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 16(16) 1725-1886 (2025)



Cover See Min Sang Kwon et al., pp. 1798-1806.

Image reproduced by permission of Jungwook Lee from Polym. Chem., 2025, **16**, 1798.

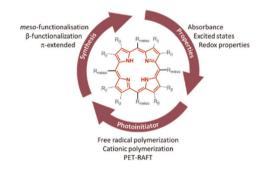
REVIEW

1732

Porphyrin derivatives: promising perspectives in visible/IR light photopolymerization

15

Fanny Schnetz, Sébastien Richeter and Davy-Louis Versace*

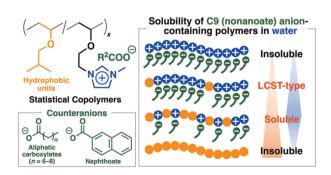


COMMUNICATION

1792

Unexpected increase in water solubility by the introduction of hydrophobic units into imidazolium-based polymeric ionic liquids with carboxylate counteranions

Nene Maruyama, Sadahito Aoshima* and Arihiro Kanazawa*







At the heart of open access for the global chemistry community

Editor-in-chief

Russell J Cox

Leibniz Universität Hannover, Germany

We stand for:



Breadth We publish work in all areas of chemistry and reach a global readership



Quality Research to advance the chemical sciences undergoes rigorous peer review for a trusted, society-run journal



Affordability Low APCs, discounts and waivers make publishing open access achievable and sustainable



Community Led by active researchers, we publish quality work from scientists at every career stage, and all countries

Submit your work now

rsc.li/rsc-advances

@RSC_Adv

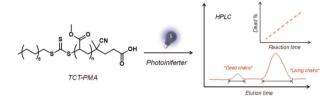
Article Online

PAPERS

1798

The livingness of poly(methyl acrylate) under visible light photoiniferter-RAFT polymerization mediated by trithiocarbonates

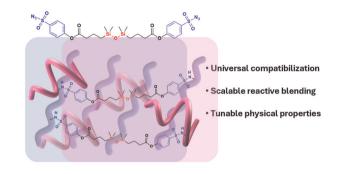
Jungwook Lee, Yonghwan Kwon, Changhoon Yu, Dominik Konkolewicz and Min Sang Kwon*



1807

Tunable polyethylene-polypropylene blends via compatibilization through nitrene insertion-enabled dynamic covalent crosslinking

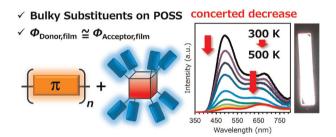
Roman Shrestha and Zhibin Guan*



1813

The origin of the thermally stable white-light emission property of POSS-conjugated polymer hybrid films

Satoru Saotome, Masayuki Gon and Kazuo Tanaka*



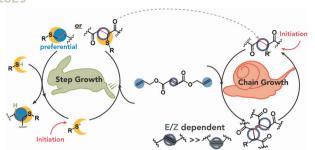
1822

Unravelling the effect of side chain on RAFT depolymerization; identifying the rate determining step

Francesco Felician, Maria-Nefeli Antonopoulou, Nghia P. Truong, Asja A. Kroeger, Michelle L. Coote, Glen R. Jones* and Athina Anastasaki*

PAPERS

1829



Harnessing ene-type and stereochemistry to control reaction kinetics and network architecture in thiol-ene photopolymerizations using maleate and fumarate-derived monomers

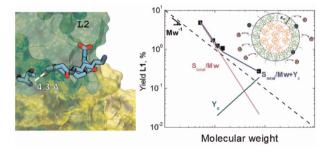
Rithwik Ghanta, Ayaulym Abilova, Cade McAndrew and Alexa S. Kuenstler*

1846

Design of degradable, intrinsically flame-retardant and high-performance tung-oil-based epoxy vitrimers

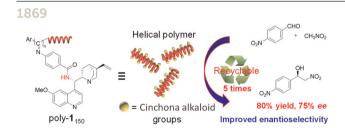
Qianyong Chang, Kun Zhang, Wenbin Li, Yanging Wang, Ke Li, Yigang Wang, Xiaoan Nie and Jie Chen*

1858



Factors modulating the hydrolysis of Nylon-6,6 by a nylon hydrolase enzyme

Vera Bocharova,* Erin E. Drufva, John F. Cahill, Ivan Popov, Isaiah T. Dishner, Muchu Zhou, Gang Seob Jung, Andrew M. Ullman, Dana L. Carper, Joshua T. Damron, Jong K. Keum, Catalin Gainaru, Serena H. Chen, Jeffrey C. Foster* and Joshua K. Michener*



Optically active helical polymers bearing cinchona alkaloid pendants: an efficient chiral organocatalyst for asymmetric Henry reaction

Xing-Yu Zhou, Wen-Gang Huang, Xue-Cheng Sun, Hui Zou, Li Zhou* and Zong-Quan Wu*

PAPERS

1875

Constructing pH-responsive poly(trimethylene carbonate) (PTMC)-based polymersomes functionalized with cell-penetrating guanidines

Lili Zhao, Suzhen Wang, Zhezhe Li, Jian Gu* and Hailong Che*

