

# Polymer Chemistry

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

[rsc.li/polymers](https://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(18) 1797-1898 (2024)



### Cover

See Gulzar A. Bhat,  
Donald J. Darensbourg *et al.*,  
pp. 1803–1820.

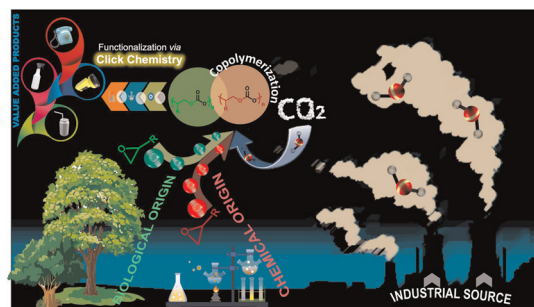
Image reproduced by  
permission of  
Donald J. Darensbourg from  
*Polym. Chem.*, 2024, **15**,  
1803.

## REVIEW

1803

### Post-polymerization functionalization of aliphatic polycarbonates using click chemistry

Mohsin Hassan, Gulzar A. Bhat\* and  
Donald J. Darensbourg\*

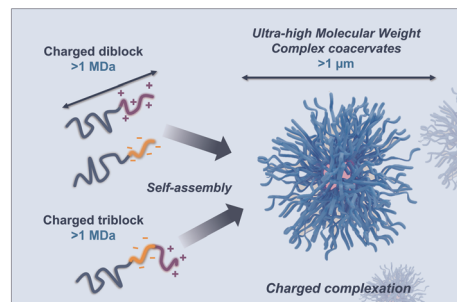


## COMMUNICATIONS

1821

### Ultra-high molecular weight complex coacervates via polymerization-induced electrostatic self-assembly

Julia Y. Rho,\* Angie B. Korpusik, Miriam Hoteit,  
John B. Garrison and Brent S. Sumerlin\*



# Environmental Science: Atmospheres

GOLD  
OPEN  
ACCESS

Connecting communities  
and inspiring new ideas

[rsc.li/submittoEA](https://rsc.li/submittoEA)

Fundamental questions  
Elemental answers

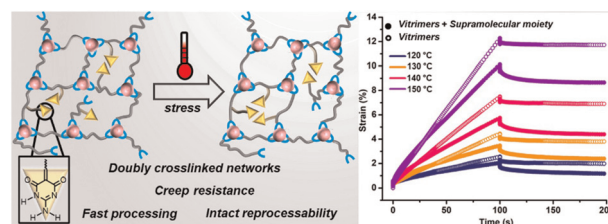


## COMMUNICATIONS

1826

**Creep resistance in doubly crosslinked dynamic covalent networks**

Swagata Mondal, Alexander J. Wong, Mahendra A. Wagh, Lily Alperstein, Gangadhar J. Sanjayan\* and Brent S. Sumerlin\*

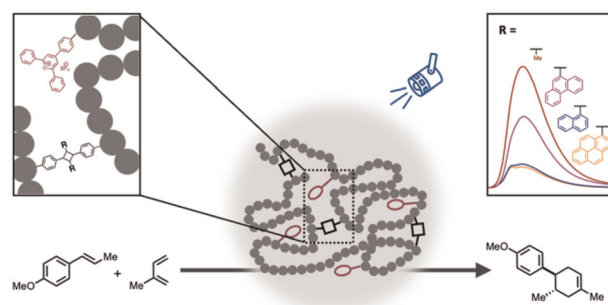


## PAPERS

1833

**Visible-light-mediated Diels–Alder reactions under single-chain polymer confinement: investigating the role of the crosslinking moiety on catalyst activity**

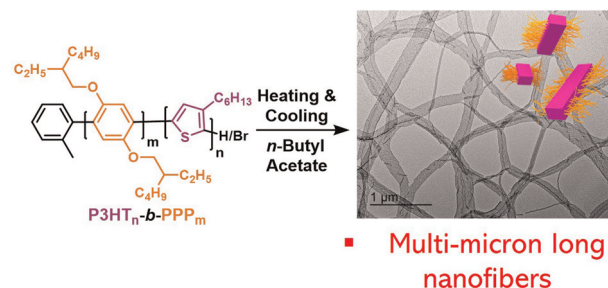
Michael Spicuzza, Shweta Prakesh Gaikwad, Steven Huss, Annemarie A. Lee, Cristina V. Craescu, Anna Griggs, Joshmi Joseph, Mark Puthenpurayil, Wilson Lin, Christopher Matarazzo, Stanley Baldwin, Victoria Perez, Diego Alejandro Rodriguez-Acevedo, John R. Swierk and Elizabeth Elacqua\*



1839

**Crystallization-driven self-assembly of poly(3-hexylthiophene)-*b*-poly(2,5-bis(2-ethylhexyloxy)*p*-phenylene), a  $\pi$ -conjugated diblock copolymer with a rigid rod corona-forming block**

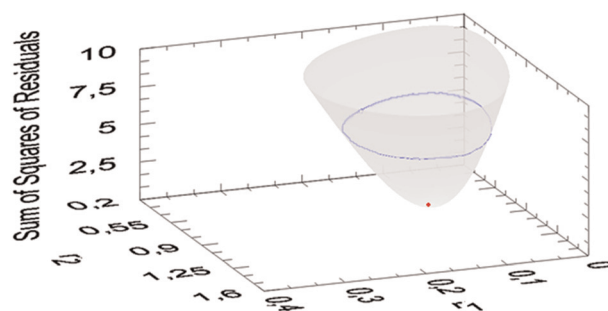
Marcus Vespa, Liam R. MacFarlane, Zachary M. Hudson\* and Ian Manners



1851

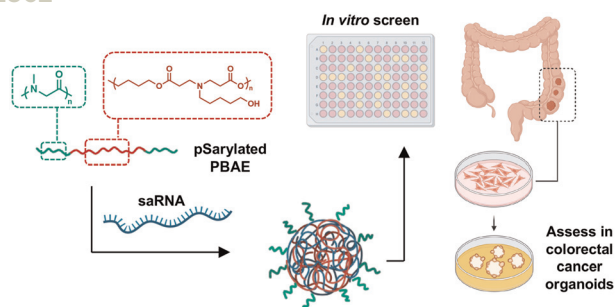
**IUPAC recommended experimental methods and data evaluation procedures for the determination of radical copolymerization reactivity ratios from composition data**

Anton A. A. Autzen, Sabine Beuermann, Marco Drache, Christopher M. Fellows, Simon Harrison, Alex M. van Herk,\* Robin A. Hutchinson, Atsushi Kajiwara, Daniel J. Keddie, Bert Klumperman and Gregory T. Russell



## PAPERS

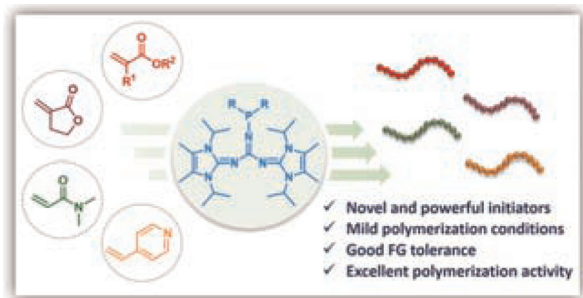
1862



### Polysarcosine functionalised cationic polyesters efficiently deliver self-amplifying mRNA

Hulya Bayraktutan, Rafał J. Kopiasz, Amr Elsherbeny, Magda Martinez Espuga, Nurcan Gumus, Umut Can Oz, Krupal Polra, Paul F. McKay, Robin J. Shattock, Paloma Ordóñez-Morán, Alvaro Mata, Cameron Alexander and Pratik Gurnani\*

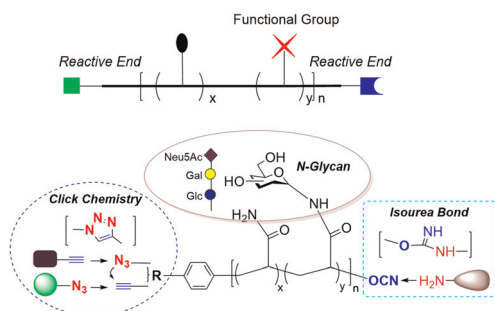
1877



### $N,N'$ -Bis(imidazolyl)guanidinyolphosphines: powerful initiators for conjugate-addition polymerization of Michael-type monomers

Lang-Qi Wen, Wei Chen, Wei-Min Ren, Xiao-Bing Lu and Hui Zhou\*

1884



### Synthesis and characterization of $\alpha,\omega$ -end orthogonally functionalizable glycopolymers from native glycans

Joseph M. Keil, Ka Keung Chan and Xue-Long Sun\*

