RSC

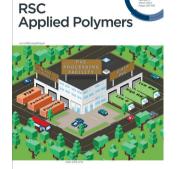
Applied Polymers

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 3(2) 291-490 (2025)



Cover

See Jason E. Bara et al.. pp. 336-346.

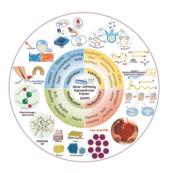
Image reproduced by permission of Ali Al Alshaikh from RSC Appl. Polym., 2025, **3**. 336.

REVIEWS

299

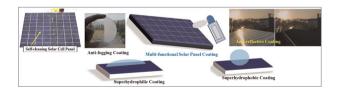
Shear-stiffening supramolecular polymers: fabrication, modification and application

Nan Li, Shiyu Gu, Qi Wu* and Jinrong Wu*



High-performance multi-functional solar panel coatings: recent advances, challenges, strategies and industrial aspects

Anil Kumar Padhan,* Vaishakhi Singh,* Saptarshi Ray and Ravi Kumar Voolapalli







RSC Applied Interfaces



Interfacial and surface research with an applied focus

Interdisciplinary and open access

rsc.li/RSCApplInter

Fundamental questions Elemental answers

Registered charity number: 207890

336

Tuning solvent strength can fractionate PVC into ultra-low molecular weight material with low dispersity

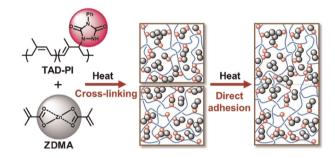
Ali Al Alshaikh, Jaewoo Choi, Feranmi V. Olowookere, Caira McClairen, Owen G. Lubic, Pravin S. Shinde, C. Heath Turner and Jason E. Bara*



347

Triazolinedione-functionalized isoprene rubber composites with self-adhesion via cross-linking with zinc dimethacrylate

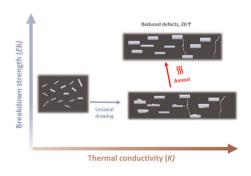
Kyohei Kotani,* Yuji Kitamura, Katsuhiko Tsunoda, Akira Takahashi and Hideyuki Otsuka*



361

Healing filler-matrix interfaces in drawn BN/UHMWPE composites by a simple thermal annealing treatment

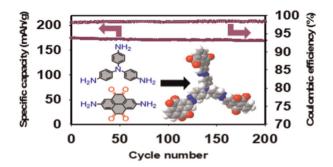
Xiangyan Yu, Qichen Zhou, Xiaoxiao Yu, Man Zhang, Coskun Kocabas, Han Zhang, Dimitrios G. Papageorgiou, Haixue Yan, Michael John Reece and Emiliano Bilotti*



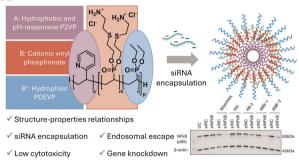
370

Composites of azo-linked pyrene-tetraone porous organic polymers as cathodes for lithium-ion batteries

Heba H. Farrag, Eloi Grignon, Alicia M. Battaglia, Jiang Tian Liu and Dwight S. Seferos*



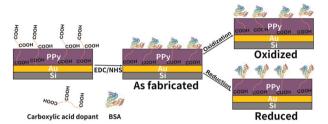
381



Phosphorous-containing, amphiphilic ABB' copolymers as siRNA nanocarriers with enhanced stability, reduced *in vitro* cytotoxicity, and efficient knockdown ability for the treatment of ocular diseases

Philipp Weingarten, Molly Tzu-Yu Lin, Moritz Kränzlein, Agnes Fietz, Iris Kachel, José Hurst, Sven Schnichels and Friederike Adams*

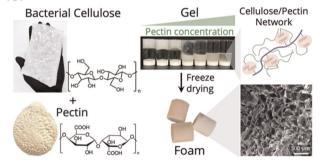
391



Immobilization and electroactive switching of bovine serum albumin on polypyrrole functionalized bioelectroactive surfaces

Danfeng Cao, Mohammad Javad Jafari, Erik Hultin, Anton Nordin, Jacob Rönnqvist, Yusheng Yuan, Emma Rörby, Jan-Ingvar Jönsson, Thomas Ederth, Jose G. Martinez and Edwin W. H. Jager*

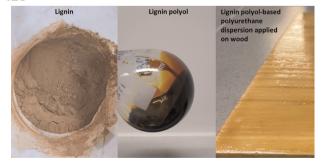
407



Modifying bacterial cellulose dispersions with deep eutectic solvent and pectin to tune the properties of open-celled foams

Hareesh Iyer, Aban Mandal, Michael Holden and Eleftheria Roumeli*

420



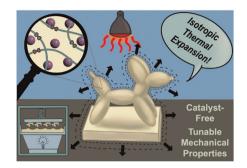
Scaling up lignin-based polyols for PU coatings

Leire Lorenzo, Walter Pitacco, Nour Mattar, Ibrahima Faye, Belén Maestro and Pablo Ortiz*

428

3D printable polymer foams with tunable expansion and mechanical properties enabled by catalyst-free dynamic covalent chemistry

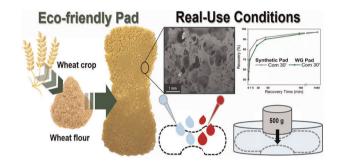
Rebecca M. Johnson, Ariel R. Tolfree, Gustavo Felicio Perruci, Lyndsay C. Ayers, Niyati Arora, Emma E. Liu, Vijayalakshmi Ganesh, Hongbing Lu and Ronald A. Smaldone*



438

Assessing the properties of protein foams as an alternative absorbent core layer in disposable sanitary pads

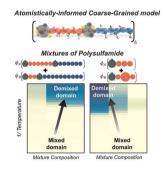
Athanasios Latras, Mercedes A. Bettelli, Pamela F. M. Pereira, Amparo Jiménez-Quero, Mikael S. Hedenqvist and Antonio J. Capezza*



453

Coarse-grained molecular dynamics simulations of mixtures of polysulfamides

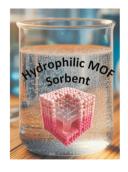
Jay Shah and Arthi Jayaraman*



469

Thiol-ene click reaction: a new pathway to hydrophilic metal-organic frameworks for water purification

Mingyuan Fang, Riansares Muñoz-Olivas, Carmen Montoro* and Mona Semsarilar*



480



Arginine-functionalised hydrogels as a novel atmospheric water-harvesting material

Moki K. Thanusing, Brett L. Pollard and Luke A. Connal*