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## IN THIS ISSUE

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### Cover

See Yoshinori Takashima  
et al., pp. 4196–4203.

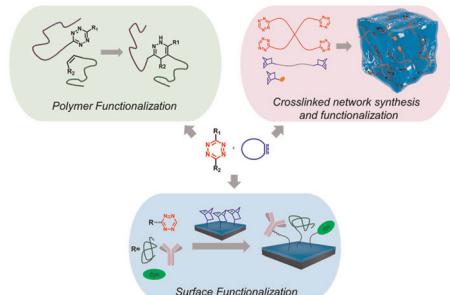
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Yoshinori Takashima from  
*Polym. Chem.*, 2024, **15**,  
4196.

## REVIEW

4173

### Tetrazine-based inverse-electron-demand Diels–Alder reaction: a powerful tool for fabrication and functionalization of polymeric materials

Mehmet Arslan,\* Aysun Degirmenci, Rana Sanyal and  
Amitav Sanyal\*



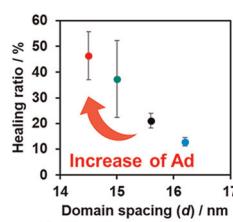
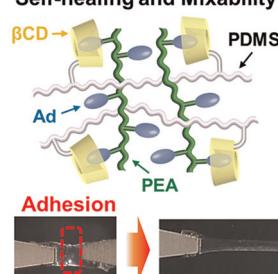
## PAPERS

4196

### Mechanical properties and molecular adhesion exhibited by inorganic–organic composite elastomers

Naoki Yamashita, Ryohei Ikura, Kenji Yamaoka,  
Nobu Kato, Masanao Kamei, Kentaro Ogura,  
Minoru Igarashi, Hideo Nakagawa and  
Yoshinori Takashima\*

#### Self-healing and Mixability



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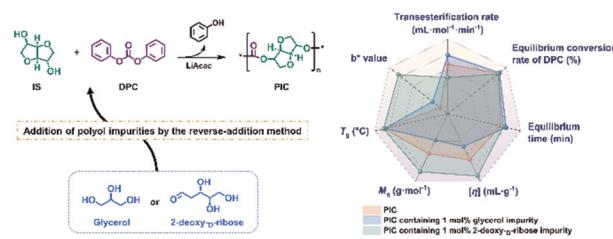


## PAPERS

4204

## Influence of polyol impurities on the transesterification kinetics, molecular structures and properties of isosorbide polycarbonate

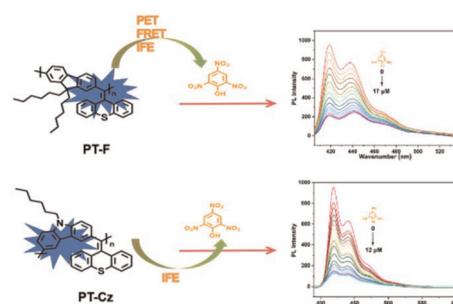
Mingfa Guo, Yaning Wang, Zhenguang Li, Jielin Xu, Qian Chen, Jing Wu\* and Huaping Wang



4221

## The synthesis of tetraarylethylene-based conjugated polymers for the application of fluorescence sensing towards nitroaromatics

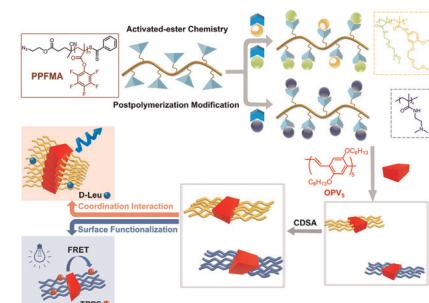
Rentuya Wu, Xiaosong Sun, Wenyue Dong,\* Yanwei Li, Qian Duan\* and Teng Fei



4231

## A facile and versatile platform for preparing uniform $\pi$ -conjugated nanofibers with controlled length and varying shells

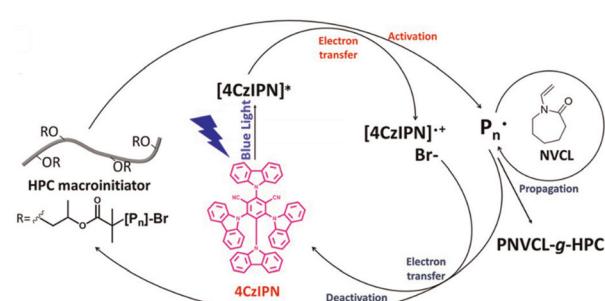
Bo Xiang, Hongluo Wu, Rang Chen, Xiaoyu Huang,\* Guolin Lu and Chun Feng\*



4244

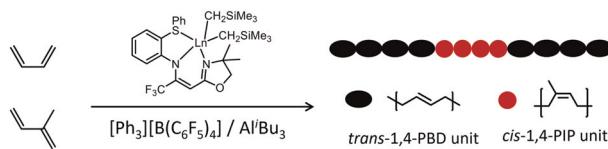
## Versatile poly(*N*-vinylcaprolactam)-grafted-hydroxypropyl cellulose polymers with tailored thermo- and pH-responsive properties *via* sustainable organocatalyzed atom transfer radical polymerization

Muhammad Asif Iqbal, Asif Mahmood, Waheed Al-Masry, Chan Ho Park, Sadaf Ul Hassan\* and Toheed Akhter\*



## PAPERS

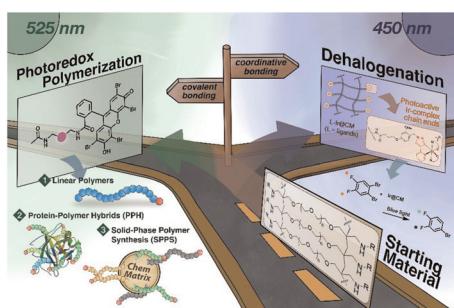
4255



**Polymerization of isoprene and butadiene with unparalleled stereoselectivity catalysed by rare-earth metal cationic species bearing a novel tridentate ligand**

Xiuling Wang, Yang Wang, Zhonglei Qin, Liying Shen\* and Xiaochao Shi\*

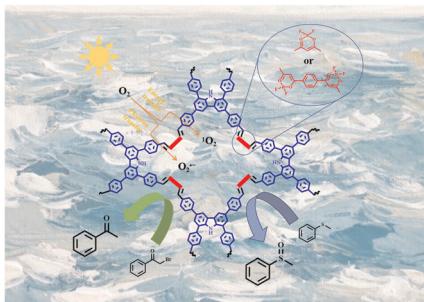
4264



**Heterogenous catalysis for oxygen tolerant photoredox atom transfer radical polymerization and small-molecule dehalogenation**

Kriti Kapil, Mingkang Sun, Ting-Chih Lin, Hironobu Murata, Grzegorz Szczepaniak, Khidong Kim, Stephen DiLuzio, Jaepil Jeong, Mitchell Baumer, Stefan Bernhard, Tomasz Kowalewski and Krzysztof Matyjaszewski\*

4281



**Vinylene-linked fully conjugated porous organic polymers based on difluoroboron  $\beta$ -diketonate complexes for green and efficient photocatalysis**

Wenshuo Xu, Zehao Zhao, Yiqiong Liu, Dongxin Yang and Weitao Gong\*

