

# Polymer Chemistry

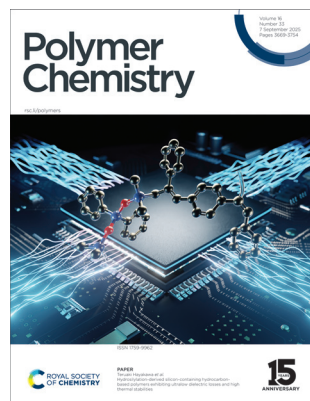
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## IN THIS ISSUE

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### Cover

See Teruaki Hayakawa *et al.*, pp. 3683–3692.

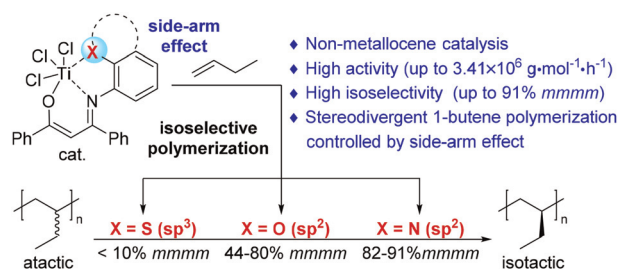
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## COMMUNICATION

3675

### The side-arm-effect controlled stereodivergent polymerization of 1-butene

Guangyu Zhu, Liang Wang, Wenjie Tao,\* Hongbin Hou, Guangqiang Xu, Bo Wang and Qinggang Wang\*

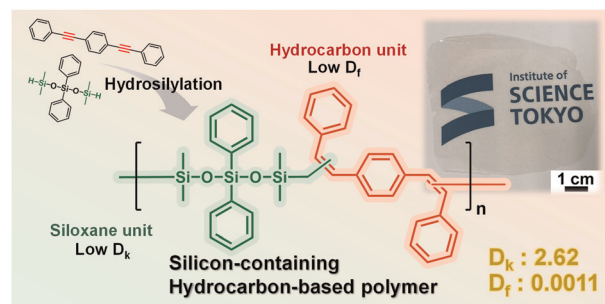


## PAPERS

3683

### Hydrosilylation-derived silicon-containing hydrocarbon-based polymers exhibiting ultralow dielectric losses and high thermal stabilities

Yuka Azuma, Riku Takahashi, Natsuko Sashi, Kan Hatakeyama-Sato, Yuta Nabae, Ririka Sawada, Shinji Ando and Teruaki Hayakawa\*



# Environmental Science: Atmospheres

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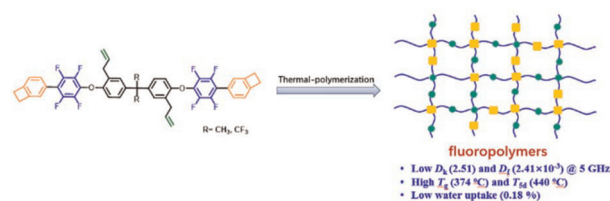
Fundamental questions  
Elemental answers



3693

### Functional fluoropolymers with good low-dielectric properties and high thermostability

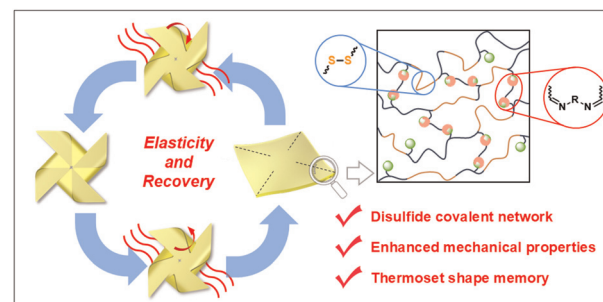
Maowei Yang, Jiaren Hou, Zhiqiang Wang, Xiao Wu, Xiaopeng Sun, Qixin Zhuang,\* Jing Sun\* and Qiang Fang\*



3701

### Elemental sulfur utilization: construction of a reprocessable covalent crosslinked polydisulfide with enhanced mechanical properties

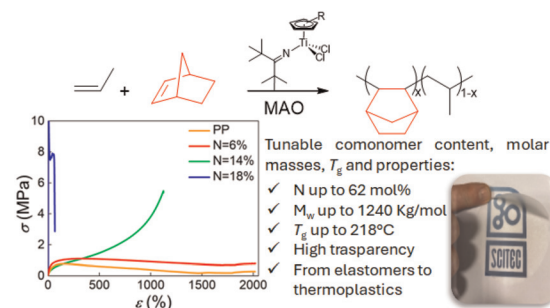
Ji-Yan Chao, Tian-Jun Yue, Xiao-Bing Lu and Wei-Min Ren\*



3709

### Poly(propene-co-norbornene)s with high molar masses and tunable norbornene contents and properties, obtained in high yields using ketimide-modified half-titanocene catalysts

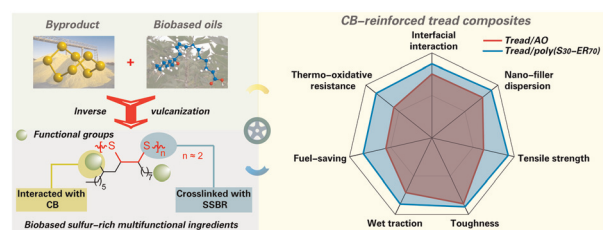
Simona Losio, Laura Boggioni, Adriano Vignali, Fabio Bertini, Akito Nishiyama, Kotohiro Nomura\* and Inconronata Tritto\*



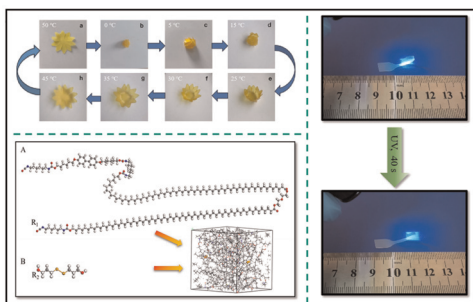
3720

### Biobased multifunctional ingredients for manufacturing tire treads with high mechanical strength and fuel-saving efficiency

Mingxu Wu, Xin He, Songbo Zhang,\* Qizhou Yu, Pibo Liu, Shuwei Wang\* and Yanming Hu\*



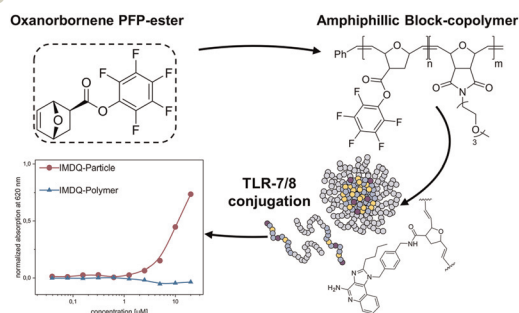
3732



### Synthesis and molecular dynamics simulation of photo-thermal responsive liquid crystal shape memory polymers with dynamic diselenide bonds

Zilong Yang, Di Wu, Caiyun Ren, Jianfeng Ban,\*  
Lulu Pan,\* Jiaping Zhu\* and Kai Liu\*

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### Immunostimulatory pH-responsive nanogels derived from poly(oxanorbornene) precursor polymers

Johannes Kockelmann and Lutz Nuhn\*

