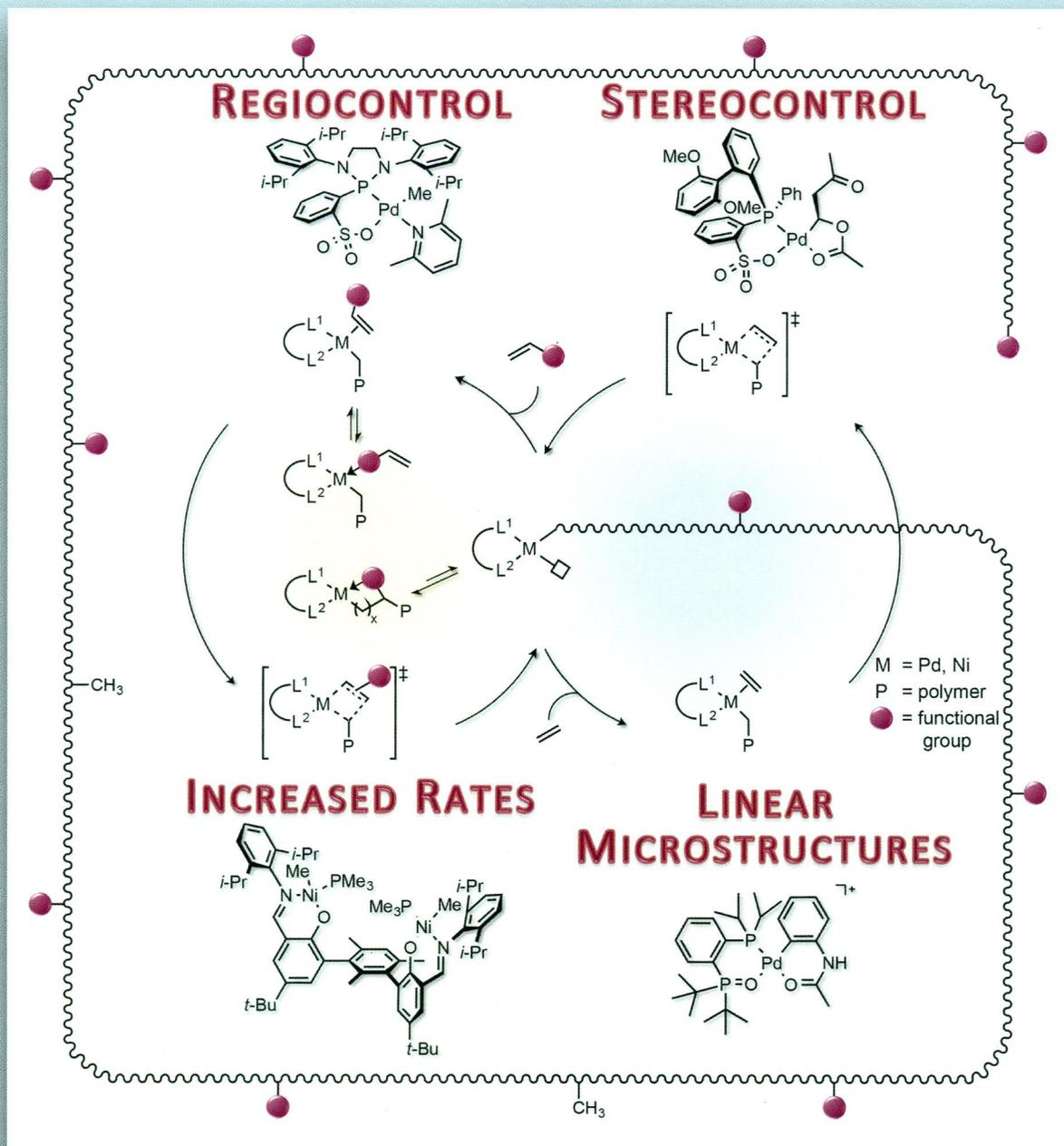


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ON THE COVER: Transition-metal-catalyzed coordination–insertion polymerization has emerged as a leading method for the controlled synthesis of functional polyolefins from industrially relevant monomers. Recent efforts to tailor catalyst function by exploiting the powerful influence of the chelating ancillary ligand of the metal complex are discussed in this Perspective. See page 2541.

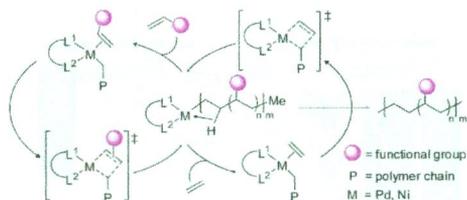
Perspective

2541

dx.doi.org/10.1021/ma500034g

Transition-Metal-Catalyzed Functional Polyolefin Synthesis: Effecting Control through Chelating Ancillary Ligand Design and Mechanistic Insights

Brad P. Carrow and Kyoko Nozaki*



Articles

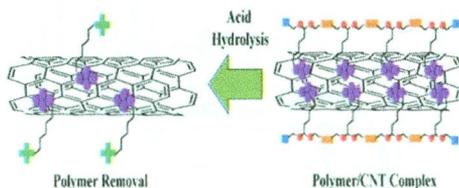
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dx.doi.org/10.1021/ma500009s

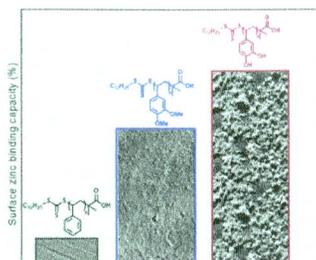
Carbon Nanotube Adsorptive Materials Derived from Acid Degradable Poly(acetals)

Andrew M. Spring, Leandro A. Estrada, Svetlana V. Vasilyeva, Andrew G. Rinzler, and John R. Reynolds*



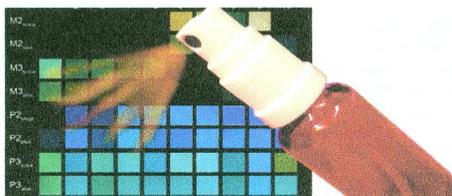
Controlled RAFT Polymerization and Zinc Binding Performance of Catechol-Inspired Homopolymers

Anna Isakova, Paul D. Topham,* and Andrew J. Sutherland



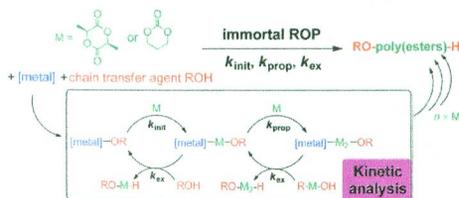
Amine Sensing with Distyrylbenzenes and Their Hexamethylene-Linked Polymers: Spraying Them On

Jan Kumpf, Jan Freudenberg, S. Thimon Schwaebel, and Uwe H. F. Bunz*



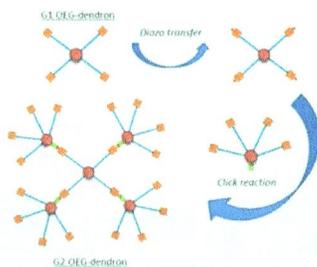
Kinetic Analysis of the Immortal Ring-Opening Polymerization of Cyclic Esters: A Case Study with Tin(II) Catalysts

Lingfang Wang, Valentin Poirier, Fabio Ghiotto, Manfred Bochmann,* Roderick D. Cannon,* Jean-François Carpentier,* and Yann Sarazin*



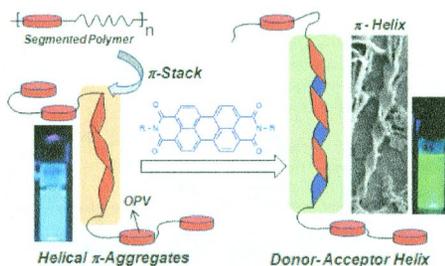
High Control, Fast Growth OEG-Based Dendron Synthesis via a Sequential Two-Step Process of Copper-Free Diazo Transfer and Click Chemistry

Peter Fransen, Daniel Pulido, Chantal Sevrin, Christian Grandfils, Fernando Albericio,* and Miriam Royo*



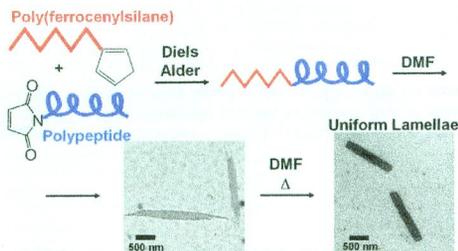
Helical Self-Assemblies of Segmented Poly(phenylenevinylene)s and Their Hierarchical Donor–Acceptor Complexes

Mahima Goel, Karnati Narasimha, and Manickam Jayakannan*



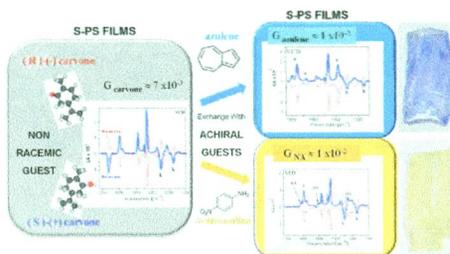
Organometallic–Polypeptide Diblock Copolymers: Synthesis by Diels–Alder Coupling and Crystallization-Driven Self-Assembly to Uniform Truncated Elliptical Lamellae

Gregory Molev, Yijie Lu, Kris Sanghyun Kim, Ingrid Chab Majdalani, Gerald Guerin, Srebrni Petrov, Gilbert Walker, Ian Manners,* and Mitchell A. Winnik*



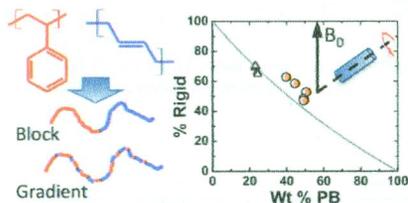
Melt-Extruded Films of a Commercial Polymer with Intense Chiral Optical Response of Achiral Guests

Paola Rizzo,* Eugenia Lepera, Graziella Ianniello, and Gaetano Guerra



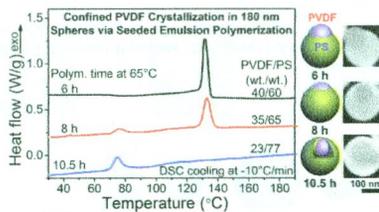
Component-Specific Heterogeneity and Differential Phase Partitioning in Gradient Copolymers Revealed by Solids NMR

Andrew Clough, Jessica L. Sigle, Arifuzzaman Tapash, Lance Gill, Nitin V. Patil, Joe Zhou, and Jeffery L. White*



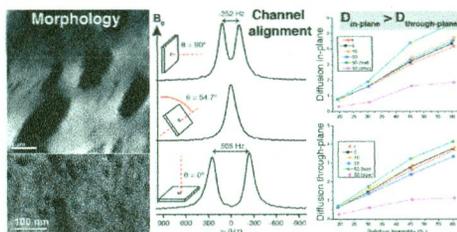
Composite Poly(vinylidene fluoride)/Polystyrene Latex Particles for Confined Crystallization in 180 nm Nanospheres via Emulsifier-Free Batch Seeded Emulsion Polymerization

Mingwang Pan,* Lianyun Yang, Jianchuan Wang, Saide Tang, Ganji Zhong, Run Su, Mani K. Sen, Maya K. Endoh, Tadanori Koga, and Lei Zhu*



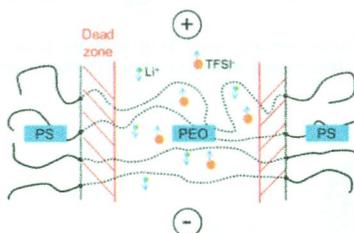
Morphological Anisotropy and Proton Conduction in Multiblock Copolyimide Electrolyte Membranes

Christoph F. Kins, Esha Sengupta, Anke Kaltbeitzel, Manfred Wagner, Ingo Lieberwirth, Hans Wolfgang Spiess, and Michael Ryan Hansen*



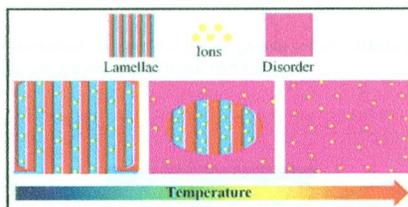
Charge Transport in Nanostructured PS–PEO–PS Triblock Copolymer Electrolytes

R. Bouchet,* T. N. T. Phan, E. Beaudoin, D. Devaux, P. Davidson, D. Bertin, and R. Denoyel



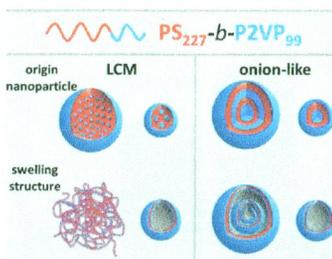
Phase Behavior of a Block Copolymer/Salt Mixture through the Order-to-Disorder Transition

Jacob L. Thelen, Alexander A. Teran, Xin Wang, Bruce A. Garetz, Issei Nakamura, Zhen-Gang Wang, and Nitash P. Balsara*



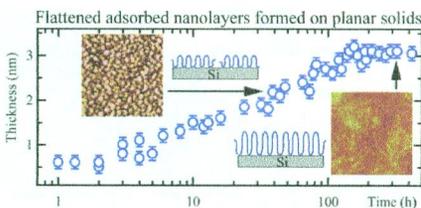
Selective Swelling of Block Copolymer Nanoparticles: Size, Nanostructure, and Composition

Hailong Fan and Zhaoxia Jin*



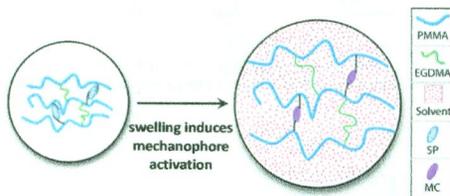
Formation Mechanism of High-Density, Flattened Polymer Nanolayers Adsorbed on Planar Solids

Naisheng Jiang, Jun Shang, Xiaoyu Di, Maya K. Endoh, and Tadanori Koga*



Solvent Swelling Activation of a Mechanophore in a Polymer Network

Corissa K. Lee, Charles E. Diesendruck, Enjong Lu, Austin N. Pickett, Preston A. May, Jeffrey S. Moore, and Paul V. Braun*



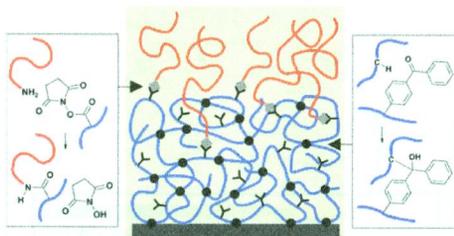
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dx.doi.org/10.1021/ma500282b

Binding of Functionalized Polymers to Surface-Attached Polymer Networks Containing Reactive Groups

Mónica Pérez-Perrino, Rodrigo Navarro, Oswald Prucker, and Jürgen Rühle*



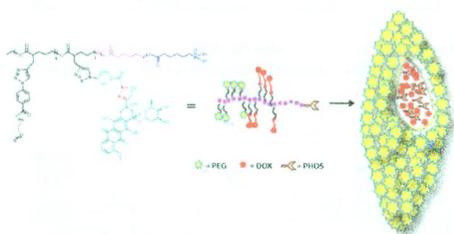
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Biodegradable Magnetic Nanocarrier for Stimuli Responsive Drug Release

Mutyalu Naidu Ganivada, Vijayakameswara Rao N, Himadri Dinda, Pawan Kumar, Jayasri Das Sarma,* and Raja Shunmugam*



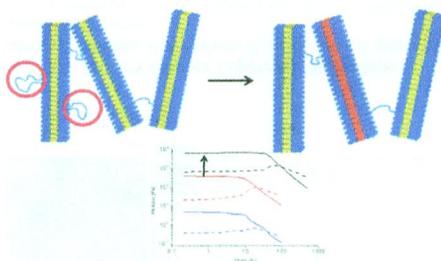
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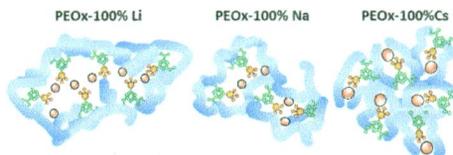
Tuning Cross-Link Density in a Physical Hydrogel by Supramolecular Self-Sorting

Marcel M. E. Koenigs, Asish Pal, Hamed Mortazavi, Gajanan M. Pawar, Cornelis Storm, and Rint P. Sijbesma*



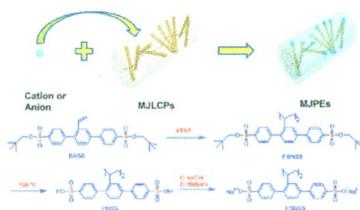
Does Ion Aggregation Impact Polymer Dynamics and Conductivity in PEO-Based Single Ion Conductors?

Kokonad Sinha and Janna Maranas*



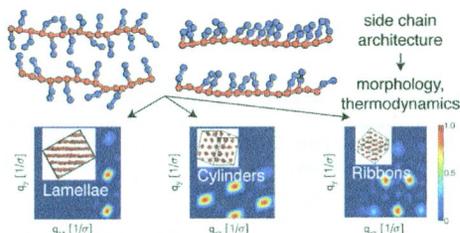
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Controlling the Morphology of Model Conjugated Thiophene Oligomers through Alkyl Side Chain Length, Placement, and Interactions

Hilary S. Marsh, Eric Jankowski, and Arthi Jayaraman*



Strong Linear Polyelectrolytes in Solutions of Extreme Concentrations of One–One Valent Salt. Hydrodynamic Study
Georges M. Pavlov,* Olga V. Okatova, Alexander S. Gubarev, Irina I. Gavrilova, and Evgenii F. Panarin