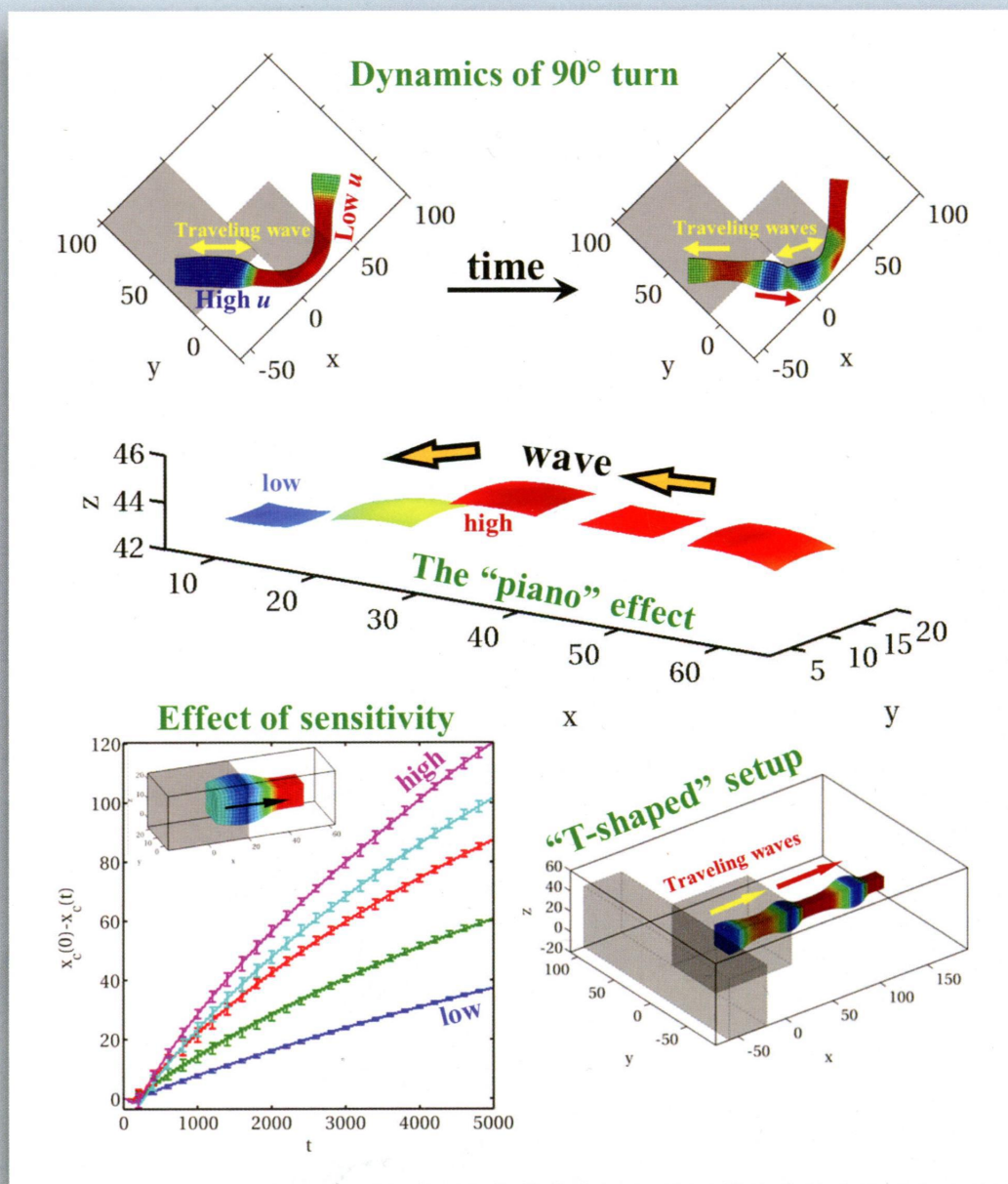


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Volume 47  
Number 10

# Macromolecules

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# Macromolecules

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**ON THE COVER:** Using computational modeling, we predict how light can be harnessed to direct the autonomous motion of self-oscillating gels. See page 3231.

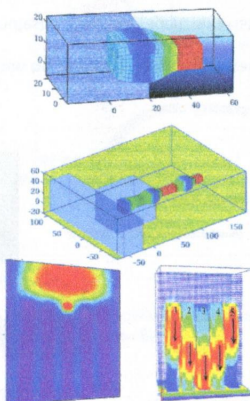
## Perspective

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[dx.doi.org/10.1021/ma402430b](https://doi.org/10.1021/ma402430b)

### Directing the Behavior of Active, Self-Oscillating Gels with Light

Pratyush Dayal, Olga Kuksenok, and Anna C. Balazs\*



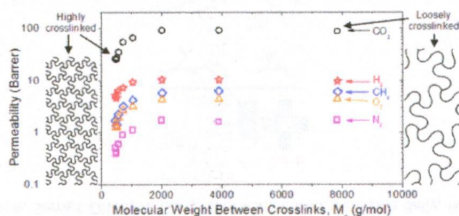
## Articles

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[dx.doi.org/10.1021/ma5005327](https://doi.org/10.1021/ma5005327)

### PEG Containing Thiol–Ene Network Membranes for CO<sub>2</sub> Separation: Effect of Cross-Linking on Thermal, Mechanical, and Gas Transport Properties

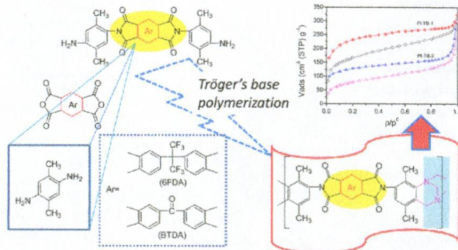
Luke Kwisnek, James Goetz, Kevin P. Meyers, Stephen R. Heinz, Jeffrey S. Wiggins, and Sergei Nazarenko\*





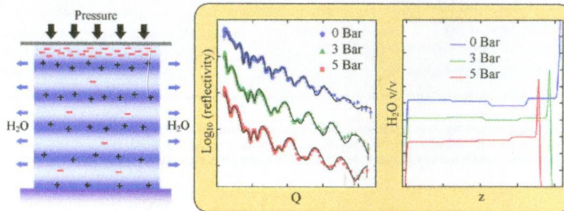
### Intrinsically Microporous Soluble Polyimides Incorporating Tröger's Base for Membrane Gas Separation

Yongbing Zhuang, Jong Geun Seong, Yu Seong Do, Hye Jin Jo, Zhaoliang Cui, Jongmyeong Lee, Young Moo Lee,\* and Michael D. Guiver\*



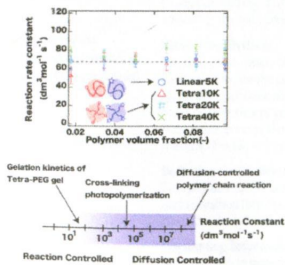
### Hydration of Odd–Even Terminated Polyelectrolyte Multilayers under Mechanical Confinement

Stephen B. Abbott,\* Wiebe M. de Vos, Laura L. E. Mears, Robert Barker, Robert M. Richardson, and Stuart W. Prescott



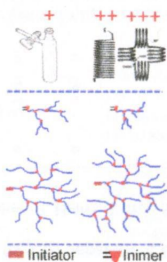
### Kinetic Aspect on Gelation Mechanism of Tetra-PEG Hydrogel

Kengo Nishi, Kenta Fujii,\* Yukiteru Katsumoto, Takamasa Sakai, and Mitsuhiro Shibayama\*



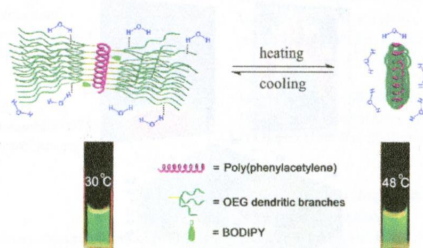
### Coil Flow Inversion as a Route To Control Polymerization in Microreactors

Dambarudhar Parida, Christophe A. Serra,\* Dhiraj K. Garg, Yannick Hoarau, Florence Bally, René Muller, and Michel Bouquay



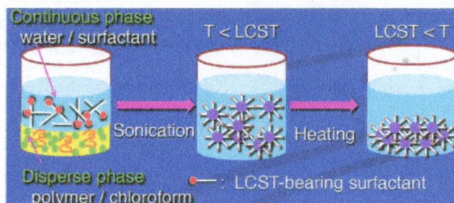
### Thermoresponsive Helical Poly(phenylacetylene)

Shu Li, Kun Liu, Guichao Kuang,\* Toshio Masuda, and Afang Zhang\*



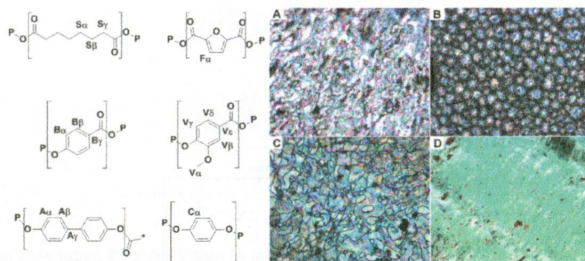
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Kevin Chiou, Pablo Froimowicz,\* Katharina Landfester, Andreas Taden, and Hatsuo Ishida\*



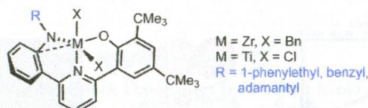
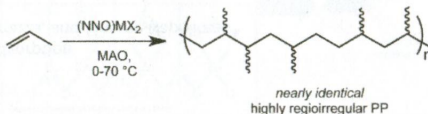
### Thermotropic Polyesters from 2,5-Furandicarboxylic Acid and Vanillic Acid: Synthesis, Thermal Properties, Melt Behavior, and Mechanical Performance

Carolus H. R. M. Wilsens, Johan M. G. A. Verhoeven, Bart A. J. Noordover, Michael Ryan Hansen, Dietmar Auhl, and Sanjay Rastogi\*



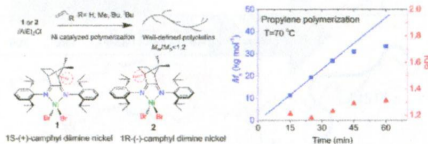
### Investigations into Asymmetric Post-Metallocene Group 4 Complexes for the Synthesis of Highly Regioirregular Polypropylene

Rachel C. Klet, Curt N. Theriault, Jerzy Klosin, Jay A. Labinger,\* and John E. Bercaw\*



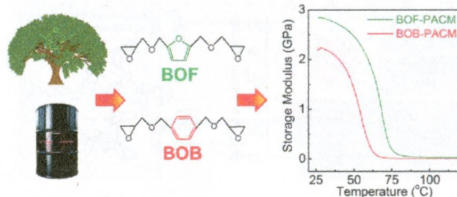
### Polymerization of $\alpha$ -Olefins Using a Camphyl $\alpha$ -Diimine Nickel Catalyst at Elevated Temperature

Jun Liu, Darui Chen, Han Wu, Zefan Xiao, Haiyang Gao,\* Fangming Zhu, and Qing Wu\*



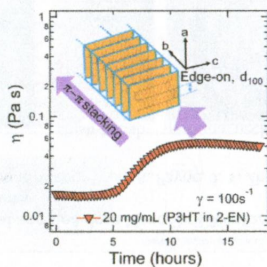
### Synthesis and Characterization of Thermosetting Furan-Based Epoxy Systems

Fengshuo Hu, John J. La Scala, Joshua M. Sadler, and Giuseppe R. Palmese\*



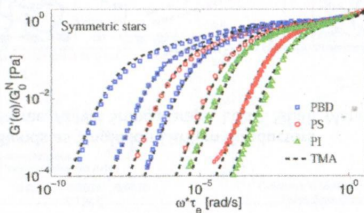
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Jeong Jae Wie, Ngoc A. Nguyen, Colin D. Cwalina, Jinglin Liu, David C. Martin, and Michael E. Mackay\*



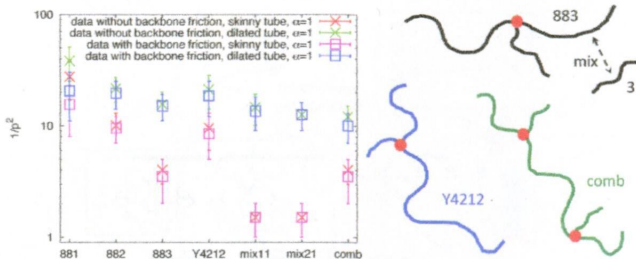
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Volha Shchetnikava,\* Johan J. M. Slot, and Evelyne van Ruymbeke



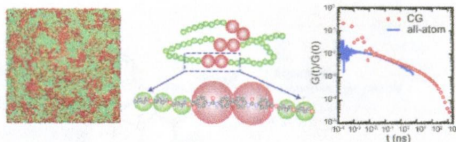
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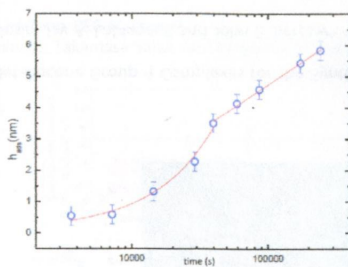
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Vipin Agrawal, Gaurav Arya, and Jay Oswald\*



### Kinetics of Irreversible Chain Adsorption

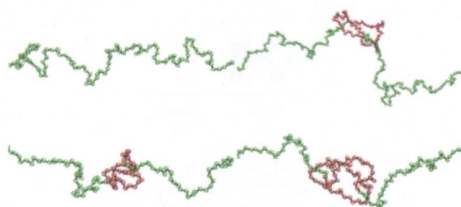
Caroline Housmans, Michele Sferazza, and Simone Napolitano\*





### Influence of Rigidity and Knot Complexity on the Knotting of Confined Polymers

Peter Poier,\* Christos N. Likos, and Richard Matthews



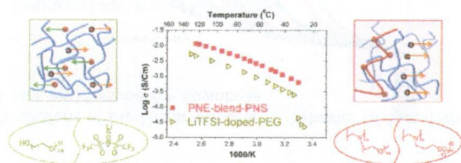
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dx.doi.org/10.1021/ma402325a

### Poly(ethylenimine)-Based Polymer Blends as Single-Ion Lithium Conductors

Robert P. Doyle, Xiaorui Chen, Max Macrae, Abhijit Srungavarapu, Luis J. Smith, Manesh Gopinadhan, Chinedum O. Osuji, and Sergio Granados-Focil\*

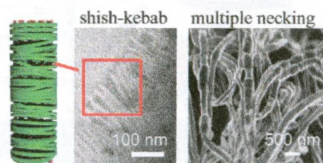


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dx.doi.org/10.1021/ma402627j

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Xuezhu Xu, Haoran Wang, Long Jiang,\* Xinnan Wang, Scott A. Payne, J. Y. Zhu, and Ruipeng Li



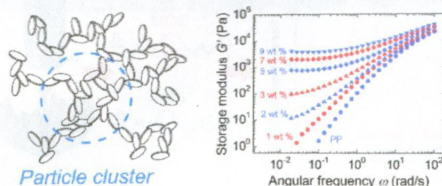
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dx.doi.org/10.1021/ma5001354

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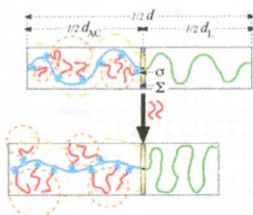
Trystan Domenech, Riadh Zouari, Bruno Vergnes, and Edith Peuvrel-Disdier\*





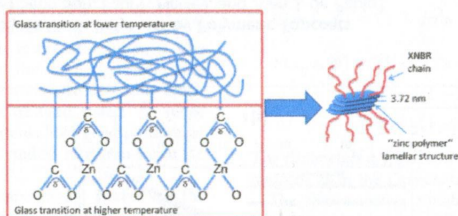
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Mehran Asad Ayoubi,\* Kristoffer Almdal, Kaizheng Zhu, Bo Nystrom, Ulf Olsson, and Lennart Piculell



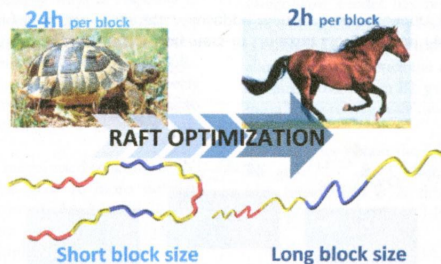
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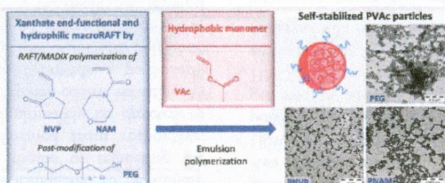
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Guillaume Gody, Thomas Maschmeyer, Per B. Zetterlund, and Sébastien Perrier\*



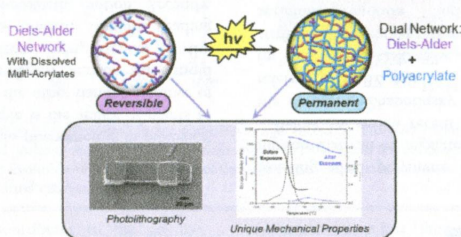
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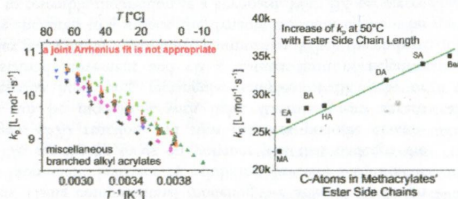
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Gayla J. Berg, Tao Gong, Christopher R. Fenoli, and Christopher N. Bowman\*



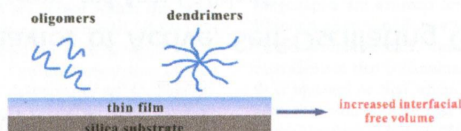
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Alexander P. Haehnel, Maria Schneider-Baumann, Lukas Arens, Andrea M. Misske, Friederike Fleischhaker, and Christopher Barner-Kowollik\*



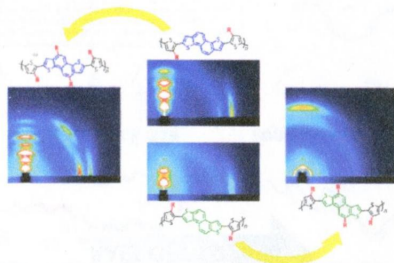
### Effect of Molecular Chain Architecture on Dynamics of Polymer Thin Films Measured by the Ac-Chip Calorimeter

Jiao Chen, Linling Li, Dongshan Zhou, Jie Xu, and Gi Xue\*



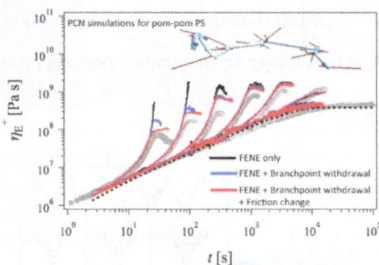
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Abelardo Ramírez-Hernández, Hyo Seon Suh, Paul F. Nealey, and Juan J. de Pablo\*

