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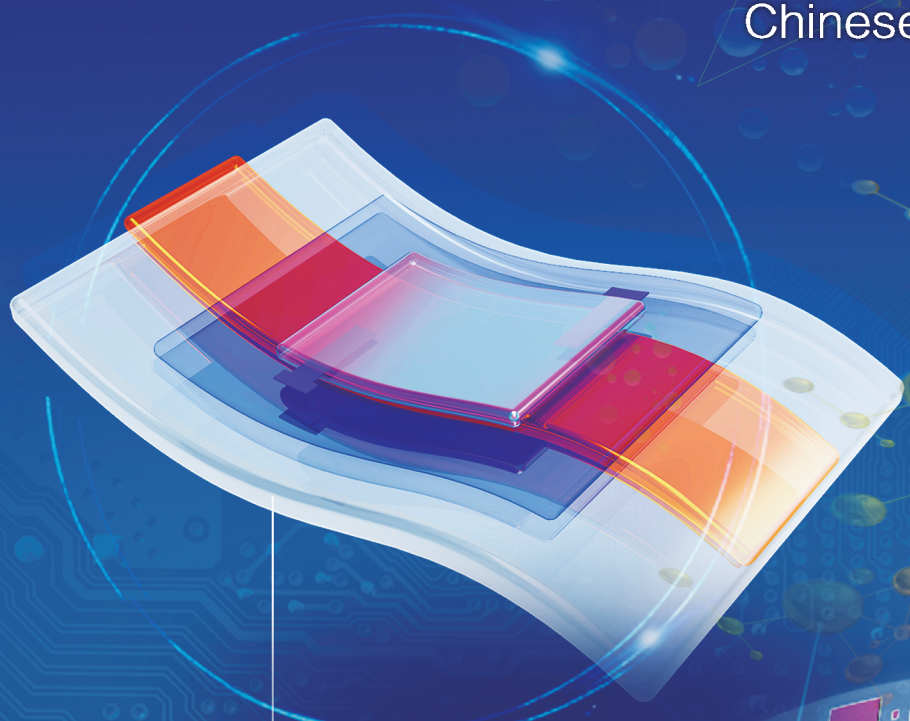
Chinese Journal of POLYMER SCIENCE

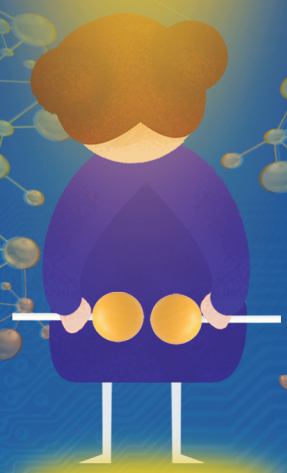
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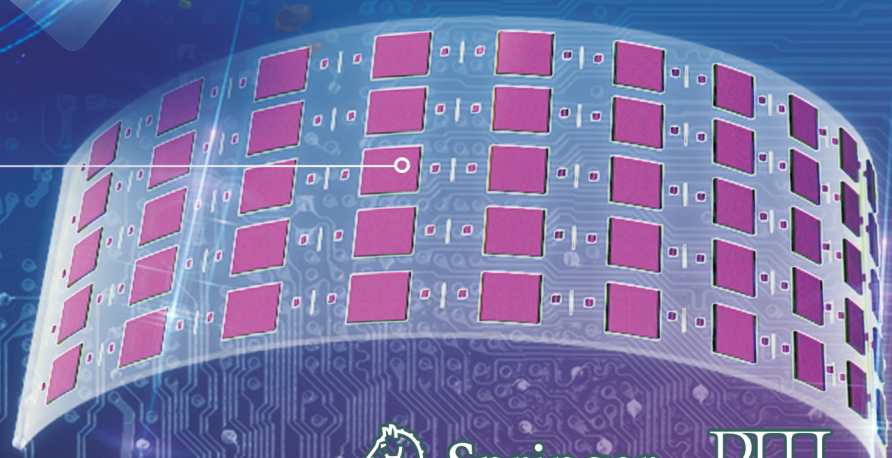
Volume 36 Number 8 August 2018

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RAPID COMMUNICATIONS

Synthesis, Self-assembly and Electrode Application of Mussel-inspired Alternating Copolymers **897**
Ying-Lin Zhang, Chuan-Long Li, Tahir Rasheed, Ping Huang, and Yong-Feng Zhou

REVIEWS

Recent Progress in Shape Memory Polymers for Biomedical Applications **905**
Hong-Mei Chen, Lin Wang, and Shao-Bing Zhou

ARTICLES

A Facile Photo-cross-linking Method for Polymer Gate Dielectrics and Their Applications in Fully Solution Processed Low Voltage Organic Field-effect Transistors on Plastic Substrate **918**
Ying Liu, Jia-Qing Zhao, Wen-Jian Sun, Yu-Kun Huang, Su-Jie Chen, Xiao-Jun Guo, and Qing Zhang

Effect of a Hybrid Zinc Stearate-Silver System on the Properties of Polylactide and Its Abiotic and the Biotic Degradation and Antimicrobial Activity Thereof **925**
Gabriela Jandíková, Petra Stoplova, Antonio Di Martino, Petr Stloukal, Pavel Kucharczyk, Michal Machovsky, and Vladimir Sedlarik

Synthesis and Properties of SEPS-*g*-PEO Copolymers with Varying Branch Lengths **934**
Zhong-Fu Zhao, Pei-Ying Liu, Chun-Qing Zhang, Wei Liu, Yan-Hui Wang, Tao Tang, Yi-Fu Ding, Yan-Dong Zhang, and Fan-Zhi Meng

Mono- and Binuclear Cobalt(II) Complexes Supported by Quinoline-2-imidate Ligands: Synthesis, Characterization, and 1,3-Butadiene Polymerization **943**
Heng Liu, Rui Zhuang, Bo Dong, Feng Wang, Yan-Ming Hu, and Xue-Quan Zhang

A Soft Shape Memory Reversible Dry Adhesive **953**
Jian-Te Dong, Wei-Ke Zou, Feng Chen, and Qian Zhao

Multiple Effects Tailoring the Self-organization Behaviors of Triphenylene Side-chain Liquid Crystalline Polymers *via* Changing the Spacer Length **960**
Xiang-Hui Han, Xi-Wen Yang, Sheng Chen, Hang Luo, Dou Zhang, and Hai-Liang Zhang

Preparation and Properties of Poly(aryl ether sulfone ketone) Ultrafiltration Membrane Containing Fluorene Group for High Temperature Condensed Water Treatment **970**
Xiang-Li Meng, Gen-Hua Yu, and Jian Ma

In-line Plasma-induced Graft-copolymerization of Pentaerythritol Triacrylate onto Polypropylene **979**
Gui-Qiu Ma, Guan-Kai Sun, Zhe Ma, Jing-Qing Li, and Jing Sheng

Dewetting Kinetics of Thin Polymer Films with Different Architectures: Effect of Polymer Adsorption **984**
Li-Na Wang, Huan-Huan Zhang, Lin Xu, Bin-Yuan Liu, Tong-Fei Shi, Shi-Chun Jiang, and Li-Jia An

Origin of Modulus Improvement for Epoxide-terminated Hyperbranched Poly(ether sulphone)/DGEBA/TETA Systems **991**
Xue-Pei Miao, Dao-Jian Cheng, Ya-Dong Dai, Yan Meng, and Xiao-Yu Li

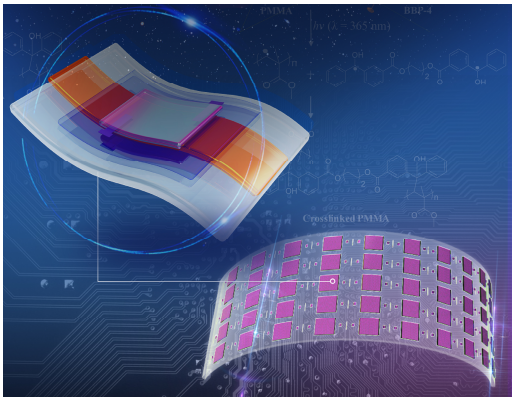
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Cover Image

A Facile Photo-cross-linking Method for Polymer Gate Dielectrics and Their Applications in Fully Solution Processed Low Voltage Organic Field-effect Transistors on Plastic Substrate

Ying Liu, Jia-Qing Zhao, Wen-Jian Sun, Yu-Kun Huang, Su-Jie Chen, Xiao-Jun Guo, and Qing Zhang

A new photochemical method is developed for cross-linking of polymer gate dielectrics. The cross-linker is added by simple solution blending, and the cross-linking is completed with UV light (365 nm). The cross-linking enhanced dielectric properties and solvent resistance of the thin-films. All solution processed OFETs on plastic substrate were fabricated.



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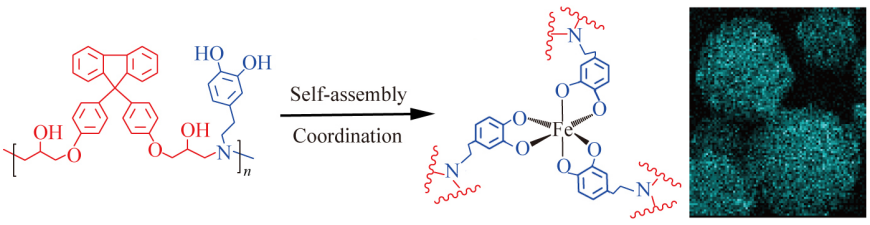
Contents

Rapid Communications

Synthesis, Self-assembly and Electrode Application of Mussel-inspired Alternating Copolymers

Ying-Lin Zhang, Chuan-Long Li, Tahir Rasheed, Ping Huang, and Yong-Feng Zhou

The work reports novel mussel-mimetic alternating copolymers capable to self-assemble into well-defined nanospheres, whch can be further used to prepare carbon/nitrogen-doped α-Fe_2O_3 nanoparticles with excellent electrochemical performance as anode materials.



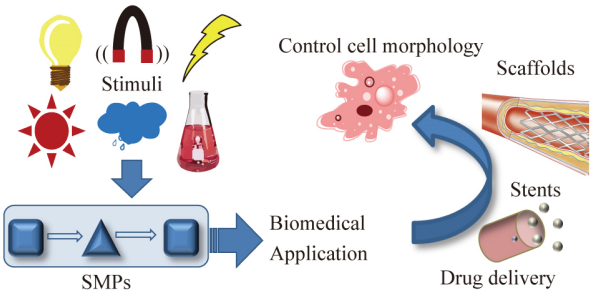
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Reviews

Recent Progress in Shape Memory Polymers for Biomedical Applications

Hong-Mei Chen, Lin Wang, and Shao-Bing Zhou

This review article summarizes the progress of shape memory polymers and their applications in biomedical fields.



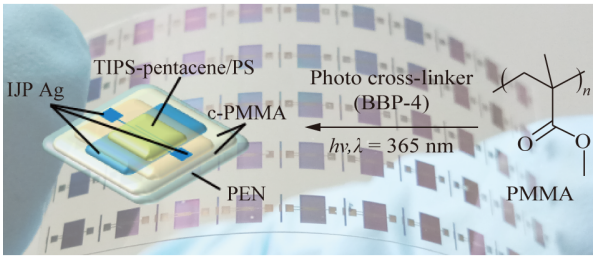
Chinese Journal of Polymer Science, 2018, 36(8), 905–917
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Articles

A Facile Photo-cross-linking Method for Polymer Gate Dielectrics and Their Applications in Fully Solution Processed Low Voltage Organic Field-effect Transistors on Plastic Substrate

Ying Liu, Jia-Qing Zhao, Wen-Jian Sun, Yu-Kun Huang, Su-Jie Chen, Xiao-Jun Guo, and Qing Zhang

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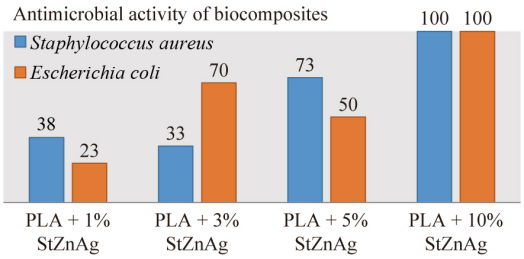


Chinese Journal of Polymer Science, 2018, 36(8), 918–924
https://doi.org/10.1007/s10118-018-2110-2

Effect of a Hybrid Zinc Stearate-Silver System on the Properties of Polylactide and Its Abiotic and the Biotic Degradation and Antimicrobial Activity Thereof

Gabriela Jandíková, Petra Stoplova, Antonio Di Martino, Petr Stloukal, Pavel Kucharczyk, Michal Machovsky, and Vladimir Sedlarik

Zinc stearate/silver antimicrobial additive, in which zinc stearate served as the carrier, was prepared by microwave synthesis. The system showed good antimicrobial activity in PLA matrix at low concentrations. Biodegradability of composite was not affected. Thermal stability and mechanical properties were improved by the presence of additive.

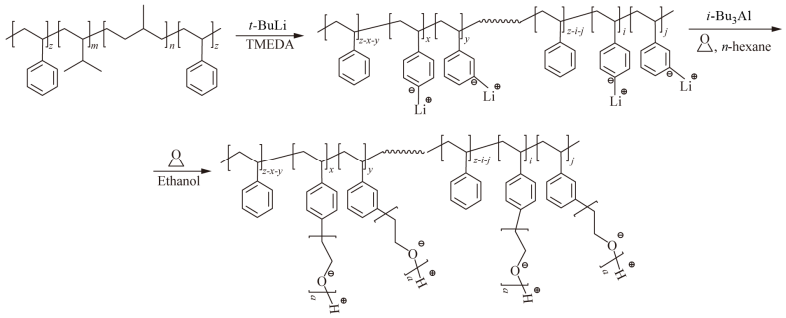


Chinese Journal of Polymer Science, 2018, 36(8), 925–933
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Synthesis and Properties of SEPS-*g*-PEO Copolymers with Varying Branch Lengths

Zhong-Fu Zhao, Pei-Ying Liu, Chun-Qing Zhang, Wei Liu, Yan-Hui Wang, Tao Tang, Yi-Fu Ding, Yan-Dong Zhang, and Fan-Zhi Meng

Lithiation of styrenic units and anionic ring-opening polymerization of ethylene oxide (EO) monomers were combined to controllably graft poly(ethylene oxide) (PEO) branches onto the polystyrene blocks of styrene-*b*-(ethylene-*co*-propylene)-*b*-styrene (SEPS) copolymers with the aid of co-initiators triisobutyl aluminum. The lithiation efficiency and branch length (BL) of the grafted PEO chains can be synthetically controlled. The structure and properties of the copolymers were systematically examined.

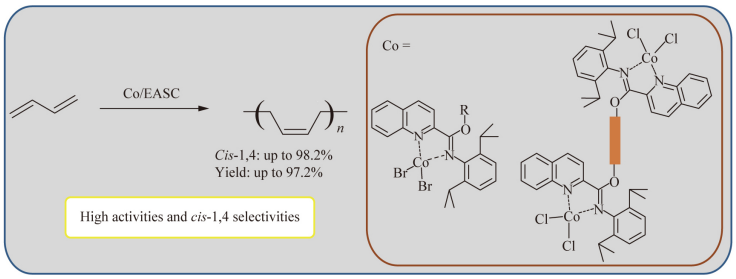


Chinese Journal of Polymer Science, 2018, 36(8), 934–942
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Mono- and Binuclear Cobalt(II) Complexes Supported by Quinoline-2-imidate Ligands: Synthesis, Characterization, and 1,3-Butadiene Polymerization

Heng Liu, Rui Zhuang, Bo Dong, Feng Wang, Yan-Ming Hu, and Xue-Quan Zhang

Mono- and binuclear Co(II) complexes ligated by quinoline-2-imidate ligands exhibited high activity and high *cis*-1,4-stereoselectivity towards 1,3-butadiene polymerization. Polymerization conditions showed a significant influence on the catalytic behavior. The binuclear Co(II) complexes displayed high thermal stability.

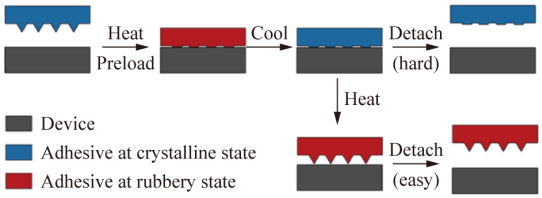


Chinese Journal of Polymer Science, 2018, 36(8), 943–952
https://doi.org/10.1007/s10118-018-2197-8

A Soft Shape Memory Reversible Dry Adhesive

Jian-Te Dong, Wei-Ke Zou, Feng Chen, and Qian Zhao

For the transfer printing process of the stretchable electronics, we developed a soft reversible dry adhesive enabled by shape memory microstructures as a stamp. Upon our designing, the adhesive provided both suitable softness to meet practical requirements and excellent shape memory performance to ensure transfer efficiency.

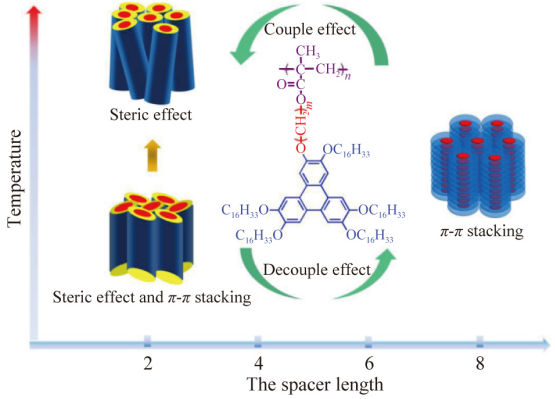


Chinese Journal of Polymer Science, 2018, 36(8), 953–959
https://doi.org/10.1007/s10118-018-2119-6

Multiple Effects Tailoring the Self-organization Behaviors of Triphenylene Side-chain Liquid Crystalline Polymers *via* Changing the Spacer Length

Xiang-Hui Han, Xi-Wen Yang, Sheng Chen, Hang Luo, Dou Zhang, and Hai-Liang Zhang

The steric effect, decoupling effect and π-π stacking interaction can be regulated by changing the spacer length. The resulting side-chain liquid crystalline polymers with triphenylene mesogens of long alkyl tail exhibit various liquid crystalline phase structures.

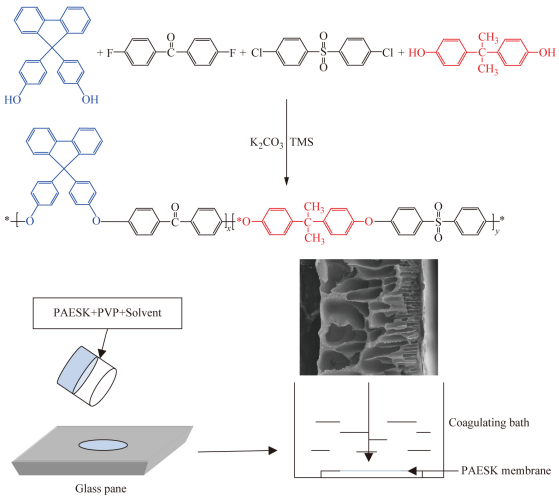


Chinese Journal of Polymer Science, 2018, 36(8), 960–969
https://doi.org/10.1007/s10118-018-2108-9

Preparation and Properties of Poly(aryl ether sulfone ketone) Ultrafiltration Membrane Containing Fluorene Group for High Temperature Condensed Water Treatment

Xiang-Li Meng, Gen-Hua Yu, and Jian Ma

Novel poly(aryl ether sulfone ketone)s (PAESK) were synthesized and subsequently were used to fabricate ultrafiltration membrane by phase-inversion method for high temperature condensed water treatment. The addition of 9,9-bis(4-hydroxyphenyl)fluorene (BHPF) improves the thermal stability of polymers. Permeate flux for high temperature condensed water at 90 ºC shows that the as-prepared membranes have great potential for high temperature condensed water treatment.

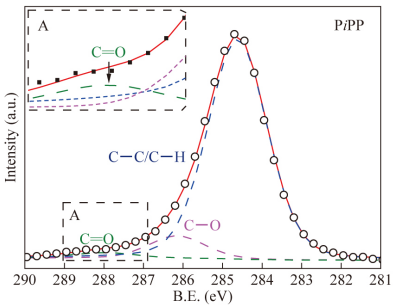


Chinese Journal of Polymer Science, 2018, 36(8), 970–978
https://doi.org/10.1007/s10118-018-2142-7

In-line Plasma-induced Graft-copolymerization of Pentaerythritol Triacrylate onto Polypropylene

Gui-Qiu Ma, Guan-Kai Sun, Zhe Ma, Jing-Qing Li, and Jing Sheng

A novel method for utilizing plasma to induce the graft reaction in isotactic polypropylene (*i*PP) melt was reported. With this method, the pentaerythritol triacrylate was successfully grafted onto *i*PP chains by the bulk precessing.

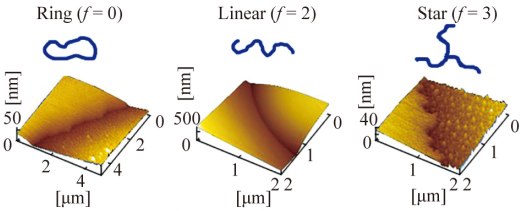


Chinese Journal of Polymer Science, 2018, 36(8), 979–983
https://doi.org/10.1007/s10118-018-2023-0

Dewetting Kinetics of Thin Polymer Films with Different Architectures: Effect of Polymer Adsorption

Li-Na Wang, Huan-Huan Zhang, Lin Xu, Bin-Yuan Liu, Tong-Fei Shi, Shi-Chun Jiang, and Li-Jia An

The capillary driving forces of the thin polymer films and adsorption of the polymer chains on the substrates together lead to their different dewetting behaviors.



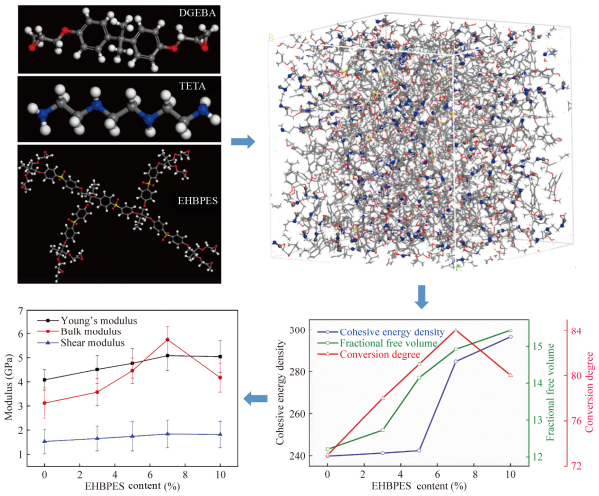
The driving forces and the adsorptions of the polymers with different architectures influence the dewetting behavior of the films

Chinese Journal of Polymer Science, 2018, 36(8), 984–990
https://doi.org/10.1007/s10118-018-2111-1

Origin of Modulus Improvement for Epoxide-terminated Hyperbranched Poly(ether sulphone)/DGEBA/TETA Systems

Xue-Pei Miao, Dao-Jian Cheng, Ya-Dong Dai, Yan Meng, and Xiao-Yu Li

The crosslinking density, cohesive energy density (CED), and free volume can be used to understand the origin of modulus improvement for EHBPES/DGEBA/TETA systems.



Chinese Journal of Polymer Science, 2018, 36(8), 991–998
https://doi.org/10.1007/s10118-018-2114-y