

RSC

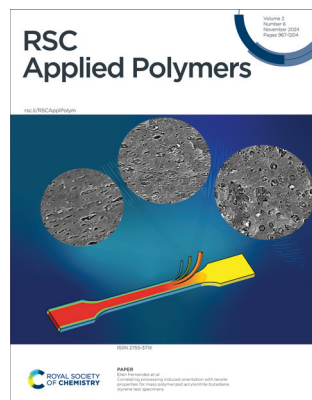
Applied Polymers

rsc.li/rscapplpolym

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

eISSN 2755-371X CODEN RAPSBD 2(6) 967-1204 (2024)



Cover
See Ellen Fernandez *et al.*,
pp. 1032–1042.

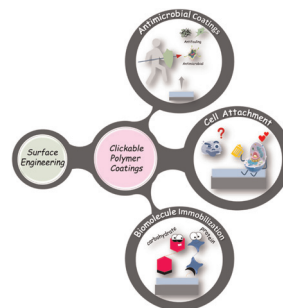
Image reproduced by
permission of
Ellen Fernandez,
Mariya Edeleva,
Ludwig Cardon and
Dagmar R. D'hooge
from *RSC Appl. Polym.*,
2024, **2**, 1032.

REVIEWS

976

'Clickable' polymeric coatings: from antibacterial surfaces to interfaces with cellular and biomolecular affinity

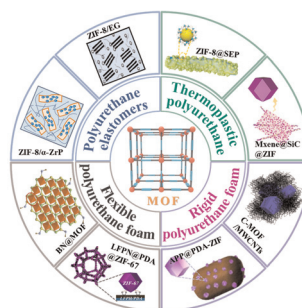
Aysun Degirmenci, Rana Sanyal and Amitav Sanyal*



996

A new way to improve the fire safety of polyurethane composites with the assistance of metal–organic frameworks

Jinhu Hu, Ye-Tang Pan,* Keqing Zhou,* Pingan Song and Rongjie Yang



Advance your career in science

with professional recognition that showcases
your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment
to attaining excellence in
your field

Gain the recognition you deserve

Achieve a professional
qualification that inspires
confidence and trust

Unlock your career potential

Apply for our professional
registers (RSci, RSciTech)
or chartered status
(CChem, CSci, CEnv)

Apply now

rsc.li/professional-development

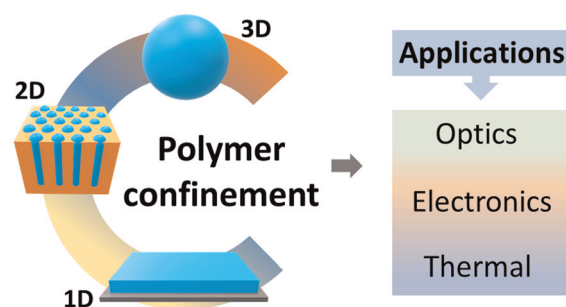


PERSPECTIVE

1013

Advancements in polymer nanoconfinement: tailoring material properties for advanced technological applications

Alberto Alvarez-Fernandez* and Jon Maiz*

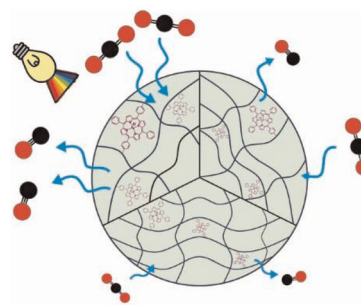


COMMUNICATION

1026

Effects of the cross-linked structures of polymer gels containing iron porphyrins on photoreduction of carbon dioxide

Shota Furusawa, Masanori Nagao,* Hikaru Matsumoto and Yoshiko Miura*

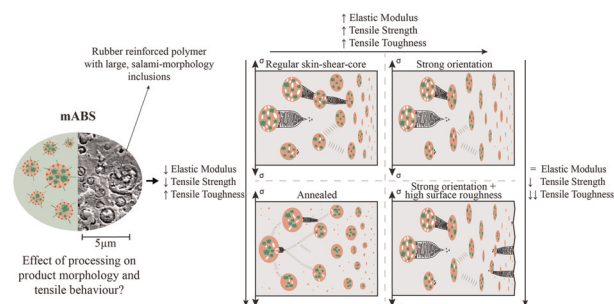


PAPERS

1032

Correlating processing induced orientation with tensile properties for mass polymerized acrylonitrile butadiene styrene test specimens

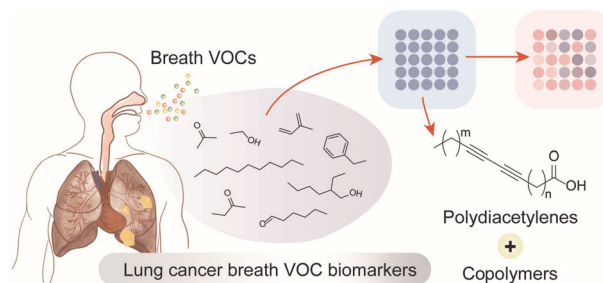
E. Fernandez, M. Edeleva, L. Cardon and D. R. D'hooge*



1043

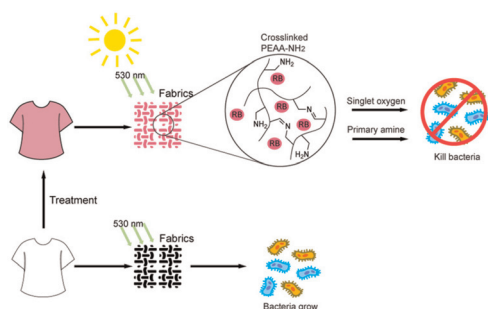
Polydiacetylene/copolymer sensors to detect lung cancer breath volatile organic compounds

Angie Davina Tjandra and Rona Chandrawati*



PAPERS

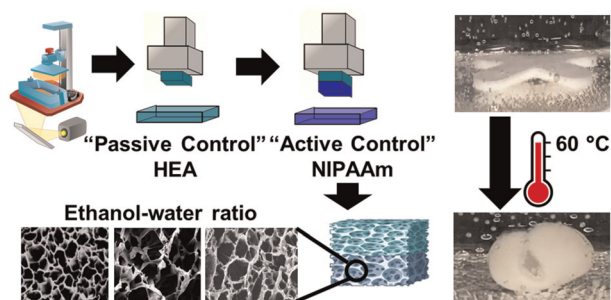
1057



Antimicrobial textiles based on photocrosslinked poly(ethylene-co-acrylic acid)

Yimin Zeng and Michael O. Wolf*

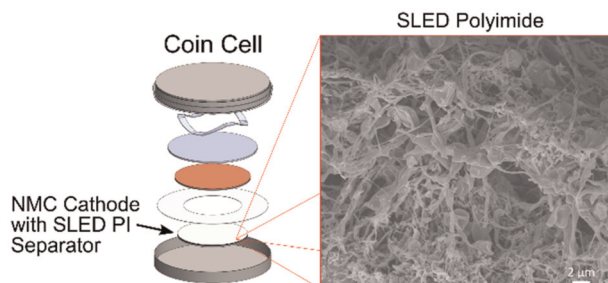
1062



Tuning the thermal response of 3D-printed bilayer hydrogels via architectural control using binary ethanol–water solvent systems

Francis Klincewicz, Subhash Kalidindi and LaShanda T. J. Korley*

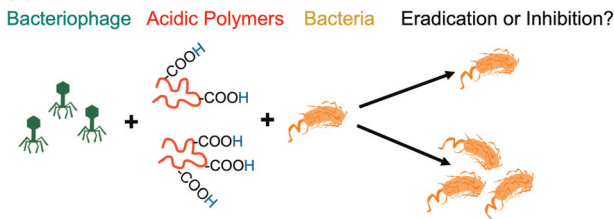
1074



Self-limiting electro spray deposition (SLED) of porous polyimide coatings as effective lithium-ion battery separator membranes

Robert A. Green-Warren, Andrew L. Fassler,* Abigail Juhl, Noah M. McAllister, Andrew Huth, Maxim Arkhipov, Michael J. Grzenda, S. Rahman Pejman, Michael F. Durstock and Jonathan P. Singer*

1082



Acidic polymers reversibly deactivate phages due to pH changes

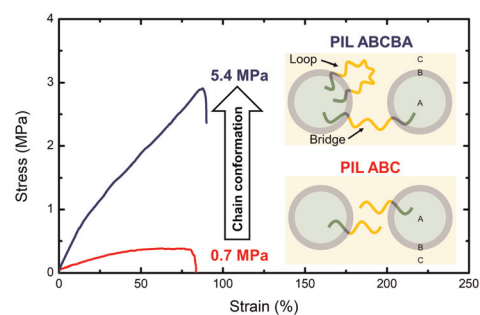
Huba L. Marton, Antonia P. Sagona,* Peter Kilbride and Matthew I. Gibson*



1091

Poly(ionic liquid) ABC triblock and ABCBA pentablock terpolymer electrolytes for lithium metal batteries

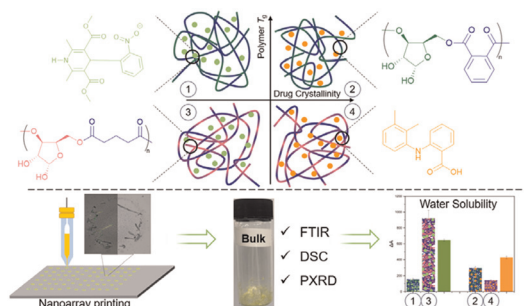
Dohyun Kim, Rui Sun, Roger Tocchetto, Carl Willis, Bert Krutzer, Frederick L. Beyer and Yossef A. Elabd*



1104

D-Xylose oxetane copolymers as bioderived and tuneable polyesters for amorphous solid dispersions

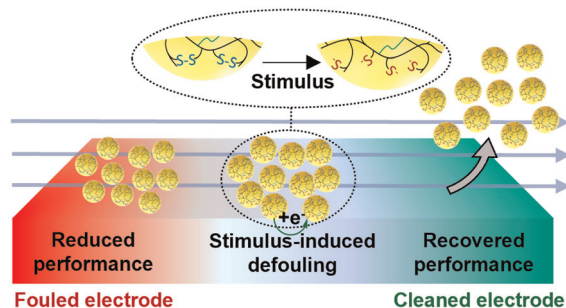
Ella F. Clark, Alexandra Howard, Sebastian D. Morales Feliu, James F. McCabe, Jonathan C. Burley, Vincenzo Taresco* and Antoine Buchard*



1113

Organo-disulfide-based particles enable controlled stimulus-triggered cleaning of electrode surfaces

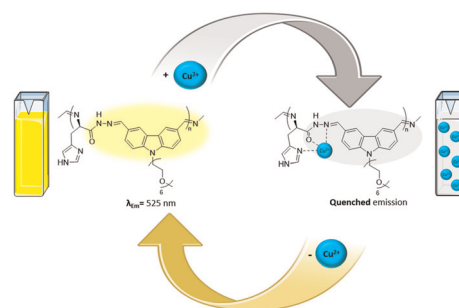
Hongyi Zhang, Garrett L. Grocke, Samuel S. Kopfinger, Yilin Wang, Arnav Brahmasandra, Randy H. Ewoldt, Stuart J. Rowan* and Shrayesh N. Patel*



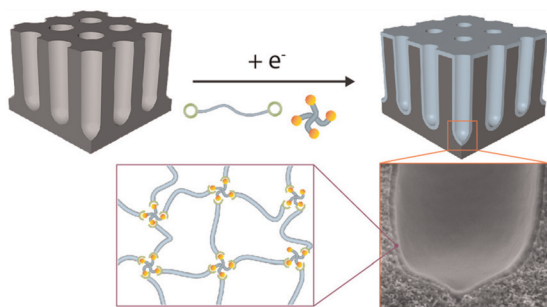
1124

Fluorescent histidine-derived biodynamers as biocompatible and highly water-soluble copper(II)-sensors

Lena Zeroug-Metz, Mohamed A. M. Kamal, Justine Bassil, Kalanika Elamaldeniya, Bo Hyun Ryu, Eric Buhler and Sangeun Lee*



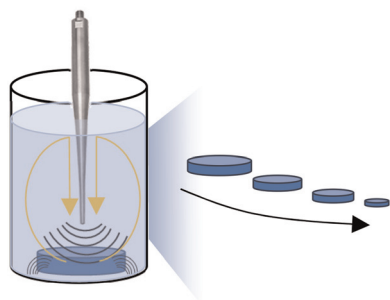
1139



Cathodic electrodeposition of polymer networks as ultrathin films on 3-D micro-architected electrodes

Zhaoyi Zheng, Anton B. Resing, Wenlu Wang and Jörg G. Werner*

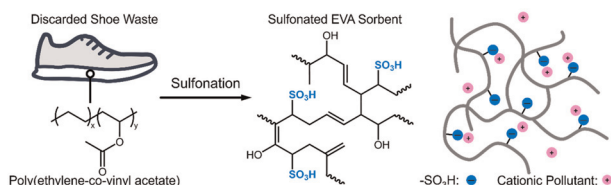
1147



Sonication labile PEG-based hydrogel system for biological component suspension and subsequent degradation

Meagan N. Arguien, Joshua T. Kamps, Sarah A. Muth, Mariana Trujillo-Lemon and Christopher N. Bowman*

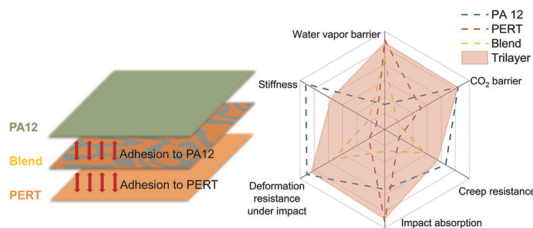
1157



Valorization of shoe sole waste into high-performance cationic dye sorbents via sulfonation

Mark Robertson, Andrew Barbour and Zhe Qiang*

1170



A polyamide and polyethylene multilayer composite with enhanced barrier and mechanical properties at high temperature

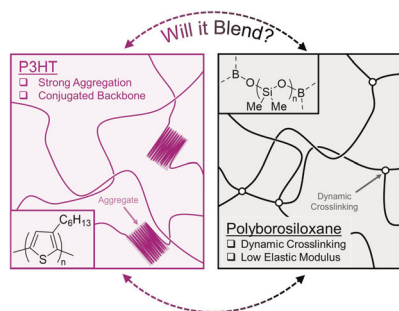
Weiqing Fang, Yu Hui Cheng, Adam Pearson, Yige Huang, Ashkan Dargahi, Mark Duncan, Joel Runka, Ahmed Hammami and Hani E. Naguib*



1182

Will it blend? Exploring the viscoelastic characteristics of P3HT-polyborosiloxane blends towards flexible electronic materials

Peter A. Gilhooly-Finn,* Megan M. Westwood and Bob C. Schroeder*



1193

Contrasting interchain order and mixed ionic–electronic conduction in conjugated polymers: an isoindigo case study

Rebecca F. Meacham, Heejung Roh, Camille E. Cunin, Eric R. Lee, Wenhao Li, Yan Zhao, Sanket Samal* and Aristide Gumyusenge*

