapore



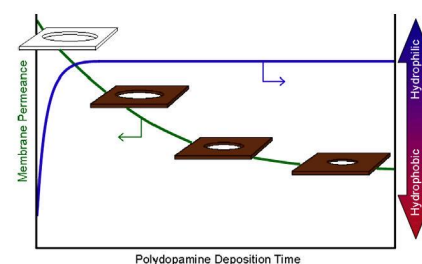
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Daniel J. Miller^{a,b}, Donald R. Paul^{a,b}, Benny D. Freeman^{a,b,*}

^a Department of Chemical Engineering and Texas Materials Institute, The University of Texas at Austin, 200 E. Dean Keeton Street, Stop C0400, Austin, TX 78712, USA

^b Department of Chemical Engineering, Center for Energy and Environmental Resources, The University of Texas at Austin, 10100 Burnet Road, Bldg. 133, Austin, TX, USA



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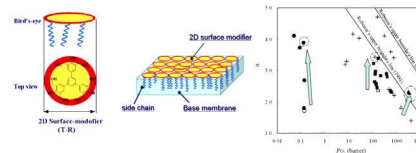
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^cPolymer Materials Research Center, College of Materials Science and Chemical Engineering, Harbin Engineering University, 145 Nantong Street, Harbin 150001, China

^dMaterials Science and Engineering, Kitami Institute of Technology, 165 Koen-cho, Kitami, Hokkaido 090-8507, Japan



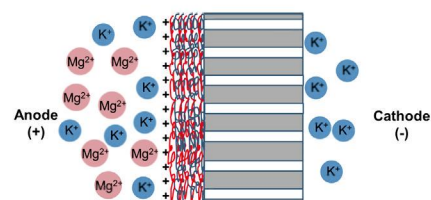
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Chao Cheng^a, Nicholas White^a, Hang Shi^b, Mackenzie Robson^a, Merlin L. Bruening^{a,*}

^aDepartment of Chemistry, Michigan State University, East Lansing, MI 48824, USA

^bDepartment of Civil and Environmental Engineering, Michigan State University, East Lansing, MI 48824, USA

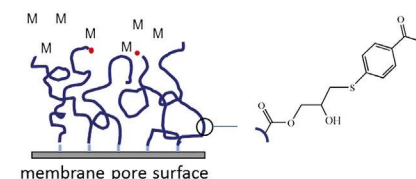


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Juan Wang, Rebecca T. Sproul, Lyna S. Anderson, Scott M. Husson^{*}

Department of Chemical and Biomolecular Engineering, Clemson University, Clemson, SC 29634, USA

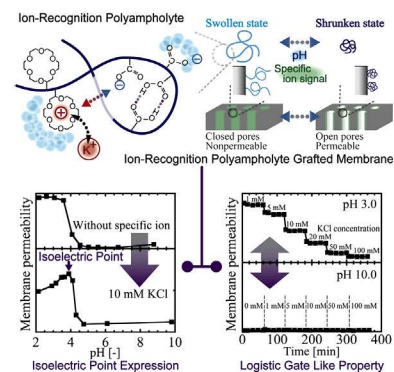


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Hidenori Ohashi, Sae Ebina, Takeo Yamaguchi^{*}

Chemical Resources Laboratory, Tokyo Institute of Technology, R1-17, 4259, Nagatsuta-cho, Midori-ku, Yokohama, Kanagawa 226-8503, Japan

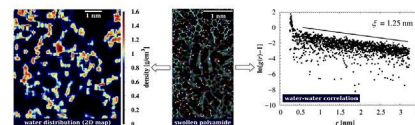


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Vesselin Kolev, Viatcheslav Freger*

Technion – Israel Institute of Technology, Wolfson Department of Chemical Engineering, Haifa 32000, Israel



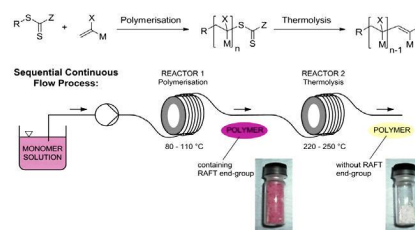
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Christian H. Hornung*, Almar Postma*, Simon Saubern, John Chiefari

CSIRO Materials Science & Engineering, Bag 10, Clayton South, Victoria 3169, Australia

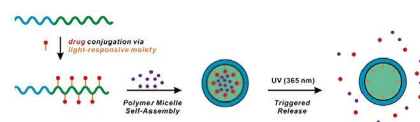


Polymeric micelles based on photocleavable linkers tethered with a model drug

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Ji-Eun Lee^a, Eungjin Ahn^{b,c}, Jae Min Bak^a, Seo-Hyun Jung^d, Jong Mok Park^d,
Byeong-Su Kim^{b,c,**}, Hyung-il Lee^{a,*}

^aDepartment of Chemistry, University of Ulsan, Ulsan 680-749, Republic of Korea
^bInterdisciplinary School of Green Energy, UNIST (Ulsan National Institute of Science and Technology), Ulsan 689-798, Republic of Korea
^cSchool of NanoBioscience and Chemical Engineering, UNIST (Ulsan National Institute of Science and Technology), Ulsan 689-798, Republic of Korea
^dResearch Center for Green Fine Chemicals, Korea Research Institute of Chemical Technology, Ulsan 681-802, Republic of Korea

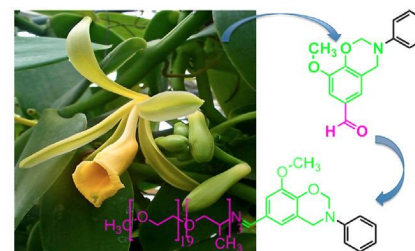


Use of renewable resource vanillin for the preparation of benzoxazine resin and reactive monomeric surfactant containing oxazine ring

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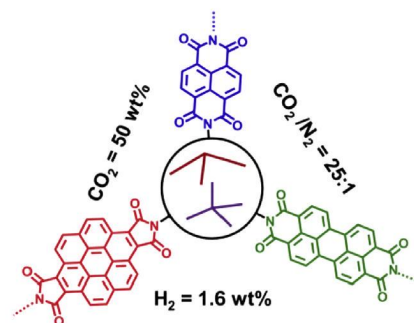
Amy Van, Kevin Chiou, Hatsuo Ishida*

Department of Macromolecular Science and Engineering, Case Western Reserve University, Cleveland, OH 44106, USA



Porous polyimides from polycyclic aromatic linkers: Selective CO₂ capture and hydrogen storage

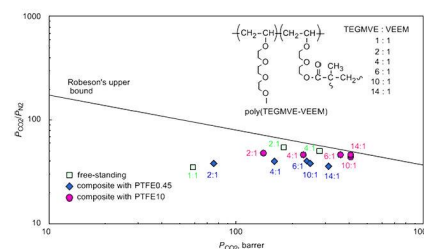
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K. Venkata Rao^a, Ritesh Halder^b, Tapas Kumar Maji^{b,**}, Subi J. George^{a,*}^aSupramolecular Chemistry Laboratory, New Chemistry Unit, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Jakkur, Bangalore 560064, India^bMolecular Materials Laboratory, Chemistry and Physics of Materials, Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore 560064, India
CO₂-permselective membranes of crosslinked poly(vinyl ether)s bearing oxyethylene chains

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Toshikazu Sakaguchi^{*}, Fumiya Katsura, Atsuya Iwase, Tamotsu Hashimoto

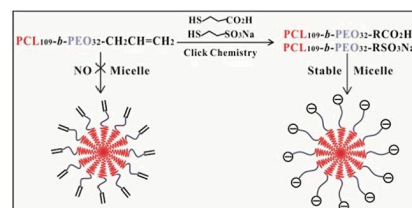
Department of Materials Science and Engineering, Graduate School of Engineering, University of Fukui, Bunkyo, Fukui 910-8507, Japan


Effects of placing negatively charged groups at the corona terminus on the aqueous dispersion stabilities for PCL-*b*-PEO block copolymer micelles

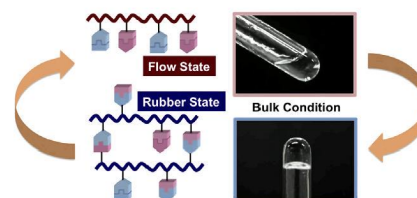
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Xiaobo Zhu, Michael Fryd, Bradford B. Wayland^{*}

Department of Chemistry, Temple University, Philadelphia, PA 19122, USA

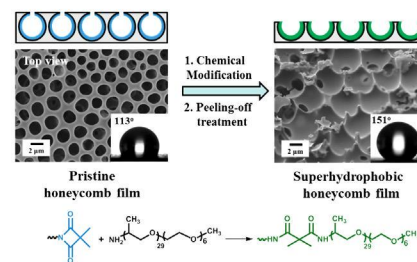

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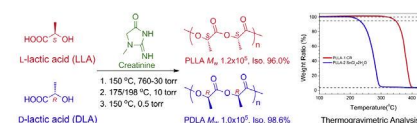
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Honeycomb-like polymeric films from dendritic polymers presenting reactive pendent moieties

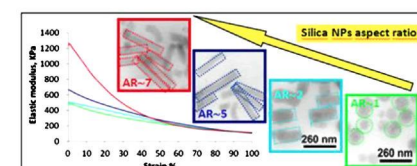
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Yu-An Su^a, Wei-Fan Chen^b, Tzong-Yuan Juang^{c,*}, Wei-Ho Ting^b, Ting-Yu Liu^d, Chi-Fa Hsieh^e, Shenghong A. Dai^b, Ru-Jong Jeng^{a,**}^aInstitute of Polymer Science and Engineering, National Taiwan University, Taipei 106, Taiwan^bDepartment of Chemical Engineering, National Chung Hsing University, Taichung 402, Taiwan^cDepartment of Applied Chemistry, National Chiayi University, 300 Syuefu Road, Chiayi 60004, Taiwan^dDepartment of Materials Engineering, Ming Chi University of Technology, New Taipei City 243, Taiwan^eChung-Shan Institute of Technology, Lungtan, Taoyuan 325, Taiwan**Synthesis of high molecular weight poly(L-lactic acid) and poly(D-lactic acid) with improved thermal stability via melt/solid polycondensation catalyzed by biogenic creatinine**

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Wei Huang^a, Na Cheng^a, Yunbiao Qi^a, Tianrong Zhang^a, Wei Jiang^a, Hong Li^{a,b,*}, Quanxing Zhang^{a,**}^aNational Engineering Research Center for Organic Pollution Control and Resource Reuse, State Key Laboratory of Pollution and Resource Reuse, School of the Environment, Nanjing University, Nanjing 210023, China^bKey Laboratory of Functional Polymer Materials of Education Ministry, Institute of Polymer Chemistry, Nankai University, Tianjin 300071, China**Shape controlled spherical (0D) and rod-like (1D) silica nanoparticles in silica/styrene butadiene rubber nanocomposites: Role of the particle morphology on the filler reinforcing effect**

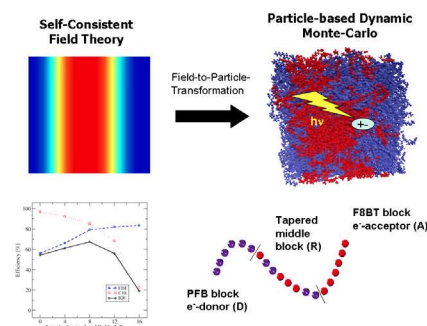
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Roberto Scotti^{a,*}, Lucia Conzatti^c, Massimiliano D'Arienzo^a, Barbara Di Credico^a, Luca Giannini^b, Thomas Hanel^b, Paola Stagnaro^c, Antonio Susanna^a, Luciano Tadiello^a, Franca Morazzoni^a^aDip. Scienze dei Materiali, INSTM, University of Milano-Bicocca, Via R. Cozzi 55, 20125 Milano, Italy^bPirelli Tyre SpA, Viale Sarca 222, 20126 Milano, Italy^cIstituto per lo Studio delle Macromolecole, ISMAC, CNR, Via De Marini 6, 16149 Genova, Italy**Performance enhancement of block-copolymer solar cells through tapering the donor–acceptor interface: A multiscale study**

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Anton Pershin, Sergii Donets, Stephan A. Baeurle^{*}

Department of Chemistry and Pharmacy, Institute of Physical and Theoretical Chemistry, University of Regensburg, D-93040 Regensburg, Germany

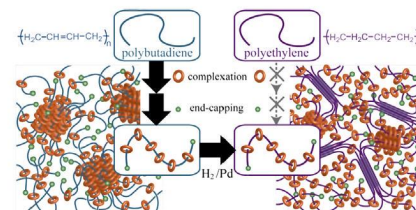


Crystal structure transition of polyrotaxanes attributable to competing rings and backbone induced by in situ modification of the backbone

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Kazuaki Kato*, Tomoya Ise, Kohzo Ito*

Department of Advanced Materials Science, Graduate School of Frontier Sciences, University of Tokyo, 5-1-5 Kashiwanoha, Kashiwa, Chiba 277-8561, Japan



Chemically cross-linked ultrathin electrospun poly(vinylidene fluoride-co-hexafluoropropylene) nanofibrous mats as ionic liquid host in electrochromic devices

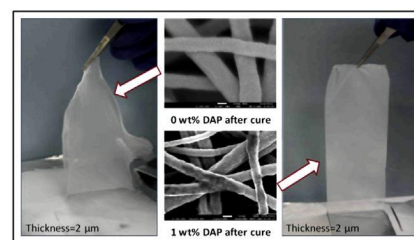
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Rui Zhou^a, Wanshuang Liu^a, Junhua Kong^b, Dan Zhou^b, Guoqiang Ding^a, Yew Wei Leong^c, Pramoda Kumari Pallathadka^c, Xuehong Lu^{a,b,*}

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^bTemasek Laboratories, Nanyang Technological University, Singapore 637553, Singapore

^cInstitute of Materials Research & Engineering, 3 Research Link, Singapore 117602, Singapore



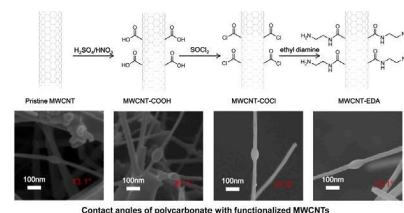
Characterization of the surface energies of functionalized multi-walled carbon nanotubes and their interfacial adhesion energies with various polymers

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Sang Chul Roh^a, Eun Yub Choi^a, Yeon Sik Choi^b, C.K. Kim^{a,*}

^aSchool of Chemical Engineering and Materials Science, Chung-Ang University, 221, Heukseok-dong, Dongjak-gu, Seoul 156-756, South Korea

^bTech Center, LG Chem. Ltd., 84, Jang-dong, Jung-gu, Daejeon 305-343, South Korea



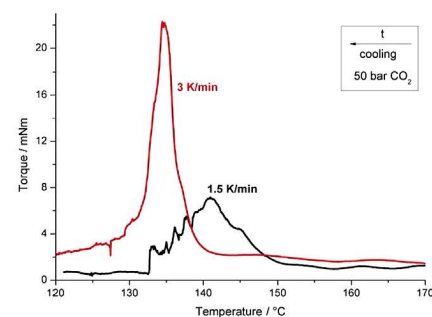
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Daniel Raps*, Thomas Köppl, Agustin Rios de Anda, Volker Altstädt

Department of Polymer Engineering, University of Bayreuth, Universitätsstraße 30, 95447 Bayreuth, Germany



Fragility and molecular mobility in micro- and nano-layered PC/PMMA films

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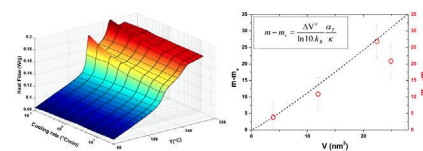
K. Arabeche^a, L. Delbreilh^{a,*}, J.-M. Saiter^a, G.H. Michler^b, R. Adhikari^c, E. Baer^d

^a AMME-LECAP EA 4528 International Laboratory, Université et INSA de Rouen, Avenue de l'Université BP 12, 76801 Saint Etienne du Rouvray Cedex, France

^b Department of Engineering, Martin-Luther University Halle-Wittenberg, D-06099 Halle, Germany

^c Central Department of Chemistry, Tribhuvan University, Kirtipur, Kathmandu, Nepal

^d Department of Macromolecular Science, Case Western Reserve University, Cleveland, OH 44106-7202, USA



Relaxation dynamics and cold crystallization of poly(pentamethylene terephthalate) as revealed by dielectric spectroscopy

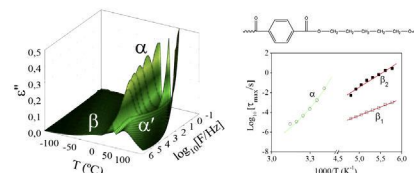
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M. Soccio^{a,c,*}, A. Nogales^a, I. Martín-Fabiani^a, N. Lotti^b, A. Munari^b, T.A. Ezquerro^{a,**}

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^c Department of Materials Science and Engineering, The Pennsylvania State University, 327 Steidle Building University Park, State College, PA 16802, USA



Selective wetting and dispersion of filler in rubber composites under influence of processing and curing additives

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H.H. Le^{a,b,*}, E. Hamann^c, S. Ilisch^c, G. Heinrich^{a,d}, H.-J. Radusch^e

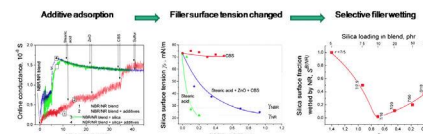
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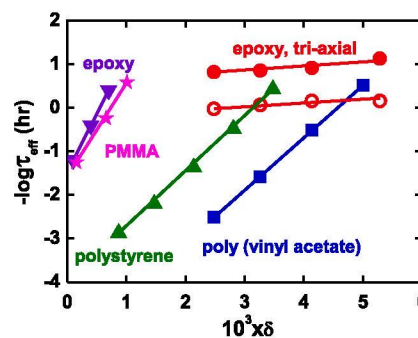


Mobility evolution during tri-axial deformation of a glassy polymer

pp 1570–1573

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Rheological studies of disulfonated poly(arylene ether sulfone) plasticized with poly(ethylene glycol) for membrane formation

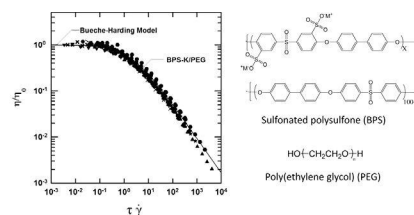
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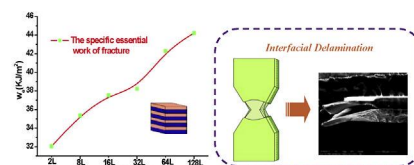


A quantitative analysis of the effect of interface delamination on the fracture behavior and toughness of multilayered propylene–ethylene copolymer/low density polyethylene films by the essential work of fracture (EWF)

pp 1583–1592

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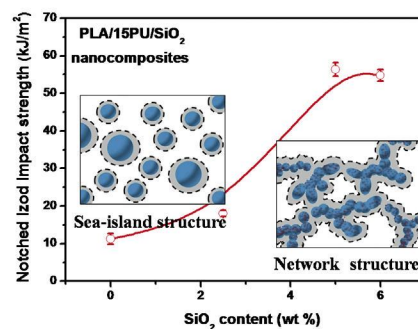


Improving impact toughness of polylactide/poly(ether)urethane blends via designing the phase morphology assisted by hydrophilic silica nanoparticles

pp 1593–1600

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Perpendicular oriented cylinders via directional coalescence of spheres embedded in block copolymer films induced by solvent annealing

pp 1601–1608

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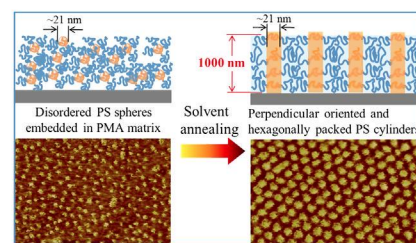
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