

# RSC

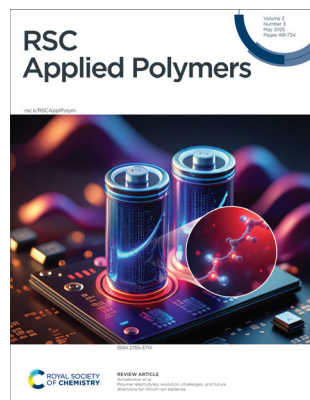
## Applied Polymers

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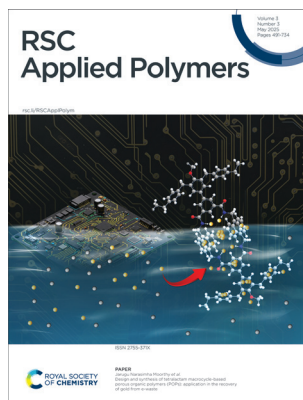
### IN THIS ISSUE

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See Achalkumar *et al.*,  
pp. 499–531.

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**Inside cover**  
See Jarugu Narasimha  
Moorthy *et al.*, pp. 603–612.

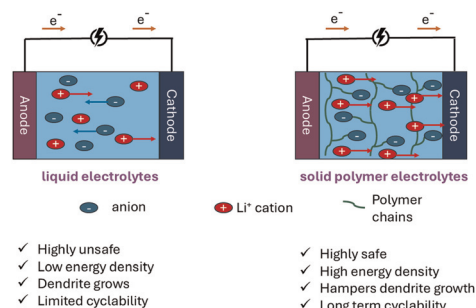
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### REVIEWS

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#### Polymer electrolytes: evolution, challenges, and future directions for lithium-ion batteries

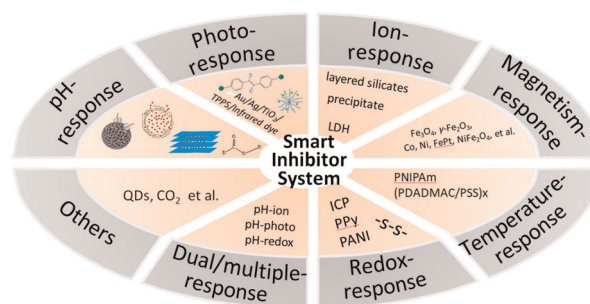
Ram Prasanth S., Varatharajan Prasannavenkadesan,  
Vimal Katiyar and Ammathnadu Sudhakar Achalkumar\*



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#### Smart inhibitor systems towards anti-corrosion: design and applications

Danping Li, Ziwen Zhang, Bilegsaikhan Sukhbat,  
Xuejie Wang, Xue Zhang, Jing Yan,\* Junping Zhang,  
Qiuyu Zhang, Yan Li, Hao Wang and Yi Yan\*





# EES Solar

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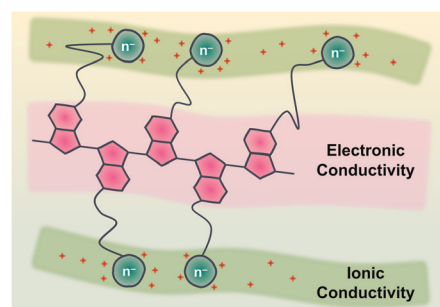


## REVIEWS

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## Recent material development and applications of conjugated polyelectrolytes by leveraging electronic and ionic transport properties

Chibin Zhang, Liang Yao, Mingrui Pu\* and Cheng Zhou\*



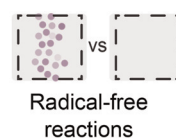
## PERSPECTIVE

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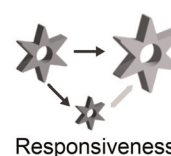
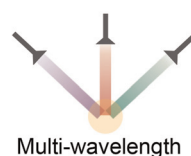
## Advances in vat photopolymerization: early-career researchers shine light on a path forward

Abhishek P. Dhand,\* Ren H. Bean, Viviane Chiaradia, Alex J. Comisso, Dalia Dranseike, Hayden E. Fowler, Julia M. Fraser, Holden Howard, Takashi Kaneko, Ji-Won Kim, Jason M. Kronenfeld, Keldy S. Mason, Connor J. O'Dea, Fred Pashley-Johnson, Dominique H. Porcincula, Maddison I. Segal, Siwei Yu and Max A. Saccone\*

## Novel Chemistries



## Novel Processes

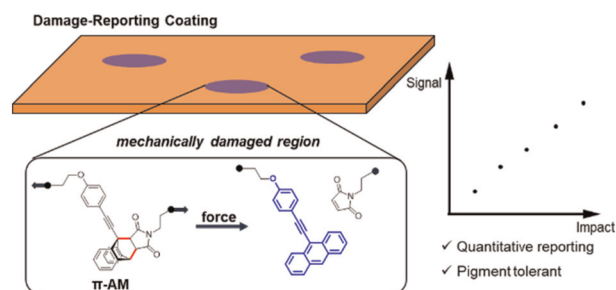


## COMMUNICATIONS

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## Harnessing mechanochemical fluorescence toward autonomous damage-reporting coatings

Zeyu Wang, Junfeng Zhou, Zichen Ling, Qixin Zhou\* and Junpeng Wang\*



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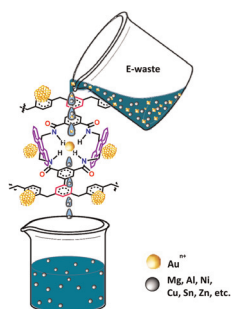
Sidechain engineering in poly(2,3-alkylthieno [3,4-*b*]pyrazine)s via GRIM polymerization: solubility, film formation, and device performance

Spencer J. Gilman, Nicolas C. Nicolaidis, Tomas J. Marsh, Paul C. Dastoor and Seth C. Rasmussen\*

	PC <sub>6</sub> TP	PEHTP
Lower bandgap	✓	✗
Better solubility	✗	✓
Better processability	✗	✓
More crystalline	✓	✗
Better devices	✗	✓



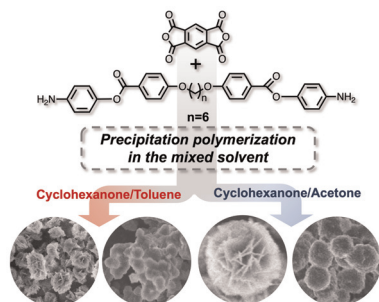
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### Design and synthesis of tetralactam macrocycle-based porous organic polymers (POPs): application in the recovery of gold from e-waste

Ashish Kumar, Gulshan Anjum and Jarugu Narasimha Moorthy\*

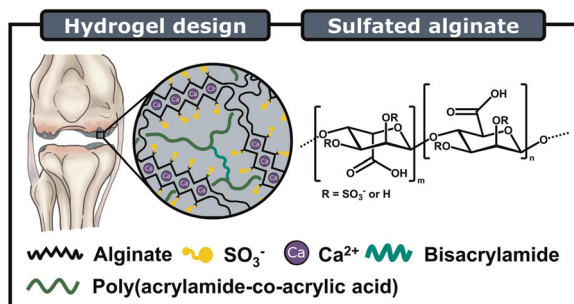
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### Self-assembly of semiaromatic poly(amic acid) into flower-like microparticles via one-step precipitation polymerization

Yuqian Chen, Ryohei Kikuchi, Kan Hatakeyama-Sato, Yuta Nabae\* and Teruaki Hayakawa\*

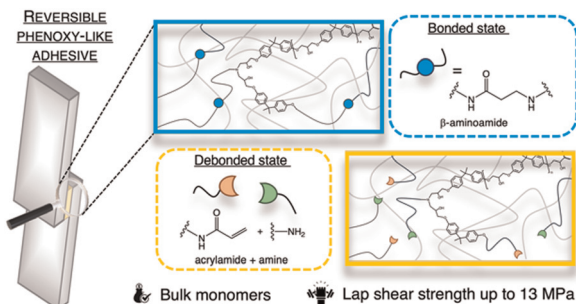
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### Effect of sulfation on a tough hybrid hydrogel network

Sander Driesen, Valentino Atella, Kristi Kiick, Louis M. Pitet\* and Geert-Jan Graulus\*

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Francesca Portone, Loc Tan Nguyen, Roberta Pinalli, Alessandro Pedrini, Filip E. Du Prez\* and Enrico Dalcanale\*

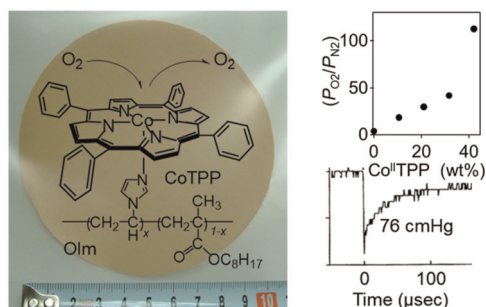


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# Highly facilitated permeation and enrichment of oxygen from air through a polyvinylimidazole membrane ligated with cobaltporphyrin that kinetically interacts with oxygen

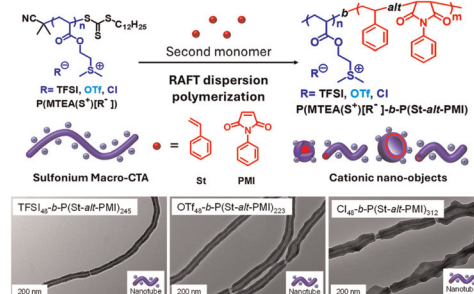
Hiromi Shinohara,\* Hirotsugu Araiara and Hiroyuki Nishide\*



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# Cationic nano-objects produced by polymerization-induced self-assembly using sulfonium-macro chain transfer agents with different counter anions

Hirotsugu Miyakawa and Hideharu Mori\*



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# Functional self-healing aldehyde-derived nanoparticle-crosslinked gelatin/PNIPAm-based adhesive gels

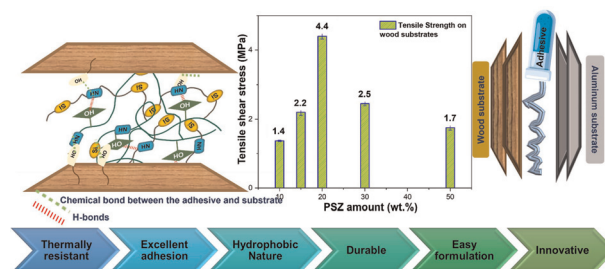
P. A. Parvathy, Sriparna De, Manjinder Singh, Gaurav Manik and Sushanta K. Sahoo\*



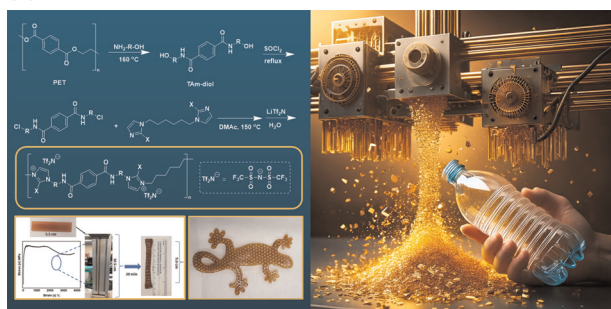
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# Hydroxyl-functional acrylic adhesives: leveraging polysilazane chemistry for curing

Amrita Chatterjee, Shashank Jha, Sushmit Sen, Keshav Dev, Chayan Das and Pradip K. Maji\*



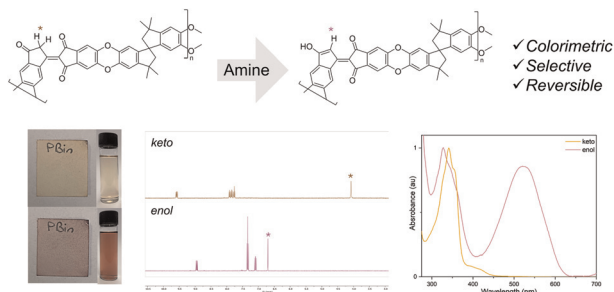
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### Depolymerization of PET by common alkanolamines yields tunable monomers to expand the design space of 3D-printable, intrinsically self-healing polyamide-ionenes

Mousumi R. Bepari, Pravin S. Shinde and Jason E. Bara\*

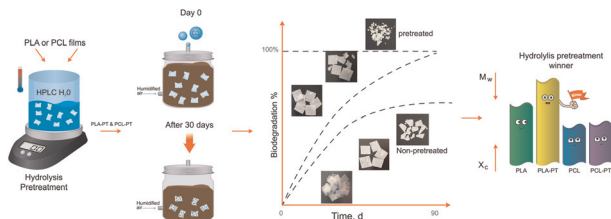
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### Bindone-based polymer for colorimetric detection of volatile amines

Dylan Wilkinson,\* Dominic Taylor, Neil B. McKeown and Graeme Cooke\*

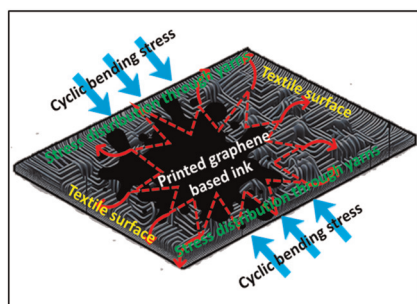
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### Impact of hydrolysis pretreatment on the compostability of biodegradable poly(caprolactone) and poly(lactic acid) films

Jordan D'Amario, Wanwarang Limsukon, Anibal Bher\* and Rafael Auras\*

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### Interfacial stress transfer in graphene-based polymeric inks on a textile surface for long term cycling stability

Monika Swami, Shanu Prabhakar, Susanta Ghosh and Debmalya Roy\*

