Soft Matter

Where physics meets chemistry meets biology for fundamental soft matter research

rsc.li/soft-matter-journal

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 1744–6848 CODEN SMOABF 20(31) 6083–6304 (2024)

Cover
See Douglas G. Hayes, Sai Venkatesh Pingali *et al.*, pp. 6109–6119.
Image reproduced by permission of Phoenix Pleasant; Oak Ridge Laboratory (ORNL) from *Soft Matter*, 2024, **20**, 6109.

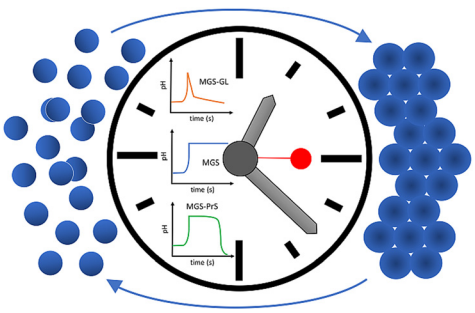
Inside cover
See Ken Yamamoto *et al.*, pp. 6120–6130.
Image reproduced by permission of Ken Yamamoto from *Soft Matter*, 2024, **20**, 6120.

TUTORIAL REVIEW

6092

Methylene glycol-sulfite pH-clocks for the time-programming of soft materials: advantages, limitations, and yet unexplored opportunities

Guido Panzarasa

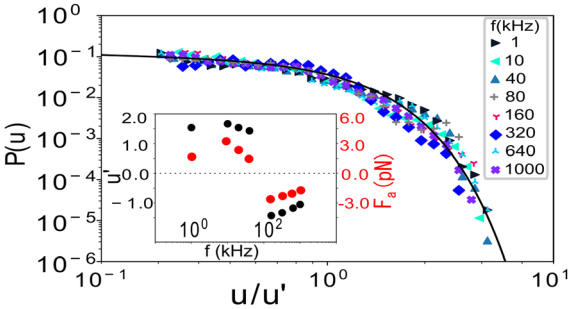


COMMUNICATION

6103

Power-law intermittency in the gradient-induced self-propulsion of colloidal swimmers

Nick Oikonomeas-Koppasis,* Stefania Ketzetzi, Daniela J. Kraft and Peter Schall



ROYAL SOCIETY OF CHEMISTRY

Royal Society of Chemistry approved training courses

Explore your options.
Develop your skills.
Discover learning that suits you.

Courses in the classroom, the lab, or online

Find something for every stage of your professional development. Search our database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit **rsc.li/cpd-training**

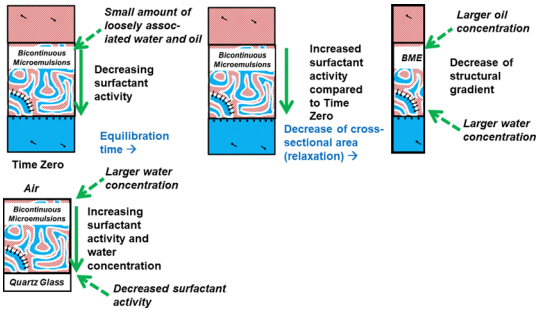
SAVE 10%

PAPERS

6109

Effect of equilibration time on the structural gradient in the vertical direction for bicontinuous microemulsions in Winsor-III and -IV systems

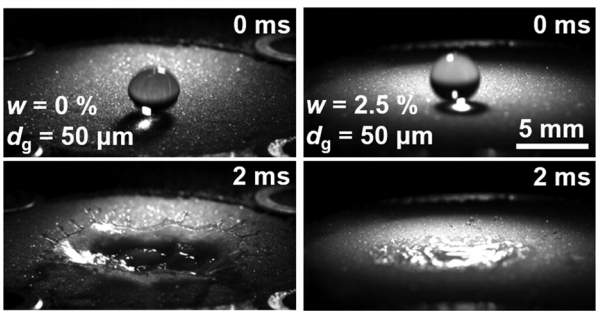
Douglas G. Hayes,* Brian A. Barth and Sai Venkatesh Pingali*



6120

Drop impact on wet granular beds: effects of water-content on cratering

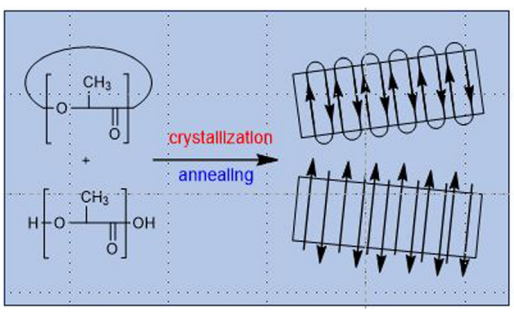
Wei Zhang, Hiroaki Katsuragi and Ken Yamamoto*



6131

Low molar mass cyclic poly(L-lactide)s: separate transesterification reactions of cycles and linear chains in the solid state

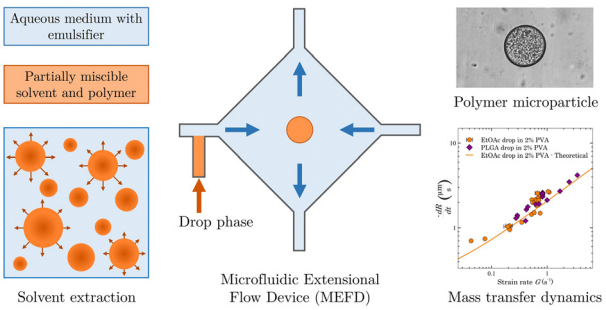
Hans R. Kricheldorf* and Steffen M. Weidner



6140

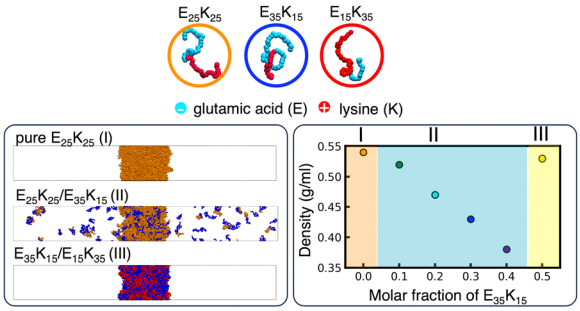
Microfluidic extensional flow device to study mass transfer dynamics in the polymer microparticle formation process

Suryavarshini Sundar, Ghata Nirmal, Suraj Borkar, Sachin Goel, Karthik Ramachandran, Ransom Kochhar, Eric J. Hukkanen, Renato A. Chiarella and Arun Ramachandran*



PAPERS

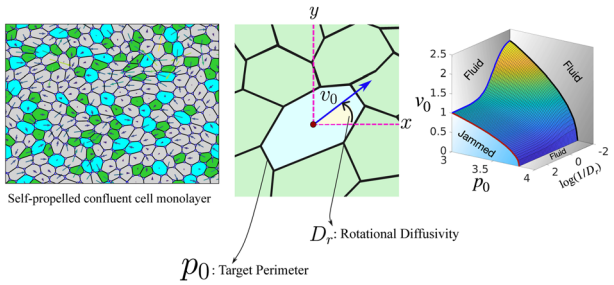
6150



Effects of charge asymmetry on the liquid–liquid phase separation of polyampholytes and their condensate properties

Yaxin An,* Tong Gao, Tianyi Wang, Donghui Zhang and Bhuvnesh Bharti

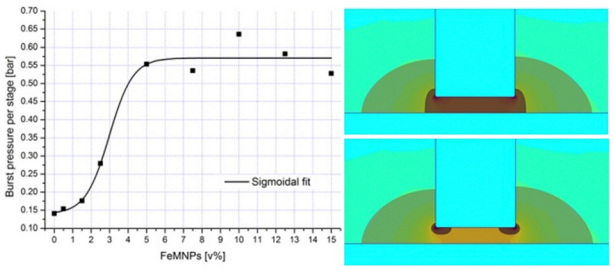
6160



Motility driven glassy dynamics in confluent epithelial monolayers

Souvik Sadhukhan,* Manoj Kumar Nandi, Satyam Pandey, Matteo Paoluzzi, Chandan Dasgupta, Nir S. Gov and Saroj Kumar Nandi*

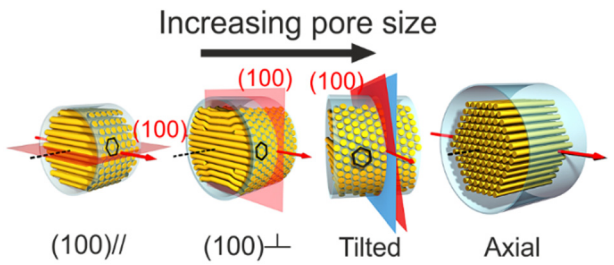
6176



High magnetization composite magnetic fluid: structure, magnetorheology and new sealing mechanism in rotating seals

Daniela Susan-Resiga, Vlad-Mircea Socoliuc,* István Borbáth, Tünde Borbáth, Septimiu Casian Tripon, Florica Bălănean and Ladislau Vékás*

6193



Orientational transitions of discotic columnar liquid crystals in cylindrical pores

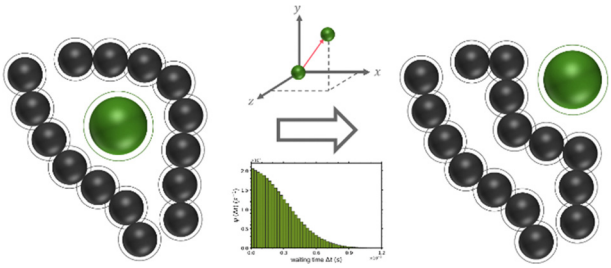
Rui-bin Zhang,* Marco A. Grunwald, Xiang-bing Zeng,* Sabine Laschat, Andrew N. Cammidge and Goran Ungar*

PAPERS

6204

A Monte Carlo simulation of tracer diffusion in amorphous polymers

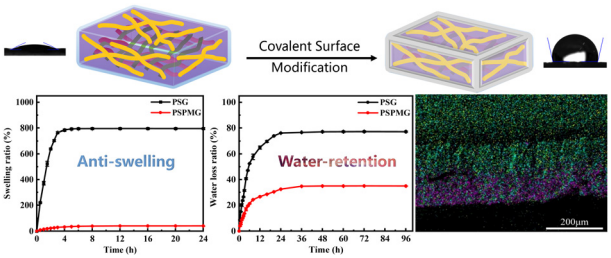
Ali Mansuri, Paras Vora, Tim Feuerbach, Judith Winck, A. W. P. Vermeer, Werner Hoheisel, Jan Kierfeld and Markus Thommes*



6215

A novel strategy to construct hydrogels with anti-swelling and water-retention abilities by covalent surface modification

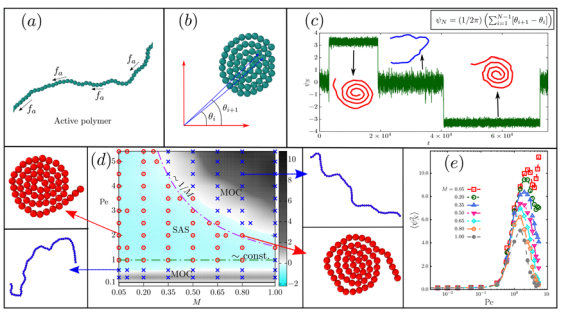
Peng Yu, Yanru Zhao, Xinjin Li, Huijuan Lin, Shasha Song, Xiangye Li* and Yunhui Dong



6221

Inertia and activity: spiral transitions in semi-flexible, self-avoiding polymers

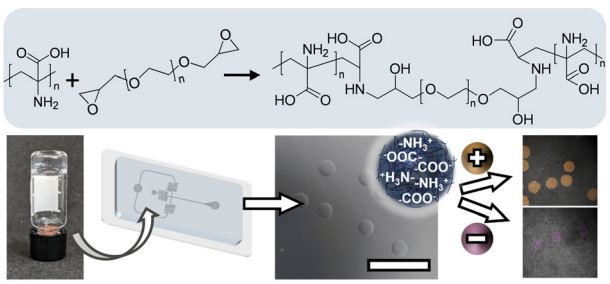
Chitrak Karan, Abhishek Chaudhuri and Debasish Chaudhuri*



6231

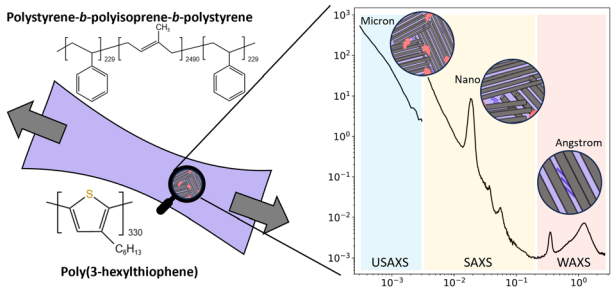
Engineering poly(dehydroalanine)-based gels *via* droplet-based microfluidics: from bulk to microspheres

Hannah F. Mathews, Tolga Çeper, Tobias Speen, Céline Bastard, Selin Bulut, Maria I. Pieper, Felix H. Schacher, Laura De Laporte and Andrij Pich*



PAPERS

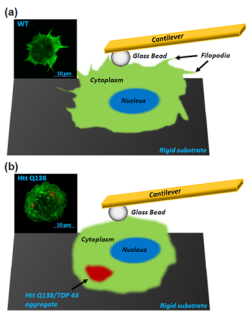
6247



Morphology of poly-3-hexyl-thiophene blends with styrene–isoprene–styrene block-copolymer elastomers from X-ray and neutron scattering

Sage C. Scheiwiller, Jitendra P. Mata and Lilo D. Pozzo*

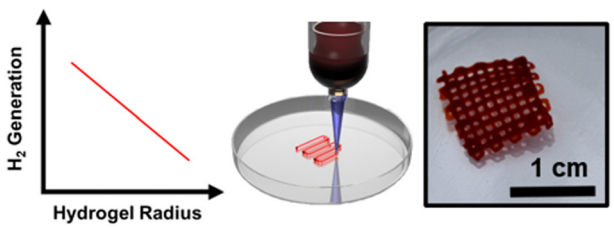
6266



Soft glassy rheology of single cells with pathogenic protein aggregates

Shatruhan Singh Rajput, Surya Bansi Singh, Deepa Subramanyam* and Shivprasad Patil*

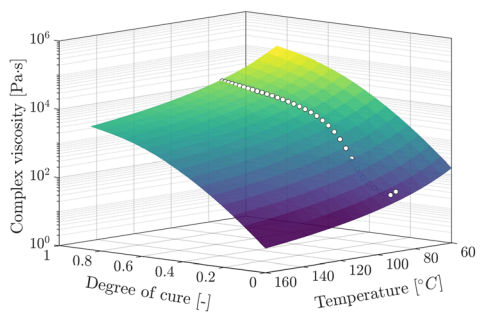
6275



Biopolymer-supramolecular polymer hybrids for photocatalytic hydrogen production

Jacob E. Kupferberg, Zois Syrgiannis, Luka Đorđević, Eric P. Bruckner, Tyler J. Jaynes, Hakim H. Ha, Evan Qi, Kristen S. Wek, Adam J. Dannenhoffer, Nicholas A. Sather, H. Christopher Fry, Liam C. Palmer and Samuel I. Stupp*

6289



Thermo-rheological and kinetic characterization and modeling of an epoxy vitrimer based on polyimine exchange

Niklas Lorenz,* William E. Dyer and Baris Kumru

CORRECTION

6302

Correction: Structure formation of PNIPAM microgels in foams and foam films

Matthias Kühnhammer, Kevin Gräff, Edwin Loran, Olaf Soltwedel, Oliver Löhmann, Henrich Frielinghaus and Regine von Klitzing*