

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 14(46) 5097–5148 (2023)



Cover

See Steve P. Rannard et al.,
pp. 5102–5114.

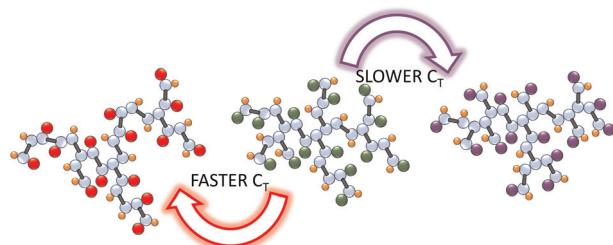
Image reproduced by
permission of
Steve P. Rannard from
Polym. Chem., 2023, **14**,
5102.

PAPERS

5102

Exploring telogen chemical structure and reactivity when forming highly branched polyesters derived from ethylene glycol dimethacrylate homopolymerisation under transfer-dominated branching radical telomerisation (TBRT) conditions

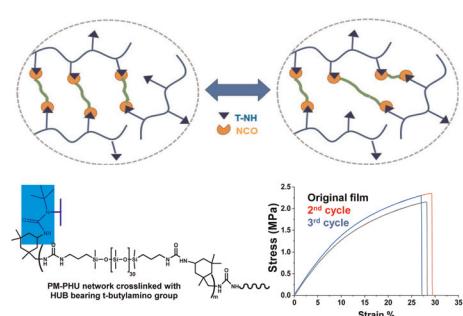
Sean Flynn, Bethany Linthwaite,
Oliver B. Penrhyn-Lowe, Samuel Mckeating,
Stephen Wright, Savannah R. Cassin, Pierre Chambon
and Steve P. Rannard*



5115

Dynamic poly(hindered urea) hybrid network materials crosslinked with reactive methacrylate polymer

Twinkal Patel, Junyoung Park, Minsoo P. Kim, Zhibin Ye,
Hyunhyub Ko, Hyun Wook Jung and Jung Kwon Oh*



Editorial Staff**Executive Editor**

Maria Southall

Deputy Editor

Laura Ghandhi

Editorial Production Manager

Cara Sutton

Assistant Editors

Sean Browner, Molly Colgate, Paul Scott, Alison Winder

Editorial Assistant

Basita Javeed

Publishing Assistant

Allison Holloway

Publisher

Sam Keltie

For queries about submitted papers, please contact

Cara Sutton, Editorial Production Manager in the first instance.

E-mail: polymers@rsc.org

For pre-submission queries please contact Maria Southall,

Executive Editor. E-mail: polymers-rsc@rsc.org

Polymer Chemistry (electronic: ISSN 1759-9962) is published 48 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the Royal Society of Chemistry Order Department, Royal Society of Chemistry,

Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK

Tel +44 (0)1223 432398; E-mail: orders@rsc.org

2023 Annual (electronic) subscription price: £2935; \$5014. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at www.rsc.org/ip

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK. Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017;

E-mail: advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

Polymer Chemistry

rsc.li/polymers

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

Editorial Board

Editor-in-Chief

Christopher Barner-Kowollik, Queensland University of Technology, Australia

Associate EditorsAthina Anastasaki, ETH Zurich, Switzerland
Filip Du Prez, Ghent University, Belgium
Holger Frey, Johannes Gutenberg University Mainz, Germany

Rongrong Hu, South China University of Technology, China

Jeremiah A Johnson, Massachusetts Institute of Technology, USA
Tanja Junkers, Monash University, Australia
Rebekka Klausen, Johns Hopkins University, USA
Dominik Konkolewicz, Miami University, USA

Zhibo Li, Qingdao University of Science and Technology, China

Zi-Chen Li, Peking University, China
Emily Pentzer, Texas A&M University, USA
Sébastien Perrier, University of Warwick, UK

Advisory Board

Steven Armes, University of Sheffield, UK	Yanchun Han, Chinese Academy of Sciences, China	Yoko Nozaki, University of Tokyo, Japan
Remzi Becer, University of Warwick, UK	Eva Marie Harth, University of Houston, USA	Rachel O'Reilly, University of Warwick, UK
Matthew Becker, Duke University, USA	Simon Harrison, CNRS - University of Toulouse, France	Makoto Ouchi, Kyoto University, Japan
Erik Berda, University of New Hampshire, USA	Laura Hartmann, Heinrich Heine University Düsseldorf, Germany	Derek Patton, University of Southern Mississippi, USA
Kerstin Blank, Max Planck Institute of Colloids and Interfaces, Germany	Fiona Hatton, Loughborough University, UK	Theresa Reineke, University of Minnesota, USA
Eva Blasco, Heidelberg University, Germany	Andrew B. Holmes, University of Melbourne, Australia	Megan Robertson, University of Houston, USA
James Blinco, Queensland University of Technology, Australia	Richard Hoogenboom, University of Ghent, Belgium	Amitav Sanyal, Bogazici University, Turkey
Chris Bowman, University of Colorado, USA	Steve Howdle, University of Nottingham, UK	Felix Schacher, Friedrich-Schiller-University Jena, Germany
Cyrille Boyer, University of New South Wales, Australia	Feilie Huang, Zhejiang University, China	Helmut Schlaad, University of Potsdam, Germany
Neil Cameron, Monash University, Australia	Toyoji Kakuchi, Changchun University of Science and Technology, China	Ellen Sletten, University of California, Los Angeles, USA
Luis Campos, Columbia University, USA	Julia Kalow, Northwestern University, USA	Martina Stenzel, University of New South Wales, Australia
Changle Chen, University of Science and Technology of China, China	Masami Kamigaito, Nagoya University, Japan	Molly Stevens, Imperial College London, UK
Mao Chen, Fudan University, China	Justia Kennemur, Florida State University, USA	Natalie Stingelin, Georgia Institute of Technology, USA
Xuesi Chen, Chinese Academy of Sciences, China	Christopher Kloxin, University of Delaware, USA	Ben Zhong Tang, HKUST, Hong Kong, China
Yoshiki Chujo, Kyoto University, Japan	Jacques Lalevée, Institut de Science des Matériaux de Mulhouse, France	Lei Tao, Tsinghua University, China
Franck D'Agosto, CPE Lyon, France	Katharina Landfester, Max Planck Institute for Polymer Research, Germany	Patrick Theato, KIT, Germany
Priyadarshi De, Indian Institute of Science Education and Research Kolkata, India	Muriel Lansalot, Université Lyon, France	Maria Vamvakaki, FORTH-IESL, Greece
Guillaume Delaittre, University of Wuppertal, Germany	Sébastien Lecommandoux, ENSCPB, University of Bordeaux, France	Jan van Hest, Eindhoven University of Technology, The Netherlands
Dagmar D'hooge, University of Ghent, Belgium	Jacques Lalevée, Institut de Science des Matériaux de Mulhouse, France	Kelly Velionia, University of Crete, Greece
Elizabeth Elacqua, Pennsylvania State University, USA	Katharina Landfester, Max Planck Institute for Polymer Research, Germany	Maria J. Vicent, CIPI, Spain
Brett P Forst, Cornell University, USA	Rachel Letteri, University of Virginia, USA	Brigitte Voit, Leibniz Institute of Polymer Design, Germany
Theoni Georgiou, Imperial College London, UK	Guey-Sheng Liou, National Taiwan University, Taiwan	Marcus Weck, NYU, USA
Didier Gigmes, Aix-Marseille Université, CNRS, France	Guoliang Liu, Virginia Tech, USA	Charlotte Williams, University of Oxford, UK
Atsushi Goto, Nanyang Technological University, Singapore	Shiyong Liu, University of Science & Technology, China	Frederik Wurm, Max-Planck-Institut für Polymerforschung, Germany
Sophie Guillaumé, Institut des Sciences Chimiques de Rennes, France	Timothy Long, Arizona State University, USA	Yusuf Yagci, Istanbul Technical University, Turkey
Dave Haddleton, University of Warwick, UK	Ian Manners, University of Victoria, Canada	Naoko Yoshie, University of Tokyo, Japan
Nikos Hadjichristidis, King Abdullah University of Science and Technology, Saudi Arabia	John Matson, Virginia Tech, USA	Wei You, University of North Carolina at Chapel Hill, USA
	Markus Mueller, University of Sydney, Australia	Xi Zhang, Tsinghua University, China
	Ravin Narain, University of Alberta, Canada	
	Julien Nicolas, University Paris-Sud, France	

Information for Authors

Full details on how to submit material for publication in Polymer Chemistry are given in the Instructions for Authors (available from <http://www.rsc.org/authors>). Submissions should be made via the journal's homepage: rsc.li/polymers. The journal welcomes submissions of manuscripts for publication as Full Papers, Communications, Perspectives and Reviews. Full Papers and Communications should describe original work of high quality and impact.

Colour figures are reproduced free of charge.

Additional details are available from the Editorial Office or <http://www.rsc.org/authors>

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)-Reproduced by permission of the Royal Society of Chemistry.

This journal is © The Royal Society of Chemistry 2023.

Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA.

Registered charity number: 207890

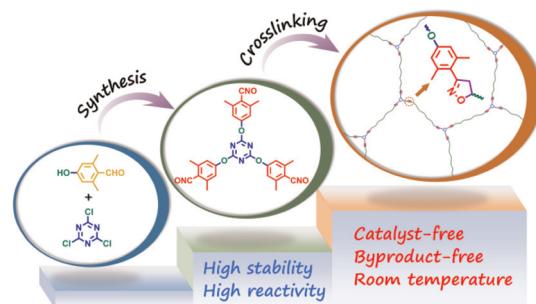


PAPERS

5125

Efficient metal-free crosslinking of common propellant binders using nitrile oxide–alkene click ligation

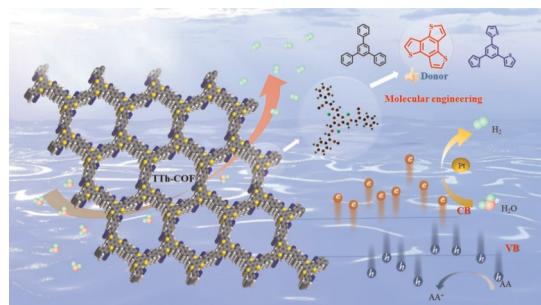
Jinkang Dou, Lijie Cheng, Bojun Tan, Binghui Duan, Minghui Xu, Bozhou Wang and Ning Liu*



5133

Molecular engineering of donor–acceptor sp^2 -carbon-linked covalent organic frameworks for enhancing photocatalytic hydrogen production

Mei Xu, Shanshan Yu, Wanru Li, Chuangye Li, Yukai Peng and Fengtao Yu*



5140

A fast and efficient way of obtaining the average molecular weight of block copolymers via DOSY

Pieter-Jan Voorter, Manfred Wagner, Christine Rosenauer, Jinhua Dai, Priya Subramanian, Alasdair McKay, Neil R. Cameron, Jasper J. Michels and Tanja Junkers*

