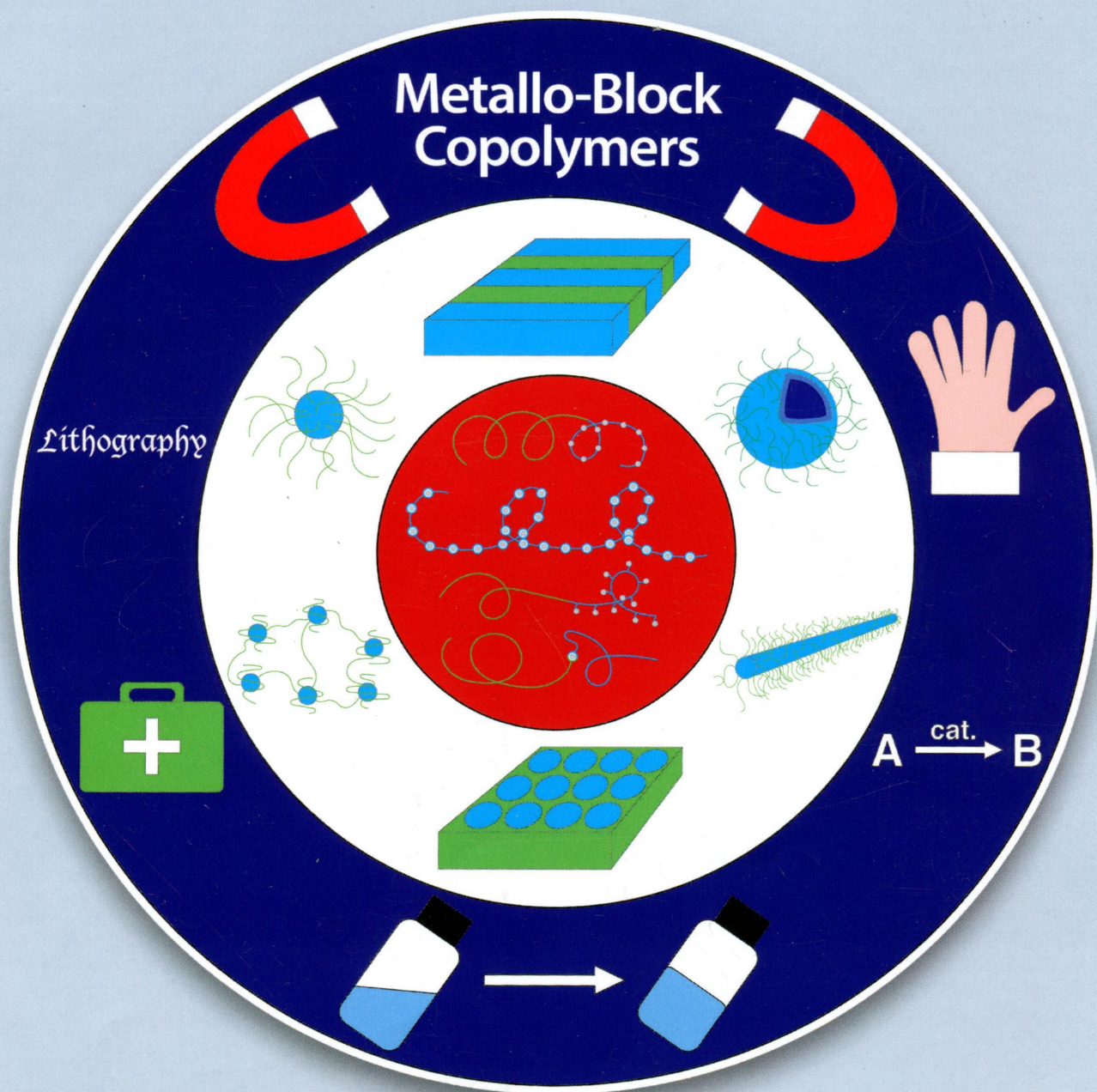


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ON THE COVER: Metalblock copolymers enable the fashioning of metallic elements into nano-sized domains and particles by the exploitation of common self-assembly protocols. This combined approach is emerging as a promising route to new functional materials. See page 3529.

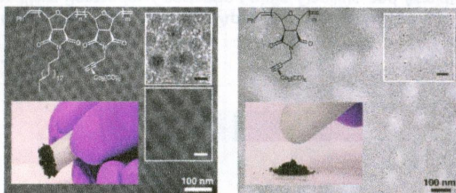
Perspective

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[dx.doi.org/10.1021/ma500106x](https://doi.org/10.1021/ma500106x)

Metalblock Copolymers: New Functional Nanomaterials

Jiawen Zhou, George R. Whittell, and Ian Manners*



Articles

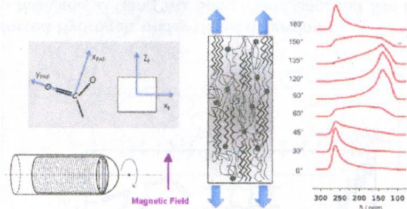
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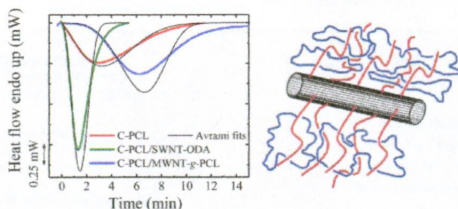
[dx.doi.org/10.1021/ma5005716](https://doi.org/10.1021/ma5005716)

Insights into Shape-Memory Poly(ϵ -caprolactone) Materials by Solid-State NMR

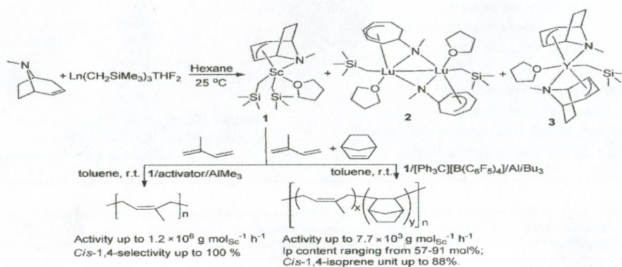
Silvia Borsacchi,* Katia Paderni, Massimo Messori, Maurizio Toselli, Francesco Pilati, and Marco Geppi



Nucleation and Antinucleation Effects of Functionalized Carbon Nanotubes on Cyclic and Linear Poly(ϵ -caprolactones)
 Ricardo A. Pérez, Juan V. López, Jessica N. Hoskins, Boyu Zhang, Scott M. Grayson, María Teresa Casas, Jordi Puiggalí, and Alejandro J. Müller*

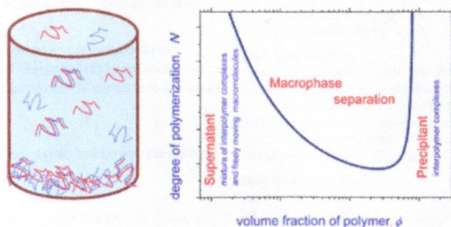


Cationic Tropicidynyl Scandium Catalyst: A Perfectly Acceptable Substitute for Cationic Half-Sandwich Scandium Catalysts in *cis*-1,4-Polymerization of Isoprene and Copolymerization with Norbornene
 Siqian Liu, Gaixia Du, Jianyun He, Yingyun Long, Shaowen Zhang,* and Xiaofang Li*



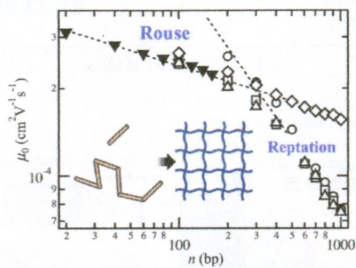
Experimental and Theoretical Studies of Polyanion–Polycation Complexation in Salted Media in the Context of Nonviral Gene Transfection

Mahfoud Boustta, Laurent Leclercq, Michel Vert, and Valentina V. Vasilevskaya*



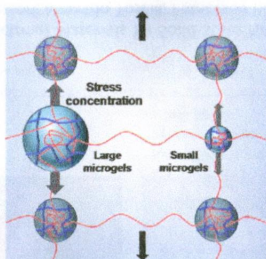
Electrophoretic Mobility of Double-Stranded DNA in Polymer Solutions and Gels with Tuned Structures

Xiang Li, Kateryna Khairulina, Ung-il Chung, and Takamasa Sakai*



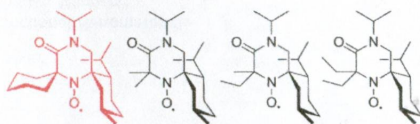
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Jian Hu, Takayuki Kurokawa, Tasuku Nakajima, Zi Liang Wu, Song Miao Liang, and Jian Ping Gong*



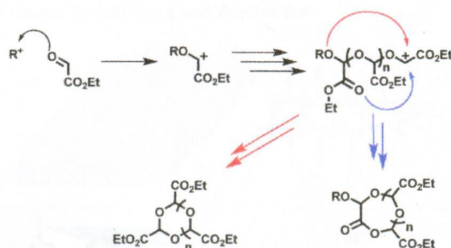
Synthesis of Bulky Nitroxides, Characterization, and Their Application in Controlled Radical Polymerization

Yuan Yuan Jing, Artur Mardyukov, Klaus Bergander, Constantin Gabriel Daniliuc, and Armido Studer*



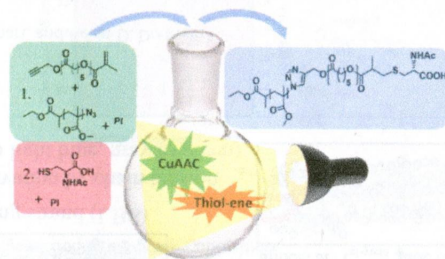
Divergent Macrocyclization Mechanisms in the Cationic Initiated Polymerization of Ethyl Glyoxylate

Joshua A. Kaitz, Charles E. Diesendruck, and Jeffrey S. Moore*

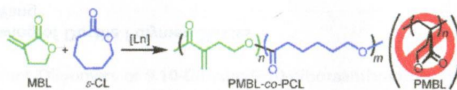


One-Pot Photo-Induced Sequential CuAAC and Thiol–Ene Click Strategy for Bioactive Macromolecular Synthesis

Seân Doran, Eljesa Murtezi, Firat Baris Barlas, Suna Timur, and Yusuf Yagci*

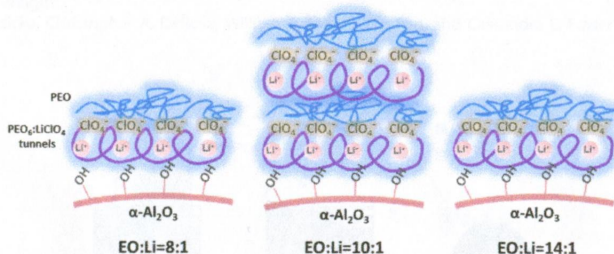
Coordination Ring-Opening Copolymerization of Naturally Renewable α -Methylene- γ -butyrolactone into Unsaturated Polyesters

Miao Hong and Eugene Y.-X. Chen*



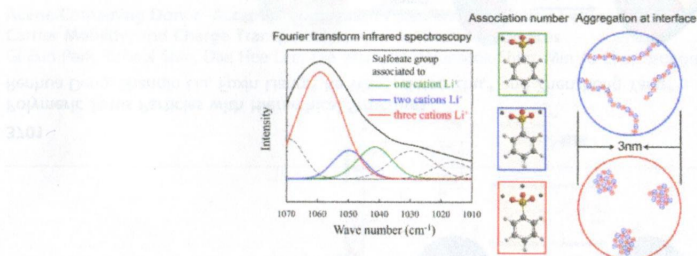
Interplay of Surface Chemistry and Ion Content in Nanoparticle-Filled Solid Polymer Electrolytes

Lalitha V. N. R. Ganapatibhotla and Janna K. Maranas*



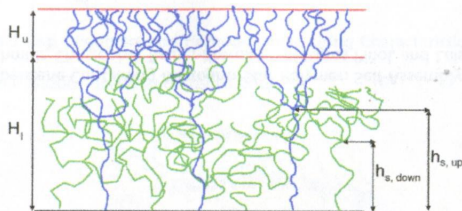
Linear Viscoelasticity and Fourier Transform Infrared Spectroscopy of Polyether–Ester–Sulfonate Copolymer Ionomers

Quan Chen, Hanqing Masser, Huai-Suen Shiau, Siwei Liang, James Runt, Paul C. Painter, and Ralph H. Colby*

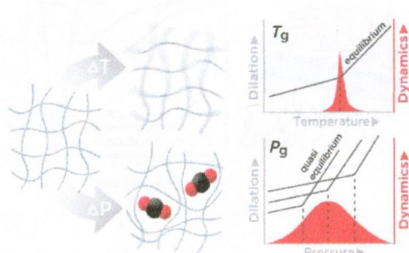


Structure of Dendrimer Brushes: Mean-Field Theory and MD Simulations

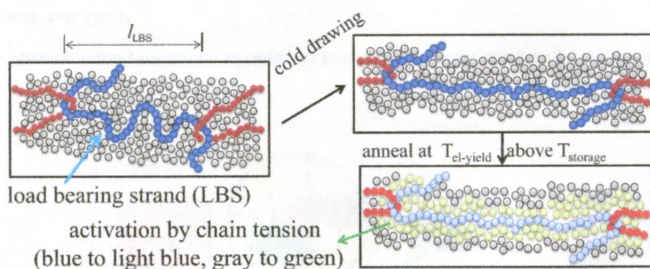
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Polymer Relaxations in Thin Films in the Vicinity of a Penetrant- or Temperature-Induced Glass Transition
Wojciech Ogieglo, Matthias Wessling, and Nieck E. Benes*

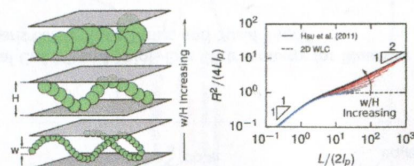


Elastic Yielding after Cold Drawing of Ductile Polymer Glasses
Shiwang Cheng and Shi-Qing Wang*



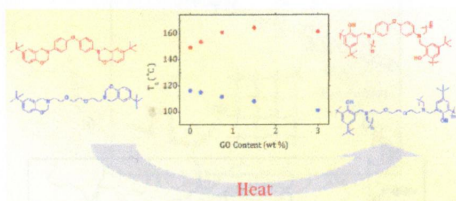
The Odijk Regime in Slits

Douglas R. Tree, Wesley F. Reinhart, and Kevin D. Dorfman*



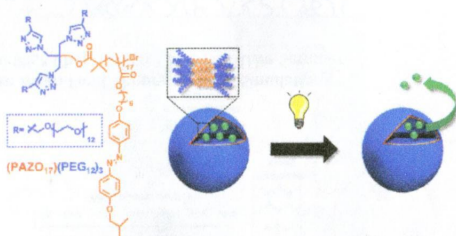
Quantifying Dispersion in Graphene Oxide/Reactive Benzoxazine Monomer Nanocomposites.

Carlos R. Arza, Hatsuo Ishida, and Frans H. J. Maurer*



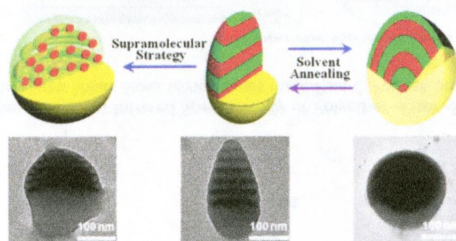
A Novel Photoresponsive Azobenzene-Containing Miktoarm Star Polymer: Self-Assembly and Photoresponse Properties

Eva Blasco, Bernhard V. K. J. Schmidt, Christopher Barner-Kowollik,* Milagros Piñol, and Luis Oriol*



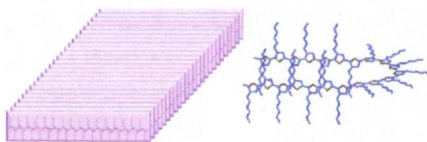
Polymeric Janus Particles with Hierarchical Structures

Renhua Deng, Shanqin Liu, Fuxin Liang,* Ke Wang, Jintao Zhu,* and Zhenzhong Yang*



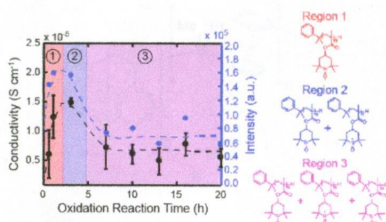
Chain Folding in Poly(3-hexylthiophene) Crystals

Yuan Yuan Han, Yan Guo, Yingfei Chang, Yanhou Geng, and Zhaohui Su*



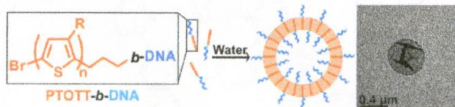
Solid State Electrical Conductivity of Radical Polymers as a Function of Pendant Group Oxidation State

Lizbeth Rostro, Si Hui Wong, and Bryan W. Boudouris*



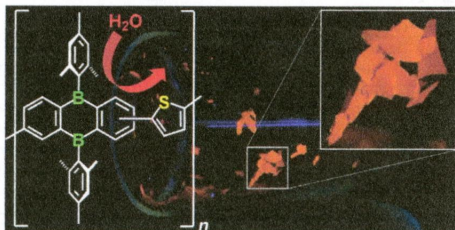
Self-Assembly of DNA-Coupled Semiconducting Block Copolymers

Amanda C. Kamps, Ma. Helen M. Cativo, Xi-Jun Chen, and So-Jung Park*



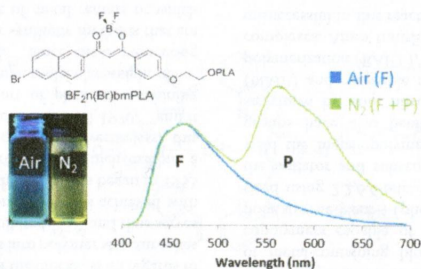
Air- and Water-Stable, Fluorescent Oligomers of 9,10-Dihydro-9,10-diboraanthracene

Christian Reus, Fang Guo, Alexandra John, Marcel Winhold, Hans-Wolfram Lerner, Frieder Jäkle,* and Matthias Wagner*



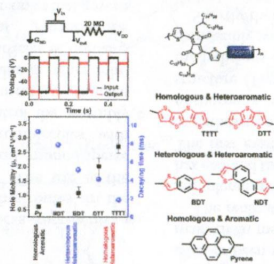
Dual-Emissive Difluoroboron Naphthyl-Phenyl β -Diketone Poly(lactide) Materials: Effects of Heavy Atom Placement and Polymer Molecular Weight

Jelena Samonina-Kosicka, Christopher A. DeRosa, William A. Morris, Ziyi Fan, and Cassandra L. Fraser*



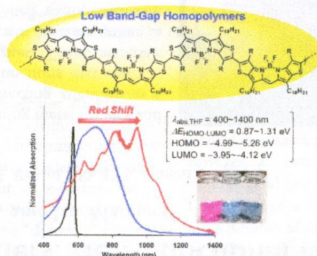
Acene-Containing Donor–Acceptor Conjugated Polymers: Correlation between the Structure of Donor Moiety, Charge Carrier Mobility, and Charge Transport Dynamics in Electronic Devices

Gi Eun Park, Jicheol Shin, Dae Hee Lee, Tae Wan Lee, Hyunseok Shim, Min Ju Cho, Seungmoon Pyo,* and Dong Hoon Choi*



Synthetic Strategy for Low-Band Gap Oligomers and Homopolymers Using Characteristics of Thiophene-Fused Boron Dipyrrromethene

Ryousuke Yoshii, Honami Yamane, Kazuo Tanaka, and Yoshiki Chujo*



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Visualization and Quantification of the Chemical and Physical Properties at a Diffusion-Induced Interface Using AFM Nanomechanical Mapping

Dong Wang,* Xiaobin Liang, Thomas P. Russell, and Ken Nakajima

