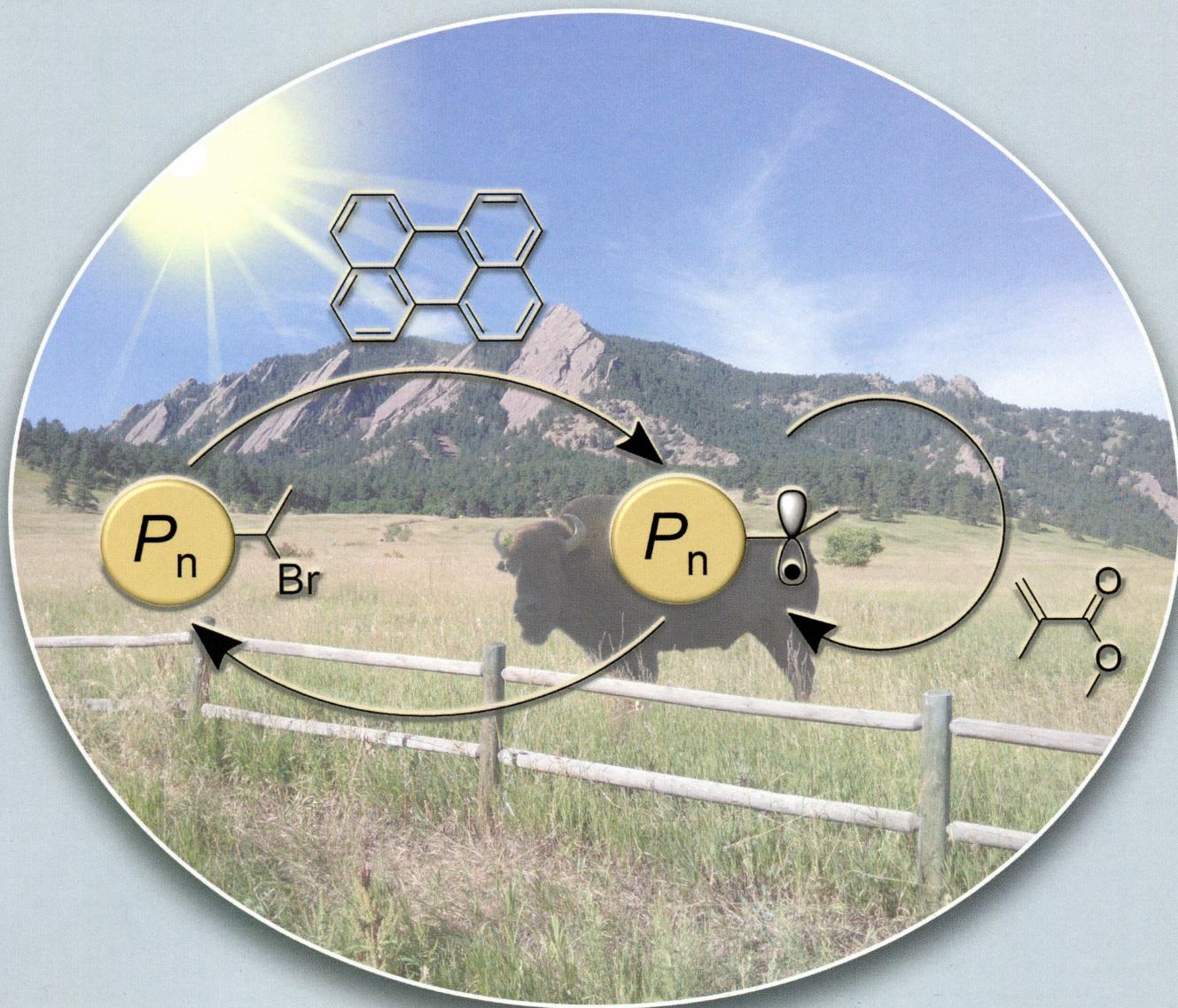


711  
M13/r

December 9, 2014  
Volume 47  
Number 23

# Macromolecules

pubs.acs.org/Macromolecules



ACS Publications  
Most Trusted. Most Cited. Most Read.

www.acs.org

**ON THE COVER:** Perylene can be used as a visible-light organic photocatalyst to generate carbon-centered radicals from alkyl bromides for the polymerization of functionalized vinyl monomers. The isolated polymers possess bromide chain-end groups and can be used as macroinitiators in chain-extension polymerizations. The polymerization propagation is strictly controlled through pulsed light sequences while the ability to use natural sunlight to promote carbon–carbon bond formation produces polymers with dispersity as low as 1.29. See page 8255.

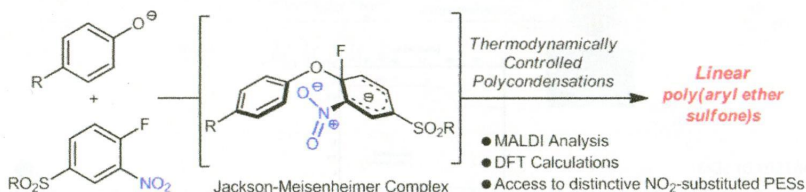
## Articles

8131 

DOI: 10.1021/ma501735q

### Meisenheimer Complex Inspired Catalyst- and Solvent-Free Synthesis of Noncyclic Poly(aryl ether sulfone)s

Jeannette M. García,\* Gavin O. Jones, Julien DeWinter, Hans W. Horn, Olivier Coulembier, Philippe Dubois, Pascal Gerbaux, and James L. Hedrick\*

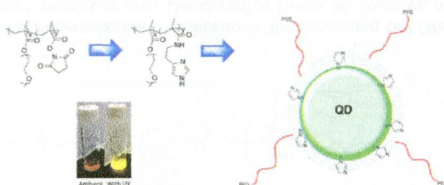


8137 

DOI: 10.1021/ma501955t

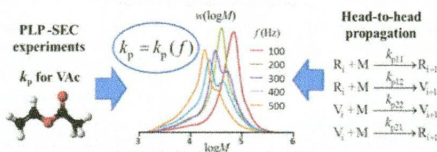
### Copolymerization and Synthesis of Multiply Binding Histamine Ligands for the Robust Functionalization of Quantum Dots

Anand Viswanath, Yi Shen, Alexandra N. Green, Rui Tan, Andrew B. Greytak, and Brian C. Benicewicz\*



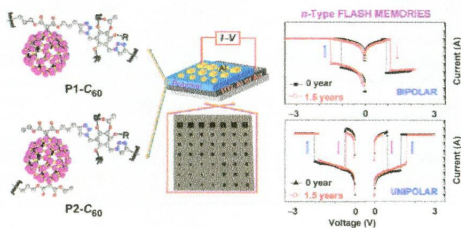
# Effect of Head-To-Head Addition on Vinyl Acetate Propagation Kinetics in Radical Polymerization

Otaatla Monyatsi, Anatoly N. Nikitin,\* and Robin A. Hutchinson\*



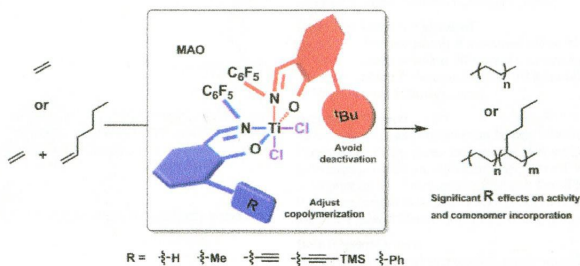
# New Fullerene-Based Polymers and Their Electrical Memory Characteristics

Yong-Gi Ko, Suk Gyu Hahm, Kimie Murata, Young Yong Kim, Brian J. Ree, Sungjin Song, Tsuyoshi Michinobu,\* and Moonhor Ree\*



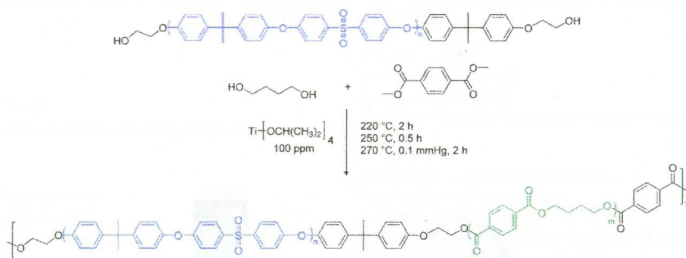
# Homo- and Heteroligated Salicylaldiminato Titanium Complexes with Different Substituents *Ortho* to the Phenoxy Oxygens for Ethylene and Ethylene/1-Hexene (Co)polymerization

Erdong Yao, Jianchun Wang, Zhongtao Chen, and Yuguo Ma\*

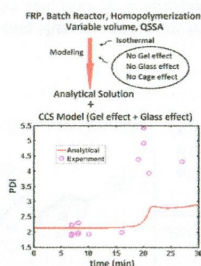


**Synthesis and Characterization of Polysulfone-Containing Poly(butylene terephthalate) Segmented Block Copolymers**

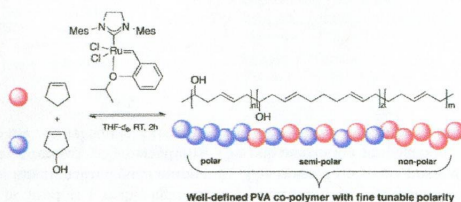
Joseph M. Dennis, Gregory B. Fahs, Robert B. Moore, S. Richard Turner, and Timothy E. Long\*

**Analytical Solution of Free Radical Polymerization: Applications- Implementing Gel Effect Using CCS Model**

Dhiraj K. Garg, Christophe A. Serra,\* Yannick Hoarau, Dambarudhar Parida, M. Bouquey, and R. Muller

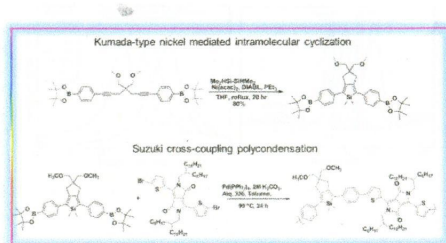
**One-Pot Synthesis of Poly(vinyl alcohol) (PVA) Copolymers via Ruthenium Catalyzed Equilibrium Ring-Opening Metathesis Polymerization of Hydroxyl Functionalized Cyclopentene**

Robert Tuba,\* Mohammed Al-Hashimi, Hassan S. Bazzi, and Robert H. Grubbs\*



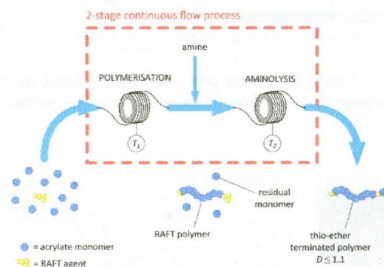
# Synthesis and Optoelectronic Properties of a Reduced Band Gap Copolymer Derived from Silacyclopentadiene and Diketopyrrolopyrrole

Milind Bisen and Colleen N. Scott\*



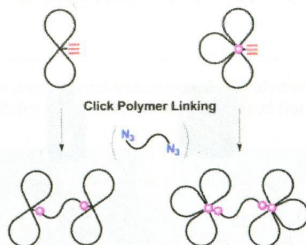
# Continuous Flow Aminolysis of RAFT Polymers Using Multistep Processing and Inline Analysis

Christian H. Hornung,\* Karin von Känel, Ivan Martinez-Botella, Maria Espiritu, Xuan Nguyen, Almar Postma, Simon Saubern, John Chiefari, and San H. Thang



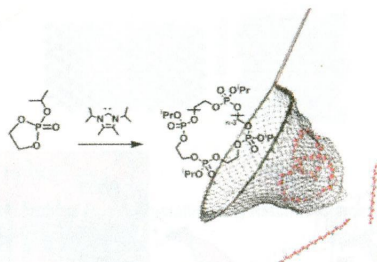
# Construction of Double-Eight and Double-Trefoil Polymer Topologies with Core-Clickable *kyklo*-Telechelic Precursors

Yoichiro Tomikawa, Hiroto Fukata, Yee Song Ko, Takuya Yamamoto, and Yasuyuki Tezuka\*



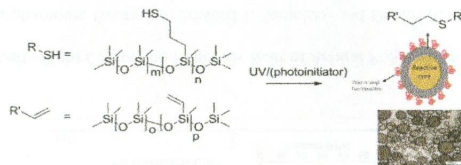
# Synthesis and Topological Trapping of Cyclic Poly(alkylene phosphates)

Tyler S. Stukenbroeker, Diego Solis-Ibarra, and Robert M. Waymouth\*



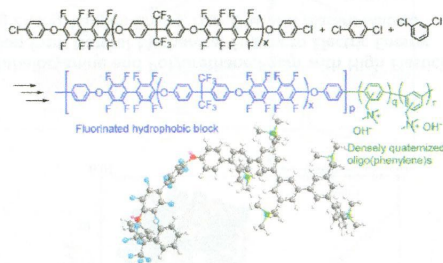
# Microencapsulation of Active Ingredients Using PDMS as Shell Material

Roberto F. A. Teixeira, Otto van den Berg, Le-Thu T. Nguyen, Krisztina Fehér, and Filip E. Du Prez\*



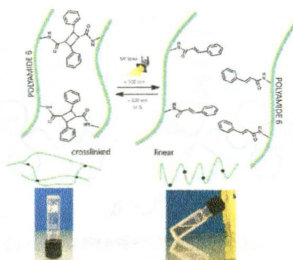
# Aromatic Copolymers Containing Ammonium-Functionalized Oligophenylene Moieties as Highly Anion Conductive Membranes

Naoki Yokota, Manai Shimada, Hideaki Ono, Ryo Akiyama, Eriko Nishino, Koichiro Asazawa, Junpei Miyake, Masahiro Watanabe, and Kenji Miyatake\*



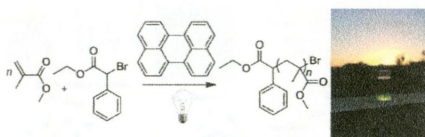
# Reversible Cross-Linking of Aliphatic Polyamides Bearing Thermo- and Photoresponsive Cinnamoyl Moieties

Deniz Tunc, Cedric Le Coz, Michael Alexandre, Philippe Desbois, Philippe Lecomte,\* and Stephane Carlotti\*



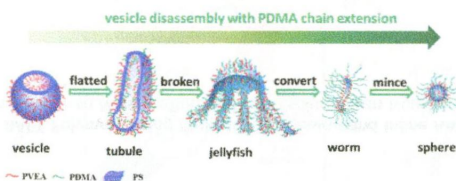
# Perylene as an Organic Photocatalyst for the Radical Polymerization of Functionalized Vinyl Monomers through Oxidative Quenching with Alkyl Bromides and Visible Light

Garret M. Miyake\* and Jordan C. Theriot



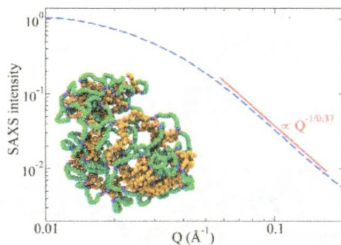
# Disassembly of Block Copolymer Vesicles into Nanospheres through Vesicle Mediated RAFT Polymerization

Fei Huo, Shentong Li, Xin He, Sayyar Ali Shah, Quanlong Li, and Wangqing Zhang\*



# Efficient Route to Compact Single-Chain Nanoparticles: Photoactivated Synthesis via Thiol–Yne Coupling Reaction

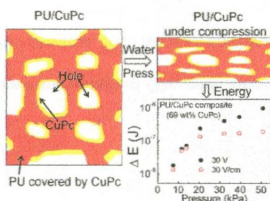
Irma Perez-Baena, Isabel Asenjo-Sanz, Arantxa Arbe, Angel J. Moreno,\* Federica Lo Verso, Juan Colmenero, and José A. Pomposo



# Dielectric Change of Copper Phthalocyanine and Polyurethane Foam with High Elasticity as a Function of Pressure

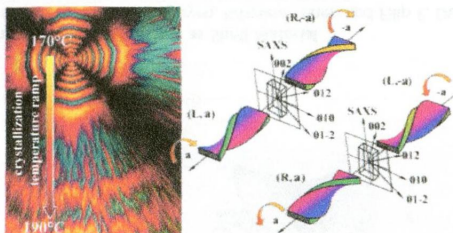
Discussed in Terms of Conversion from Natural Mechanical Energy to Electric Energy

Shaoyan Fan, Yuezhen Bin, Rong Zhang, Panpan Zhang, Dan Zhu, and Masaru Matsuo\*



# Switching Chirality of Hybrid Left–Right Crystalline Helicoids Built of Achiral Polymer Chains: When Right to Left Becomes Left to Right

Martin Rosenthal,\* Manfred Burghammer, Georg Bar, Edward T. Samulski, and Dimitri A. Ivanov\*



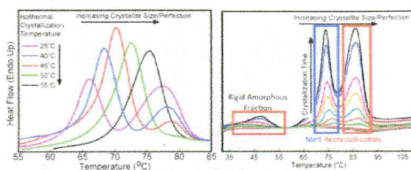
8305

S

DOI: 10.1021/ma501915v

# Melting Behavior of Poly(3-(2'-ethyl)hexylthiophene)

Bryan S. Beckingham, Victor Ho, and Rachel A. Segalman\*



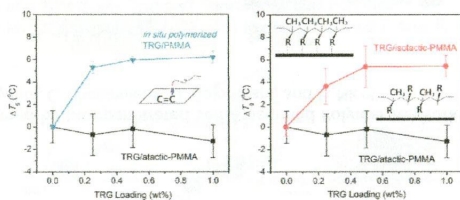
8311

S

DOI: 10.1021/ma501799z

# Does Graphene Change $T_g$ of Nanocomposites?

Ken-Hsuan Liao, Shigeru Aoyama, Ahmed A. Abdala, and Christopher Macosko\*



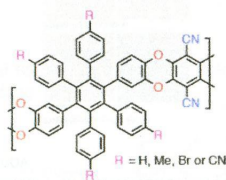
8320

S

DOI: 10.1021/ma501925j

# Gas Permeability of Hexaphenylbenzene Based Polymers of Intrinsic Microporosity

Mariolino Carta, Paola Bernardo, Gabriele Clarizia, Johannes C. Jansen, and Neil B. McKeown\*



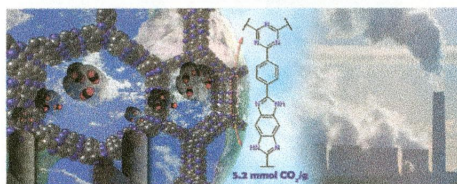
8328

S

DOI: 10.1021/ma502071w

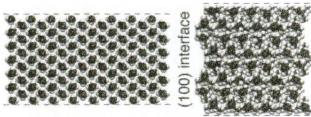
# Highly Selective CO<sub>2</sub> Capture by Triazine-Based Benzimidazole-Linked Polymers

Ali Kemal Sekizkardes, Suha Altarawneh, Zafer Kahveci, Timur İslamoğlu, and Hani M. El-Kaderi\*



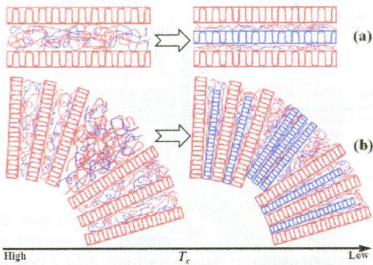
Self-Consistent Real Space Free Energy Calculations for Polyethylene and Isotactic Polypropylene Crystals and Interfaces

Michael P. Howard\* and Scott T. Milner



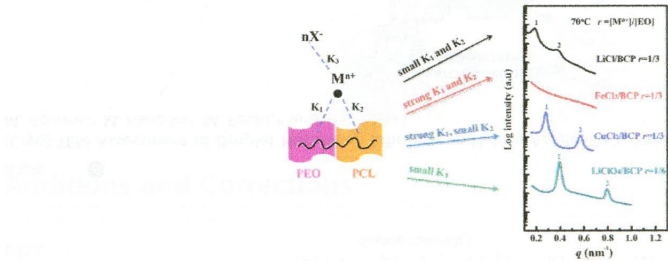
Unusual Fractional Crystallization Behavior of Novel Crystalline/Crystalline Polymer Blends of Poly(ethylene suberate) and Poly(ethylene oxide) with Similar Melting Points

Mengting Weng and Zhaobin Qiu\*



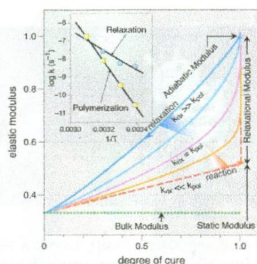
Influence of Ionic Species on the Microphase Separation Behavior of PCL-*b*-PEO/Salt Hybrids

Jie Huang, Rui-Yang Wang, Zai-Zai Tong, Jun-Ting Xu,\* and Zhi-Qiang Fan



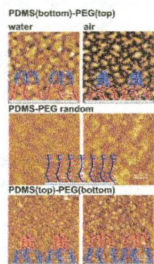
# *In Situ* Analysis of the Relationship between Cure Kinetics and the Mechanical Modulus of an Epoxy Resin

Michael Aldridge, Alan Wineman, Anthony Waas, and John Kieffer\*



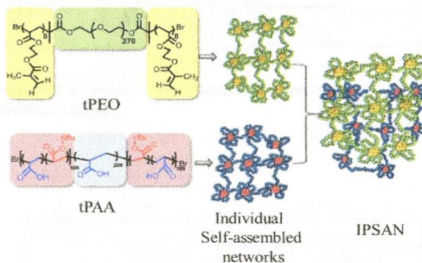
# Adaptive PEG–PDMS Brushes: Effect of Architecture on Adhesiveness in Air and under Water

Alla Synytska,\* Ekaterina Biehlig, and Leonid Ionov

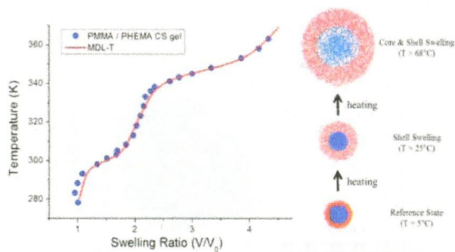


# Multiresponsive Hydrogels Formed by Interpenetrated Self-Assembled Polymer Networks

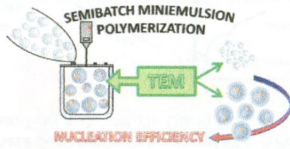
A. Klymenko, T. Nicolai,\* L. Benyahia, C. Chassenieux, O. Colombani, and E. Nicol



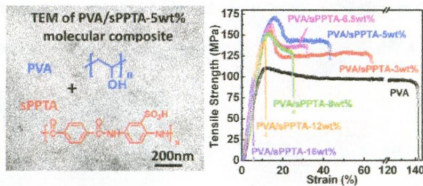
Swelling Behaviors of Doubly Thermosensitive Core–Shell Nanoparticle Gels  
Sang Min Lee and Young Chan Bae\*



(Cryo)-TEM Assessment of Droplet Nucleation Efficiency in Hybrid Acrylic/CeO<sub>2</sub> Semibatch Miniemulsion Polymerization  
M. Aguirre,\* M. Barrado,\* M. Paulis,\* and J. R. Leiza\*



Hydrogen-Bonding Assembly of Rigid-Rod Poly(*p*-sulfophenylene terephthalamide) and Flexible-Chain Poly(vinyl alcohol) for Transparent, Strong, and Tough Molecular Composites  
Mao Peng,\* Guohua Xiao, Xinglei Tang, and Yang Zhou

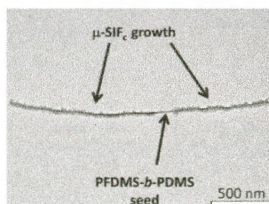


8420 **S**

DOI: 10.1021/ma501725h

# Crystallization-Driven Solution Self-Assembly of $\mu$ -ABC Miktoarm Star Terpolymers with Core-Forming Polyferrocenylsilane Blocks

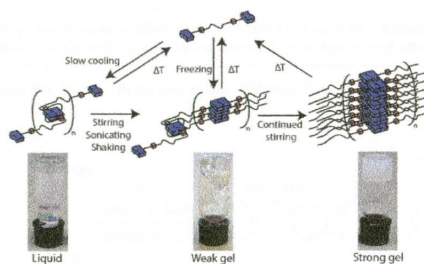
Adam Nunns, George R. Whittell, Mitchell A. Winnik,\* and Ian Manners\*

8429 **S**

DOI: 10.1021/ma502047h

# Mechanically Induced Gelation of a Kinetically Trapped Supramolecular Polymer

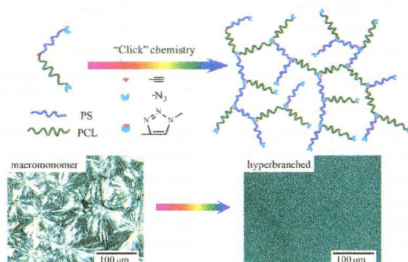
Abraham J. P. Teunissen, Marko M. L. Nieuwenhuizen, Fransico Rodríguez-Llansola, Anja R. A. Palmans, and E. W. Meijer\*

8437 **S**

DOI: 10.1021/ma501948g

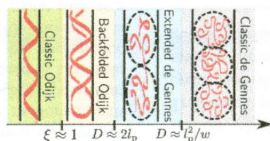
# Construction and Properties of Hyperbranched Block Copolymer with Independently Adjustable Heterosubchains

Jinxian Yang, Lianwei Li,\* Zongyang Jing, Xiaodong Ye,\* and Chi Wu



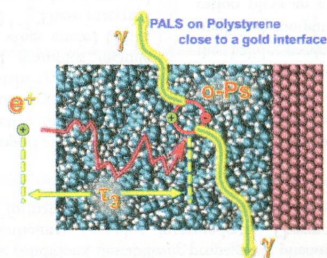
### Backfolding of Wormlike Chains Confined in Nanochannels

Abhiram Muralidhar, Douglas R. Tree, and Kevin D. Dorfman\*



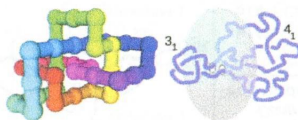
### Interphase of a Polymer at a Solid Interface

H. J. Butt, H. Duran, W. Egger, F. Faupel, V. Harmandaris, S. Harms, K. Johnston,\* K. Kremer, F. Y. Lin, L. Lue, C. Ohrt, K. Raetzke, L. Ravelli, W. Steffen,\* and S. D. B. Vianna



### Knotted Globular Ring Polymers: How Topology Affects Statistics and Thermodynamics

Marco Baiesi,\* Enzo Orlandini, and Attilio L. Stella



## Additions and Corrections

### Correction to Phototriggered Base Proliferation: A Highly Efficient Domino Reaction for Creating Functionally Photo-Screened Materials

Minghui He, Xun Huang, Zhaohua Zeng, and Jianwen Yang\*