

# Polymer Chemistry

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## IN THIS ISSUE

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### Cover

See Patrick Théato *et al.*,  
pp. 2075–2082.

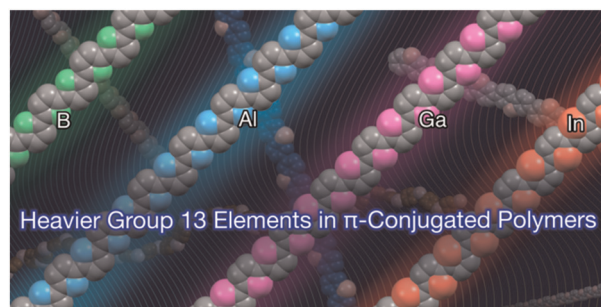
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Daniel Döpping and  
Patrick Théato  
from *Polym. Chem.*,  
2025, **16**, 2075.

## REVIEWS

2046

### $\pi$ -Conjugated polymers consisting of heavier group 13 elements

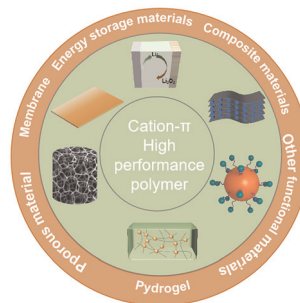
Shunichiro Ito and Kazuo Tanaka\*



2058

### Cation– $\pi$ interactions in polymer science: from fundamental insights to material applications

Tianhang Zhou, Ning Wang, Yang Gao\* and Xiaoan Li\*



# EES Batteries

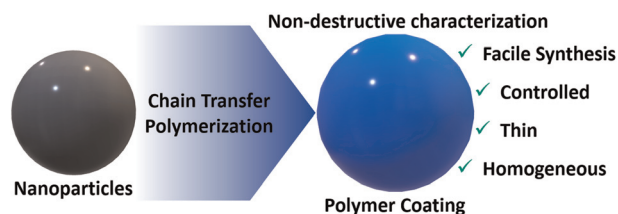
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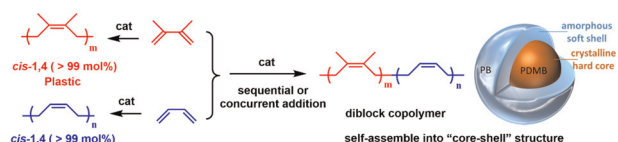
Daniel Döpping, Andreas Stihl, Dominik Voll,  
Felix H. Schacher and Patrick Théato\*

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Felix H. Schacher and Patrick Théato\*



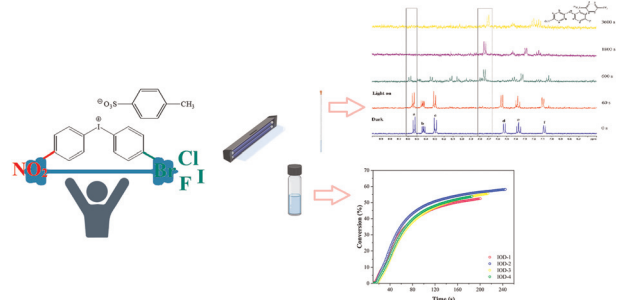
# Plastic-rubber diblock copolymers obtained from copolymerization of dimethyl-1,3-butadiene and butadiene using rare-earth metal catalysts

Jiao Zong, Benmin Hu, Shihui Li, Lei Li, Bo Liu\* and Dongmei Cui\*



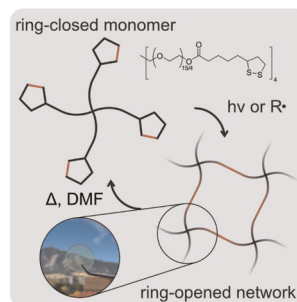
## Dual role of novel highly efficient radical generators for UV/LED-activated polymerization processes

Alicja Balcerak-Woźniak\* and Janina Kabatc-Borcza



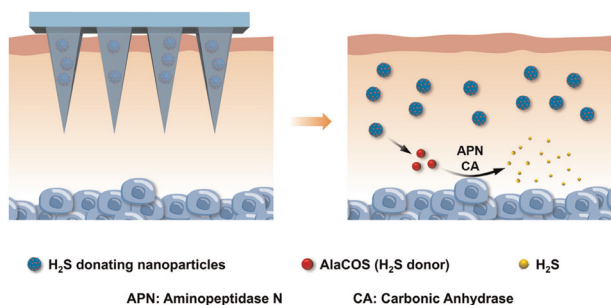
## Multifunctional dithiolane monomers for multi-scale, recyclable light-driven additive manufacturing

Benjamin R. Nelson, Jaxon T. Cione,  
Bruce E. Kirkpatrick, Kendra M. Kreienbrink,  
Abhishek P. Dhand, Jason A. Burdick, C. Wyatt Shields  
IV, Kristi S. Anseth and Christopher N. Bowman\*



## PAPERS

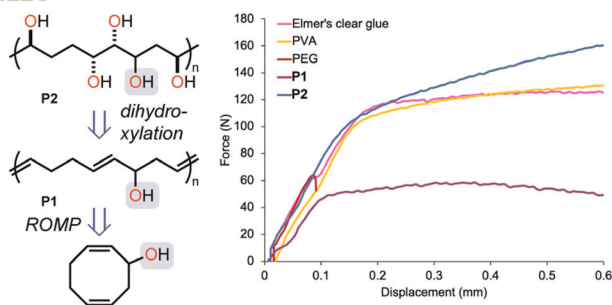
2117



### Microneedle-mediated transdermal H<sub>2</sub>S gas therapy for psoriasis

Yanlin Wang, Fan Rong, Xiaoyi Sun, Duohang Bi, Yin Wang,\* Yijing Liu\* and Jintao Zhu\*

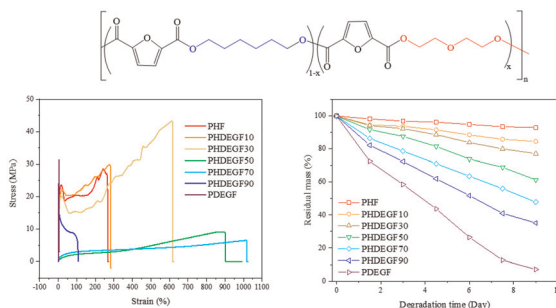
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### Directed dihydroxylation of a poly(cyclooctadienol) toward densely-hydroxylated polyol adhesives

Lauren S. Cooke and Aleksandr V. Zhukhovitskiy\*

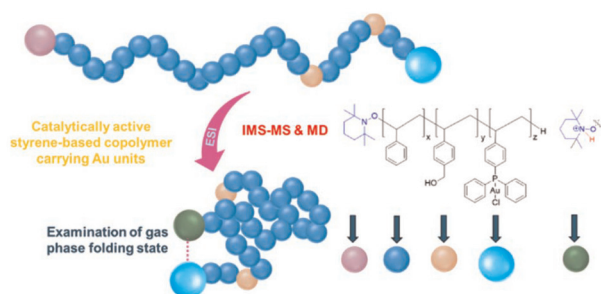
2133



### Novel biobased poly(hexamethylene-co-diethylene glycol furandicarboxylate) copolyesters with improved mechanical properties and hydrolytic degradation rates

Shiwei Feng, Haidong Yang and Zhaobin Qiu\*

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### Ion mobility mass spectrometry coupled with molecular dynamics simulations: in-depth structural analysis of polystyrene-based Au-containing copolymers

Sarajit Naskar, Aidan Izuagbe, Vincent Lemaure, Quentin Duez, Andrea Minoia, Julien De Winter, Stephen J. Blanksby, Jérôme Cornil, Christopher Barner-Kowollik\* and Pascal Gerbaux\*

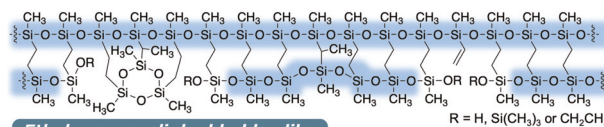


## PAPERS

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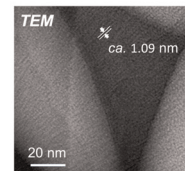
# Preparation of highly thermally stable and soluble ethylene-crosslinked ladder-like polymethylsiloxanes via template polymerisation

Sho Nonaka, Kazuhiro Shikinaka, Tomoyasu Hirai and Yoshiro Kaneko\*



## Ethylene-crosslinked ladder-like polymethylsiloxanes

- ✓ **Soluble** in various organic solvents
- ✓ **One-dimensional** crosslinked polymer
- ✓ D<sup>2</sup> structure ratio: **~80%**
- ✓ Thermal decomposition temp. (*T*<sub>d10</sub>): **>500°C**
- ✓ Residual weights at 800°C: **>65%**
- ✓ Transmittance of cast film: **>90%**  
(wavelength range of 250–800 nm)



2162

# Synthesis and self-assembly of a diblock copolymer consisting of a cyclic olefin copolymer and polycaprolactone

Yung-Chuan Chuang, Jing-Wen Su, Yu-Chuan Sung, Jing-Cherng Tsai,\* Jian-Wei Huang, Sheng-Wei Shao and Rong-Ming Ho\*

