

Polymer Chemistry

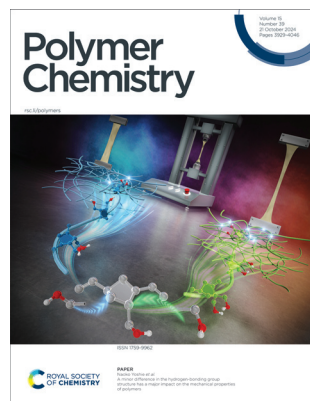
The home for the most innovative and exciting polymer chemistry, with an emphasis on polymer synthesis and applications thereof

rsc.li/polymers

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1759-9962 CODEN PCOHC2 15(39) 3929–4046 (2024)



Cover

See Naoko Yoshie *et al.*,
pp. 3967–3976.

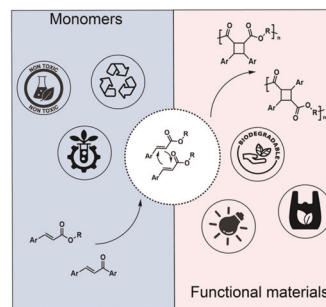
Image reproduced by
permission of Naoko Yoshie
from *Polym. Chem.*, 2024,
15, 3967.

REVIEW

3935

Truxinates and truxillates: building blocks for architecturally complex polymers and advanced materials

Sara El-Arid, Jason M. Lenihan, Aaron B. Beeler* and Mark W. Grinstaff*



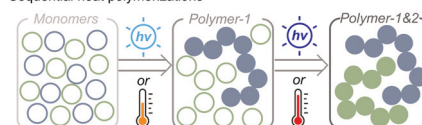
MINIREVIEW

3954

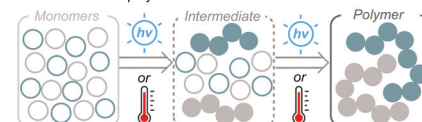
Controlled orthogonal reactions in neat polymerizations

Caleb J. Reese, Grant M. Musgrave and Chen Wang*

Sequential neat polymerizations



Simultaneous neat polymerizations



Royal Society of Chemistry approved training courses

Explore your options.
Develop your skills.
Discover learning
that suits you.

**Courses in the classroom,
the lab, or online**

Find something for every
stage of your professional
development. Search our
database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit rsc.li/cpd-training



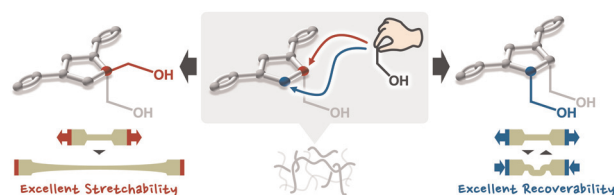
**SAVE
10%**

PAPERS

3967

A minor difference in the hydrogen-bonding group structure has a major impact on the mechanical properties of polymers

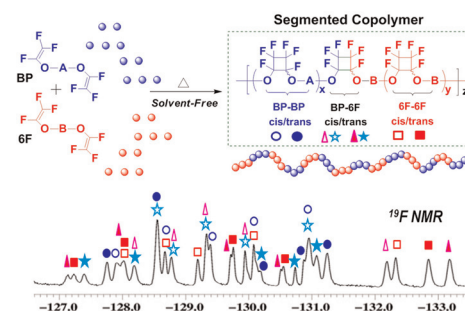
Shogo Ishizaka, Shintaro Nakagawa and Naoko Yoshie*



3977

One-pot single-step copolymerization of aromatic trifluorovinyl ethers toward perfluorocyclobutyl (PFCB) segmented copolymers

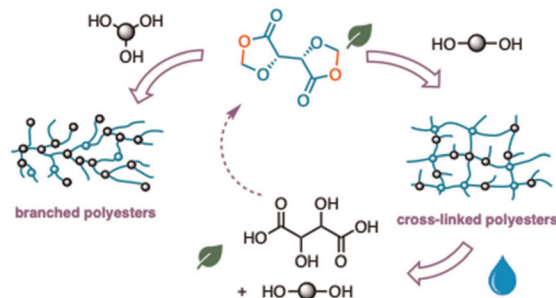
Jiyoung Park, Tugba G. Kucukkal, Jung-Min Oh, Steven J. Stuart, Stephen E. Creager, Gustavo Muñoz and Dennis W. Smith Jr.*



3983

Degradable branched and cross-linked polyesters from a bis(1,3-dioxolan-4-one) core

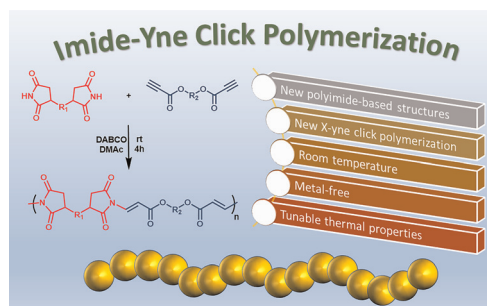
Orla Buensoz, Christina A. R. Picken, Paul Price, Christopher Fidge and Michael P. Shaver*



3991

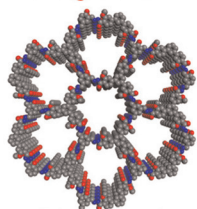
Imide-yne click polymerization: a new and versatile tool for the toolbox of X-yne click polymerization

Oguzhan Aslanturk, Gokhan Sagdic, Emrah Cakmakci, Hakan Durmaz* and Ufuk Saim Gunay*



PAPERS

4005

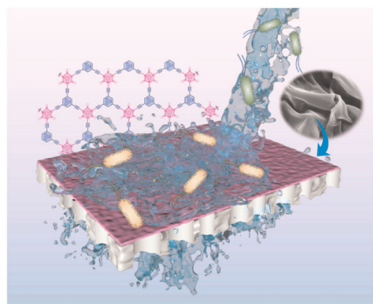
Emissive hydrazone COF

High sensitivity and selectivity
for hydrazine sensing

Emissive covalent organic frameworks with abundant interaction sites for hydrazine sensing

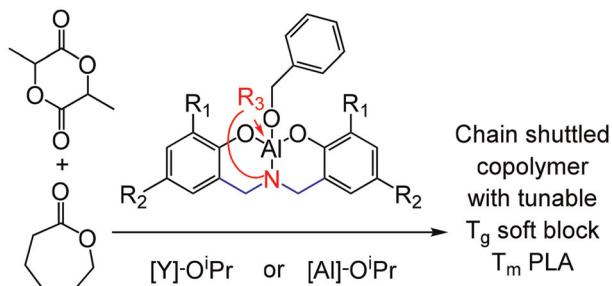
Yuwei Zhang, Ce Xing, Zhibin Tian, Wanyi Zhao, Yongfeng Zhi,* Lina Zhao* and He Li*

4011

**Preparation and antibacterial performance of a conjugated microporous polymer nanosheet-based membrane**

Hanxue Sun,* Hongyu Zhang, Rui Jiao, Fei Wang, Jiyan Li, Zhaoqi Zhu and An Li*

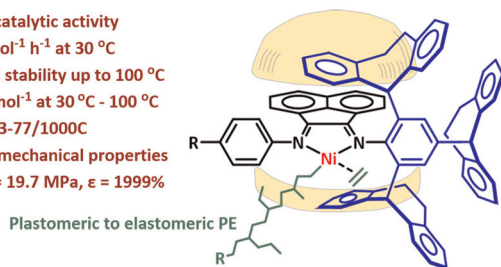
4020

**Tuning the thermal properties of L-lactide/ε-caprolactone chain shuttled copolymers via catalyst selection**

Xavier Mosca, Lucas Perchery, Marc Bria, Julien De Winter, Gregory Stoclet, Till Bousquet, Lydie Pelinski, Fanny Bonnet* and Philippe Zinck*

4029

Exceptional catalytic activity
 $3.2 \times 10^7 \text{ g mol}^{-1} \text{ h}^{-1}$ at 30 °C
High thermal stability up to 100 °C
 $M_w = 10^5 \text{ g mol}^{-1}$ at 30 °C - 100 °C
Branches = 33-77/1000C
Remarkable mechanical properties
SR = 66%, $\sigma = 19.7 \text{ MPa}$, $\epsilon = 1999\%$

**Benzosuberyl installed "sandwich" type unsymmetrical α-diimine nickel precatalysts for synthesizing plastomeric to elastomeric polyethylene**

Aibo Zhou, Rongyan Yuan, Qaiser Mahmood,* Shifang Yuan,* Yizhou Wang, Zexu Hu, Song Zou, Tongling Liang and Wen-Hua Sun*

