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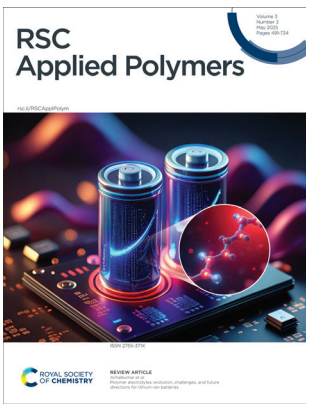

Cover
See Achalkumar *et al.*, pp. 499–531.

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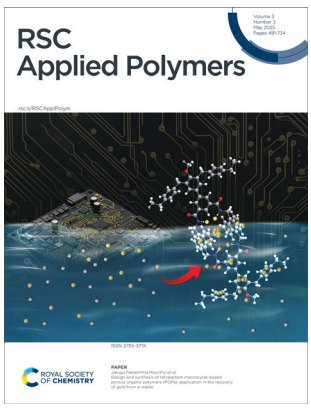

Inside cover
See Jarugu Narasimha Moorthy *et al.*, pp. 603–612.

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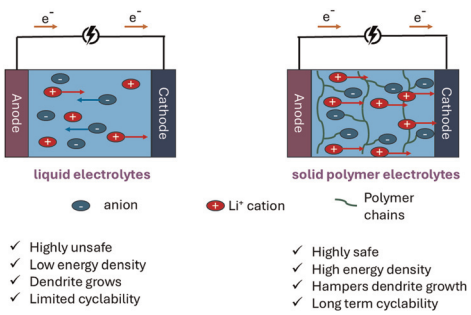
Polymer electrolytes: evolution, challenges, and future directions for lithium-ion batteries

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



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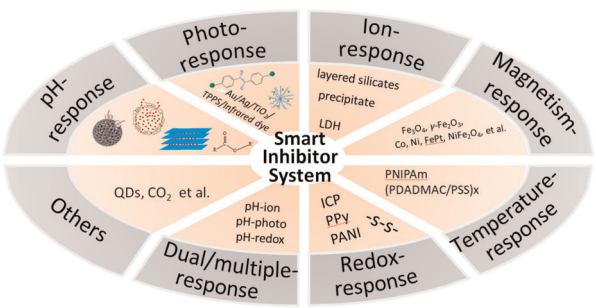
Smart inhibitor systems towards anti-corrosion: design and applications

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



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REVIEWS

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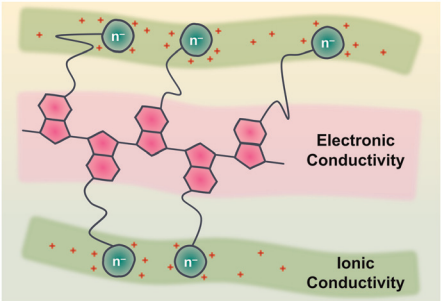
Recent material development and applications of conjugated polyelectrolytes by leveraging electronic and ionic transport properties

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



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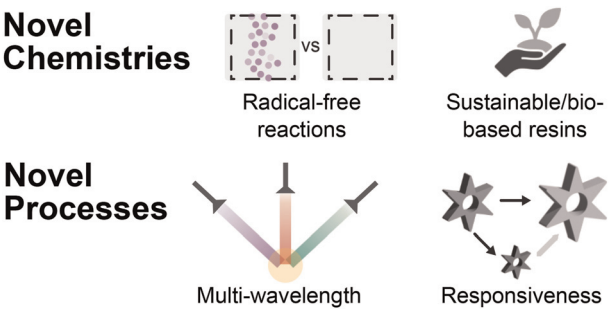
Advances in vat photopolymerization: early-career researchers shine light on a path forward

Abhishek P. Dhand,* Ren H. Bean, Viviane Chiaradia, Alex J. Commisso, 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*



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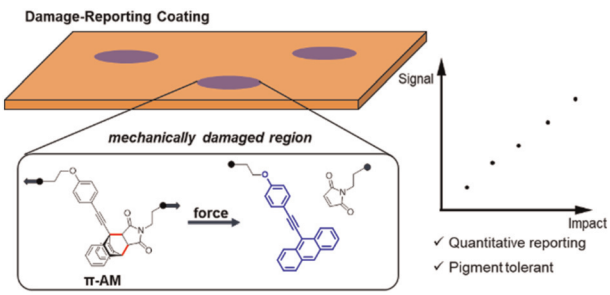
Harnessing mechanochemical fluorescence toward autonomous damage-reporting coatings

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



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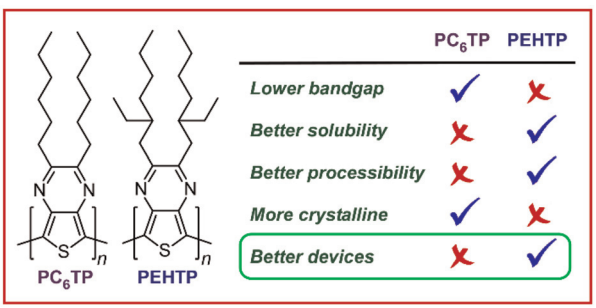
Sidechain engineering in poly(2,3-alkylthieno [3,4-*b*]pyrazine)s *via* GRIM polymerization: solubility, film formation, and device performance

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



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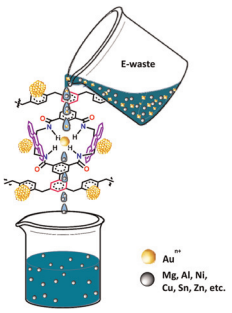

Design and synthesis of tetralactam macrocycle-based porous organic polymers (POPs): application in the recovery of gold from e-waste

Ashish Kumar, Gulshan Anjum and Jarugu Narasimha Moorthy*

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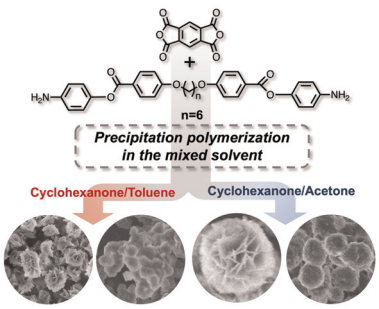

Self-assembly of semiaromatic poly(amic acid) into flower-like microparticles *via* one-step precipitation polymerization

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

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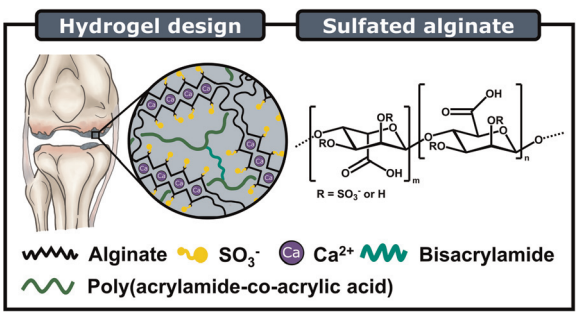

Effect of sulfation on a tough hybrid hydrogel network

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

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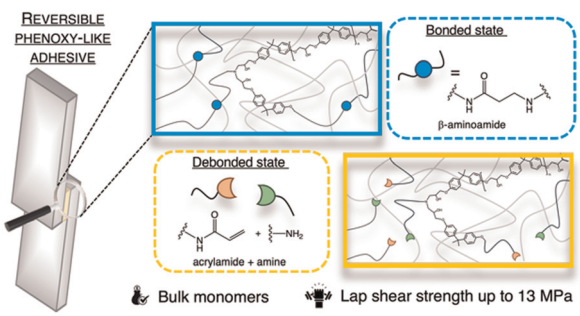

Debondable phenoxy-based structural adhesives with β-amino amide containing reversible crosslinkers

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

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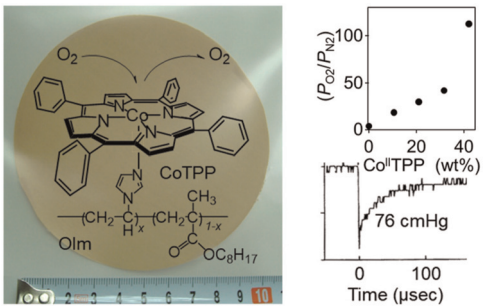
Highly facilitated permeation and enrichment of oxygen from air through a polyvinylimidazole membrane ligated with cobaltporphyrin that kinetically interacts with oxygen

Hiromi Shinohara,* Hirotsugu Araihara and Hiroyuki Nishide*



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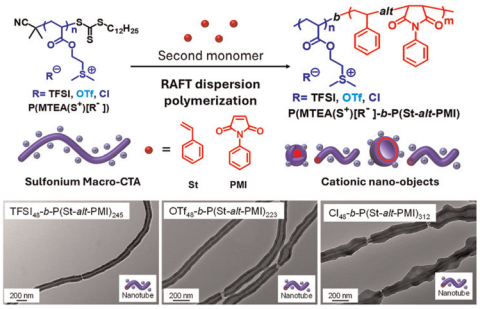
Cationic nano-objects produced by polymerization-induced self-assembly using sulfonium-macro chain transfer agents with different counter anions

Hirotsugu Miyakawa and Hideharu Mori*



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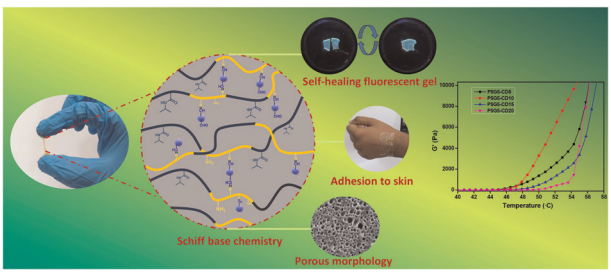
Functional self-healing aldehyde-derived nanoparticle-crosslinked gelatin/PNIPAm-based adhesive gels

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



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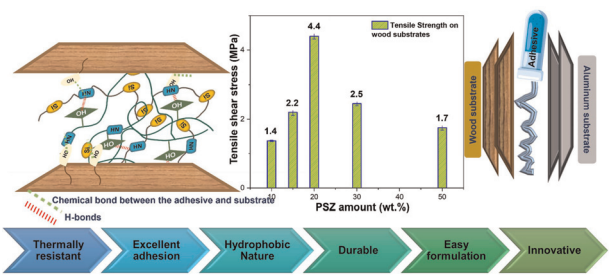
Hydroxyl-functional acrylic adhesives: leveraging polysilazane chemistry for curing

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



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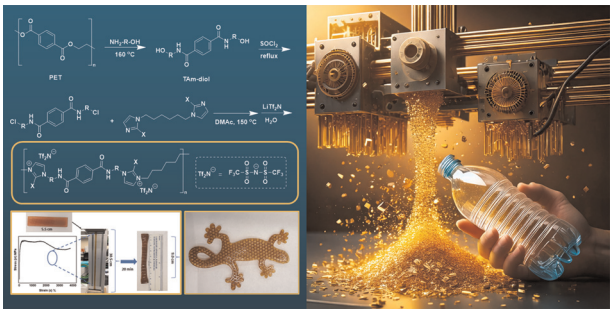

Depolymerization of PET by common alkanolamines yields tunable monomers to expand the design space of 3D-printable, intrinsically self-healing polyamide-ionenes

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

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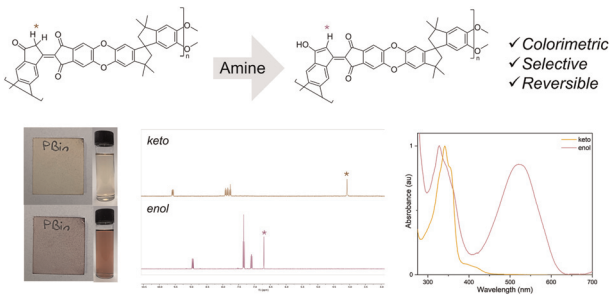

Bindone-based polymer for colorimetric detection of volatile amines

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

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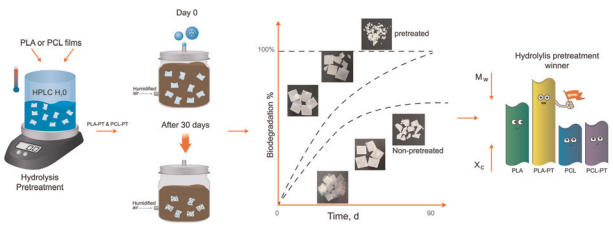

Impact of hydrolysis pretreatment on the compostability of biodegradable poly(caprolactone) and poly(lactic acid) films

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

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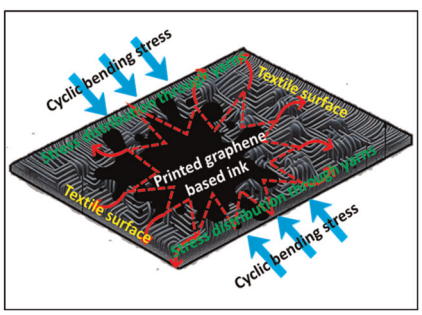

Interfacial stress transfer in graphene-based polymeric inks on a textile surface for long term cycling stability

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

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