

# Polymer Chemistry

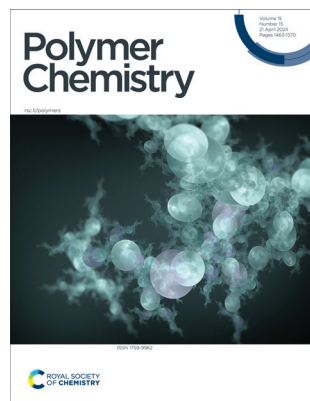
The home for the most innovative and exciting polymer chemistry, with an emphasis on polymer synthesis and applications thereof

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## IN THIS ISSUE

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### Cover

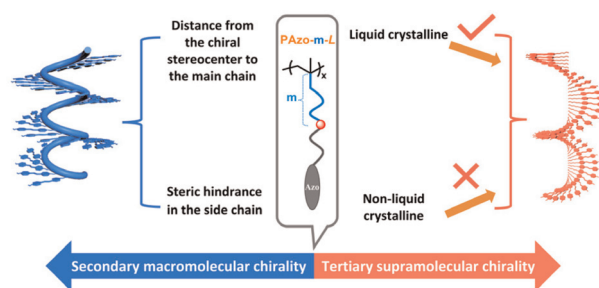
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## COMMUNICATION

1469

### Construction of secondary and tertiary chiral structures in side-chain azobenzene polymers with flexible main chains

Dongdong Liu,\* Jinyan Zhao, Yafei Ma, Xi Zhao, Shengyu Shi, Shi Li, Qingping Song,\* Xiaoxiao Cheng\* and Wei Zhang\*

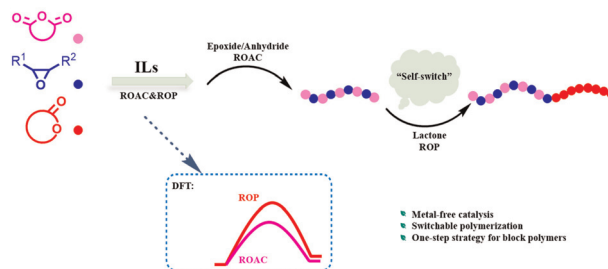


## PAPERS

1475

### Switchable copolymerization of mixed monomers catalyzed by imidazolium ionic liquids

Xue Wu, Yongli Li, Jingjing Yu, Yefan Liu, Zhidong Li, Yang Zhang and Pengfei Song\*





<https://polycond-2024.sciencesconf.org/>

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## Topics:

Recent advances in polycondensation polymers (photocatalysis, enzymatic catalysis, biocatalysis, assisted microwave polymerisation, polymerisation in ionic liquid solvents, in deep eutectic solvents, solid-state chemistry)

Polymers from biosourced monomers (synthesis, properties)

Polymers from direct arylation reaction (synthesis, properties)

Multi-component polycondensation

Functional polymers: synthesis, properties (ionic conducting properties, optoelectronic properties, gas permeation properties, electrochemical properties, electrochromic properties)

High performance polymers: synthesis, properties

Polymers of intrinsic microporosity: synthesis, properties

Hybrid organic / inorganic materials

Polymer processing: Extrusion, reactive extrusion, injection molding, 3D printing, electro-spray/spinning

Polycondensation and artificial intelligence (machine learning)

Thermosetting materials

Recycling/depolymerisation of polycondensates

Covalent Adaptable Networks

## A wide range of application fields

**Polymers for the development of new materials to answer current societal issues concerning :**

- ☐ **Renewable energy :**  
Materials for batteries, fuel cells, redox-flow batteries, supercapacitors
- ☐ **Optoelectronics, Electric and Electronic applications :**  
OLED, smart windows, ...
- ☐ **Membrane separation processes :**  
water desalination, gas separation purposes, water purification
- ☐ **(Bio)medical applications :**  
High-tech prothese, anti-bacterial material
- ☐ **Others ( Packaging, automotive applications)**

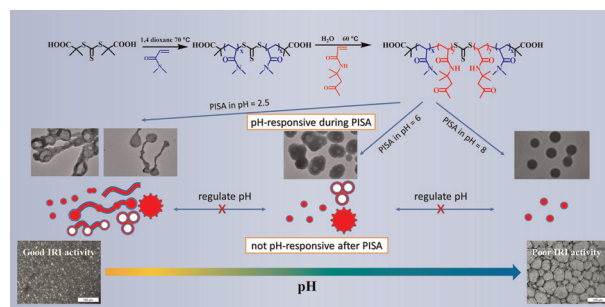


## PAPERS

1484

### Polymerization-pH tailored RAFT-mediated polymerization-induced self-assembly for ice recrystallization inhibiting the investigation

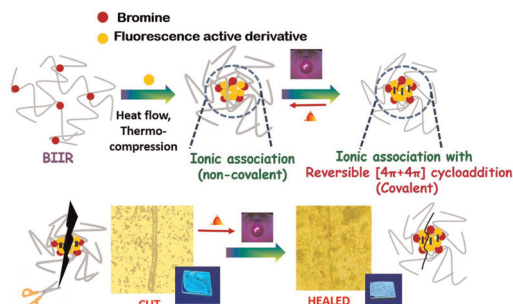
Huangbing Xu, Teng Qiu, Haotian Shi, Xiaoqian Tian, Xiaoyu Li\* and Longhai Guo\*



1495

### Reversible dual crosslinking in anthracenyl functionalized butyl elastomers based on ionic interaction and (4 + 4) cycloaddition mechanisms

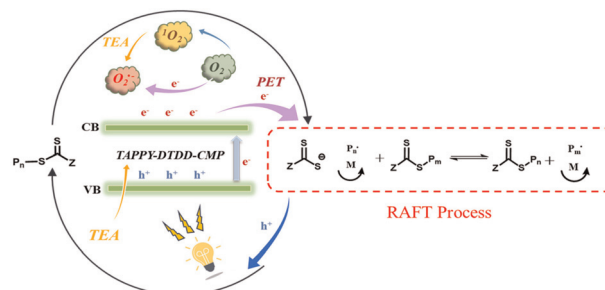
Shrabana Sarkar, Sarthik Samanta, E. Bhoje Gowd and Nikhil K. Singha\*



1504

### Visible light-triggered non-deoxygenated PET-RAFT polymerization by heterogeneous conjugated microporous polymer photocatalysts

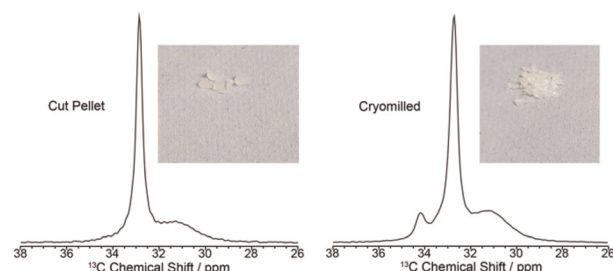
Xin Cao, Zhen Lu, Hongjie Yang, Rui Zhao, Longqiang Xiao\* and Linxi Hou\*



1511

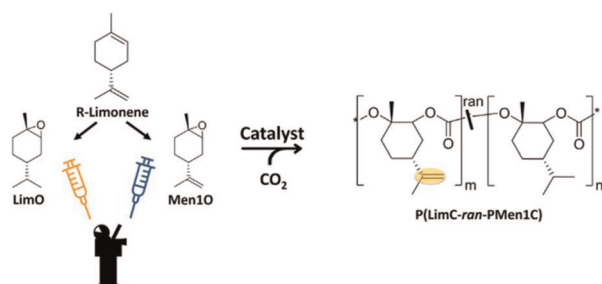
### Characterisation of formulated high-density poly(ethylene) by magic angle spinning nuclear magnetic resonance

Alyssa M. Rose, Andrew R. McLauchlin, George Wilson, Tom O. McDonald and Frédéric Blanc\*



## PAPERS

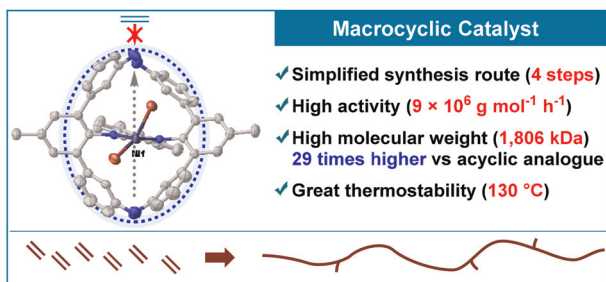
1522



### Bio-based, random terpolymers with defined functionality based on poly(limonene carbonate-*ran*-menth-1-ene carbonate)

Marcel Höferth, Holger Schmalz and Andreas Greiner\*

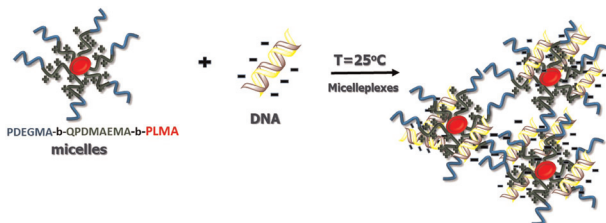
1530



### An aza-cyclophane supported macrocyclic $\alpha$ -diimine nickel catalyst for ethylene polymerization

Jingshuang Yang, Yue Chi,\* Yuxing Zhang\* and Zhongbao Jian\*

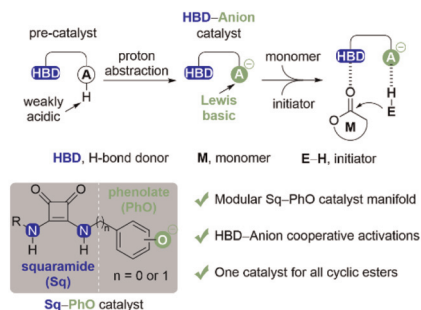
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### PDEGMA-*b*-PDMAEMA-*b*-PLMA triblock terpolymers and their cationic analogues: synthesis, stimuli responsive self-assembly and micelleplex formation

Despoina Giaouzi and Stergios Pispas\*

1552



### Development of a H-bond donor-Lewis basic anion bifunctional organocatalyst for ring-opening polymerizations

Bo Liu, Peng Kang, Zhenjiang Li,\* Na Shi, Qi Xin, Ziqi Liu, Tao Cai, Jun He, Chunyu Li and Kai Guo\*

