

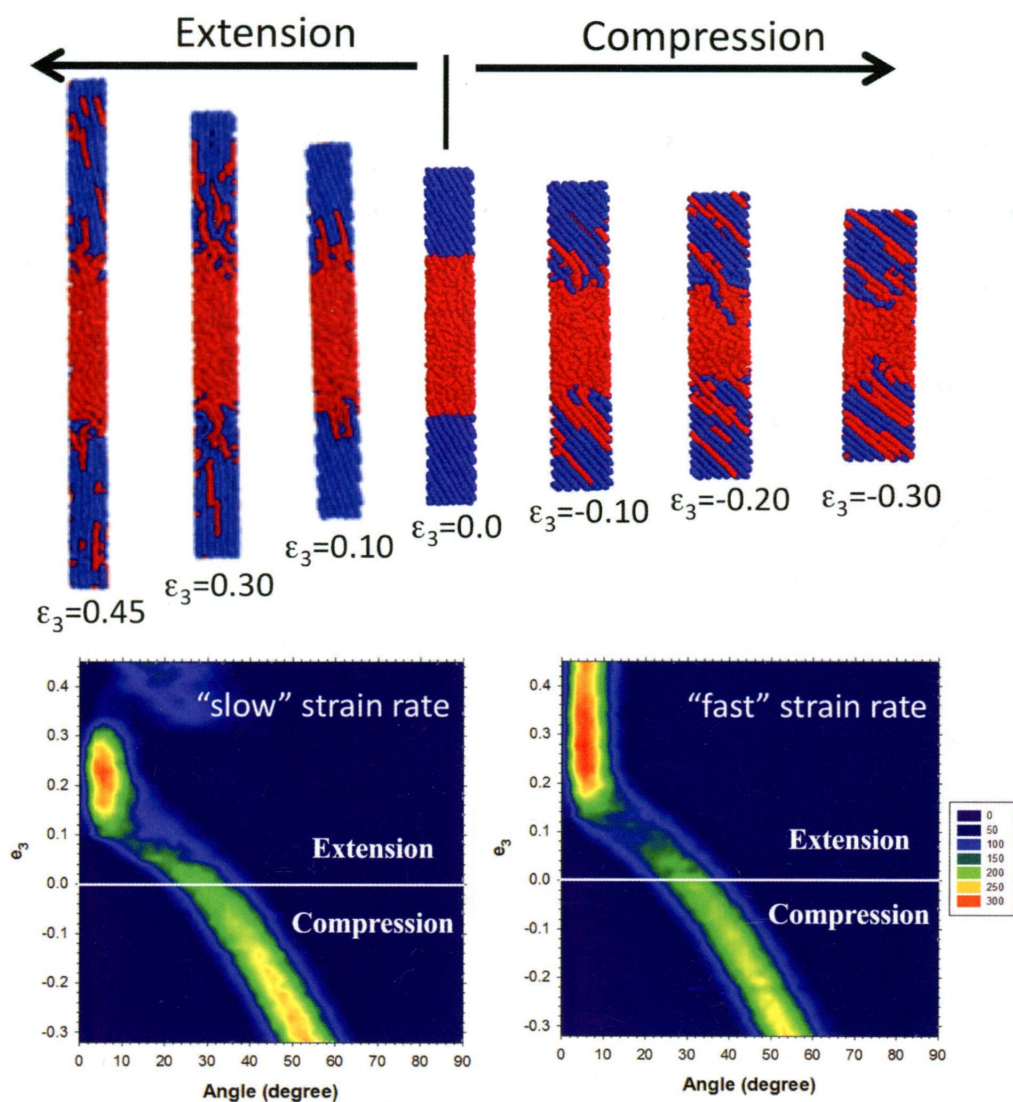
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Semicrystalline Polyethylene Deformation with Crystal Stem Reorientation



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ON THE COVER: At the molecular level, plastic deformation of a semicrystalline polymer may be decomposed into responses from stacks of alternating crystalline lamellae and amorphous layers. These snapshots from united atom molecular dynamics simulations show the structural evolution of crystalline (blue) and amorphous (red) methylene groups in the semicrystalline stack undergoing uniaxial extension and compression. At low strain, the material responds by the mechanism of crystallographic slip, rotating the chain stems in the lamellae toward or away from the direction of deformation, as illustrated by the dependence of the orientation distribution function on strain. At higher strains, additional mechanisms such as cavitation and melting/recrystallization become important, depending on strain rate and mode of deformation. See *Macromolecules* **2014**, *47* (7), 2515–2528.

Articles

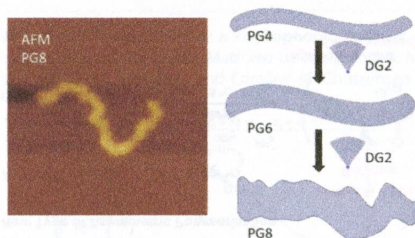
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Synthesis of High Generation Dendronized Polymers and Quantification of Their Structure Perfection

Hao Yu, A. Dieter Schlüter,* and Baozhong Zhang*



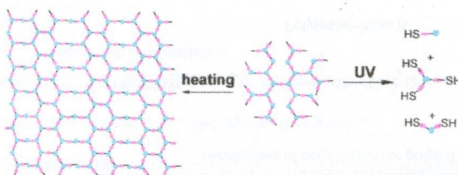
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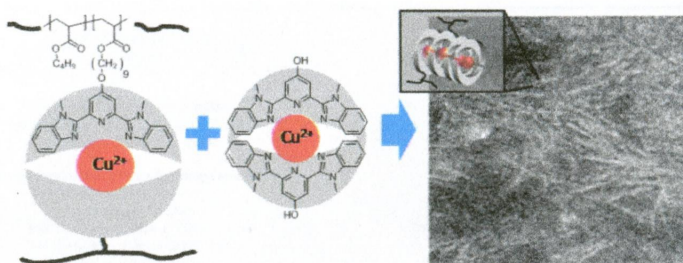
A Responsive Hyperbranched Polymer Not Only Can Self-Immolate but Also Can Self-Cross-Link

Zhi-Qiang Yu, Xiao-Man Xu, Chun-Yan Hong,* De-Cheng Wu, and Ye-Zi You

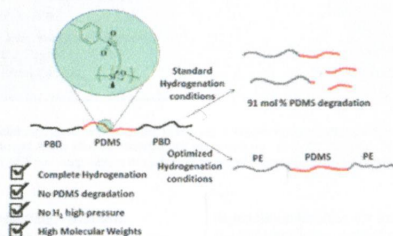


Metallopolymers Containing Excess Metal–Ligand Complex for Improved Mechanical Properties

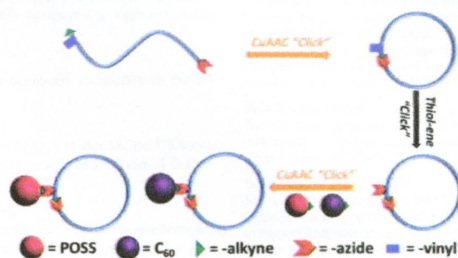
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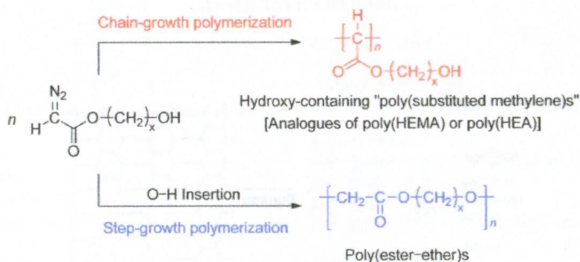
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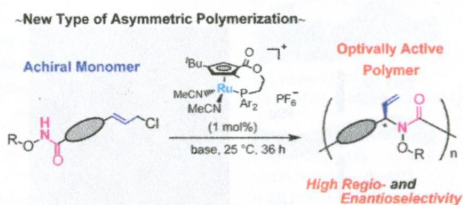


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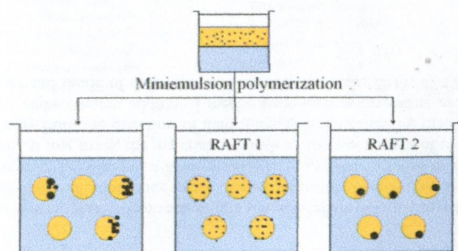
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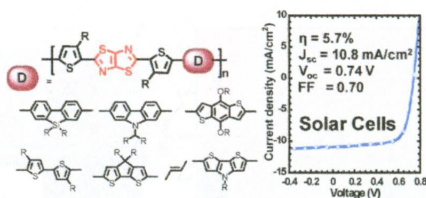
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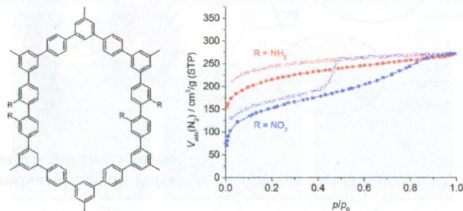
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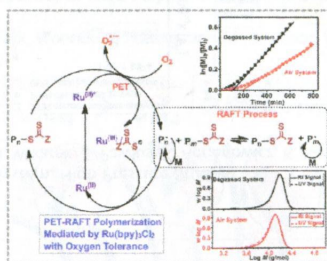
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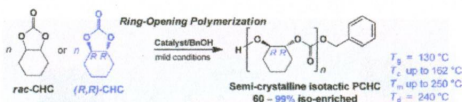


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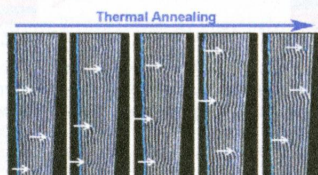
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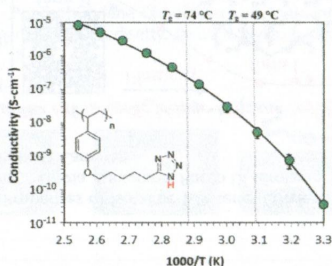
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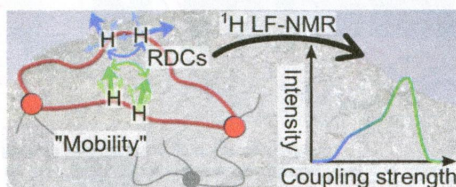
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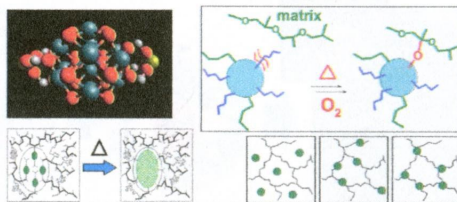


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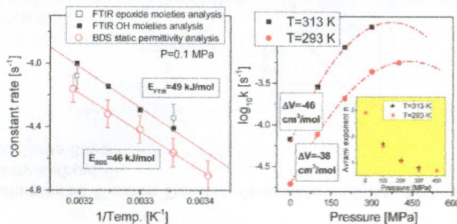
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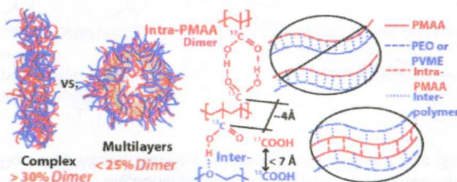


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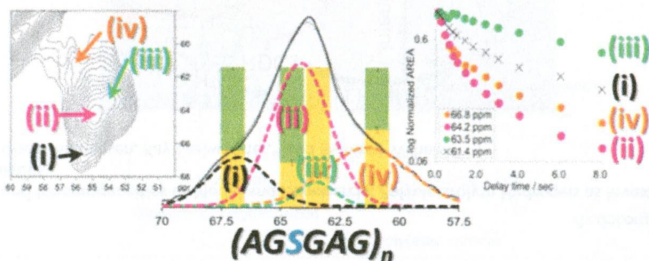
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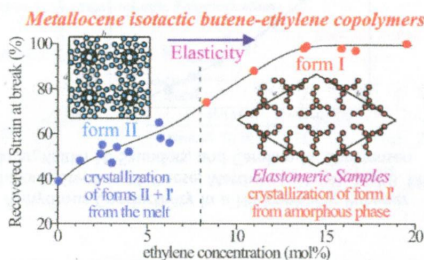
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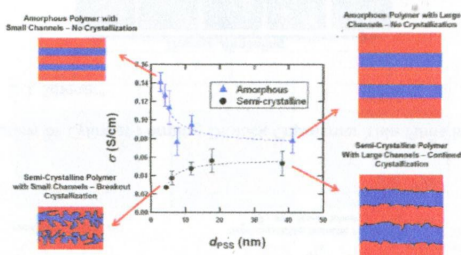
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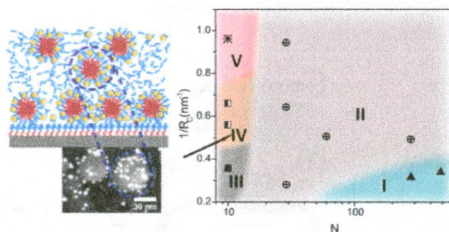
Keith M. Beers, David T. Wong, Andrew J. Jackson, Xin Wang, John A. Pople, Alexander Hexemer, and Nitash P. Balsara*



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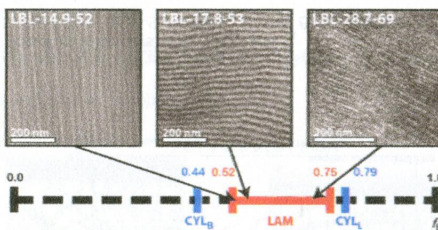
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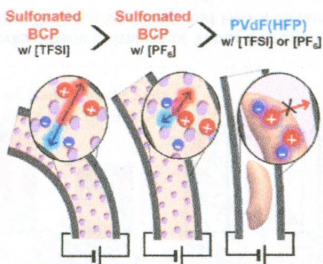
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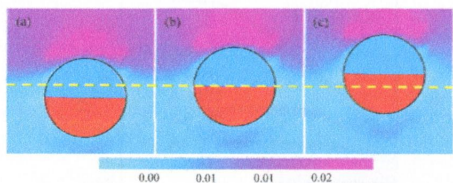
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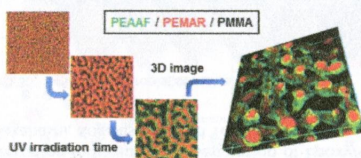
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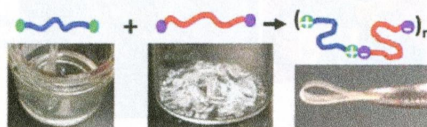
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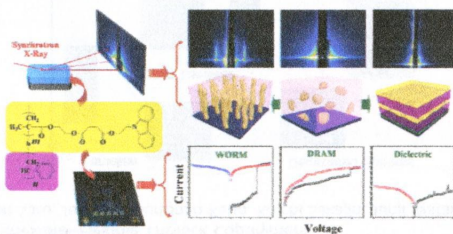
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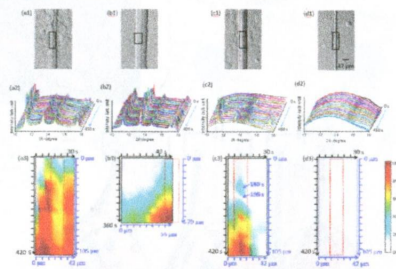
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Kyungtae Kim, Young Yong Kim, Samdae Park, Yong-Gi Ko, Yecheol Rho, Wonsang Kwon, Tae Joo Shin, Jehan Kim, and Moonhor Ree*



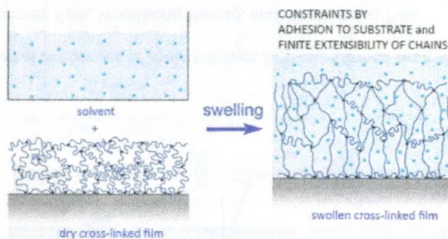
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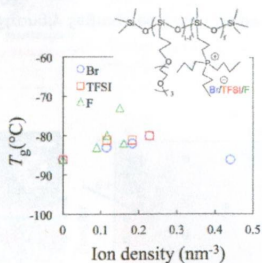
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Karel Dušek,* Andrei Choukourou, Miroslava Dušková-Smrčková, and Hýnek Biederman



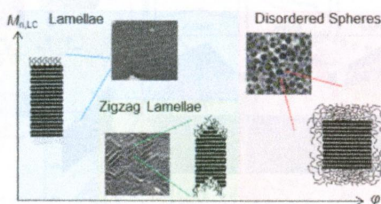
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Siwei Liang, Michael V. O'Reilly, U Hyeok Choi, Huai-Suen Shiau, Joshua Bartels, Quan Chen, James Runt, Karen I. Winey,* and Ralph H. Colby*



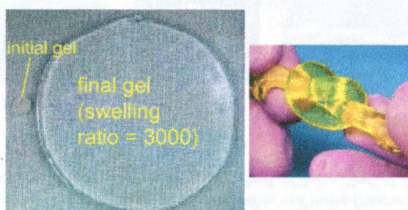
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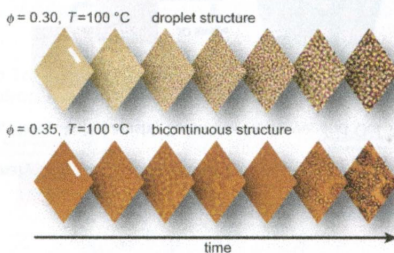
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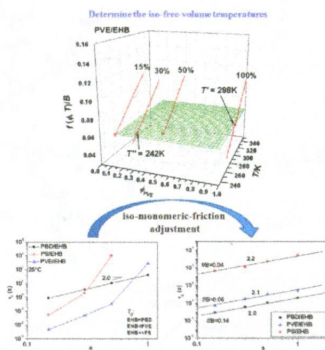
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Ayana Hara, Rintaro Inoue, Nobuaki Takahashi, Koji Nishida, and Toshiji Kanaya*



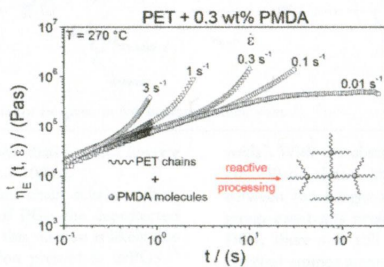
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Zhi-Chao Yan, Bao-Qing Zhang, and Chen-Yang Liu*



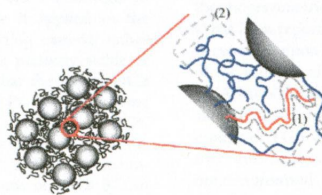
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Michael Härth,* Joachim Kaschta, and Dirk W. Schubert

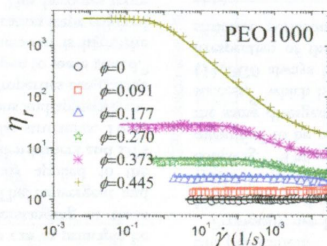


Structure, Ion Transport, and Rheology of Nanoparticle Salts

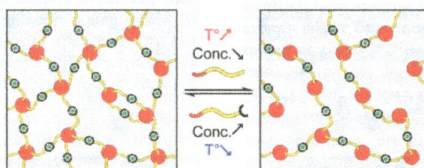
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 Jérémy Brassinne, Jean-François Gohy,* and Charles-André Fustin*



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Controlled Ring-Opening Metathesis Polymerization of a Monomer Containing Terminal Alkyne and Its Versatile Postpolymerization Functionalization via Click Reaction

Kyung Oh Kim, Jonglak Kim, and Tae-Lim Choi*

