Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

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 22(4) 829–1072 (2026)

Cover
See Fatemeh Naderi Samani and Reza Foudazi, pp. 838–859.
Image reproduced by permission of Fatemeh Naderi Samani from *Soft Matter*, 2026, **22**, 838.
Image created using AI.

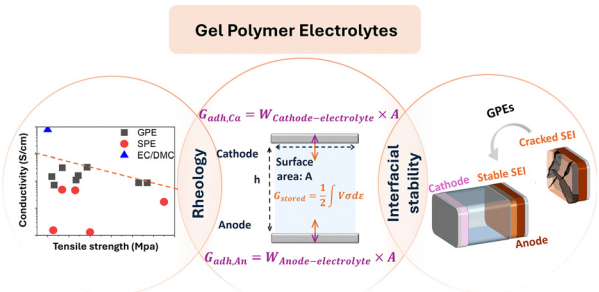
Inside cover
See C. Arauz-Moreno *et al.*, pp. 860–872.
Image reproduced by permission of Carlos Arauz-Moreno from *Soft Matter*, 2026, **22**, 860.

PERSPECTIVE

838

Gel polymer electrolytes: definitions, classification, rheology, and interfacial properties

Fatemeh Naderi Samani and Reza Foudazi*

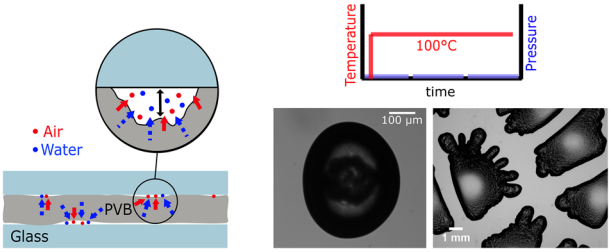


PAPERS

860

Bubble growth in a confined heated polymer: the example of safety glass

C. Arauz-Moreno,* K. Piroird and E. Lorenceau



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%

Registered charity number: 207890

Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

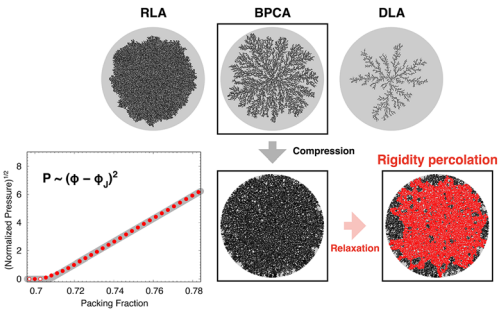
Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

873

Compression-driven jamming in porous cohesive aggregates

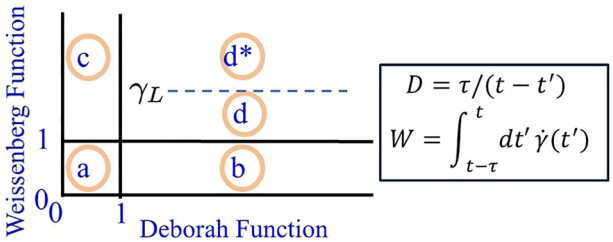
Sota Arakawa



884

Viscoelastic stress relaxation, fast and slow

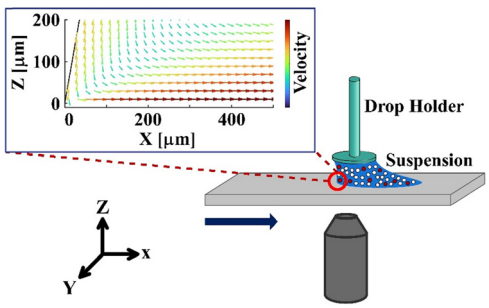
H. Henning Winter



892

Dynamic wetting by concentrated granular suspensions

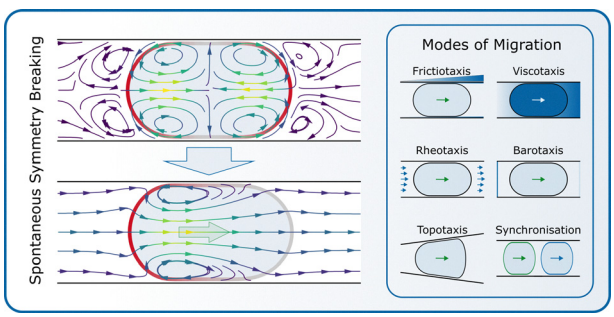
Reza Azizmalayeri, Peyman Rostami, Thomas Witzmann, Christopher O. Klein and Günter K. Auernhammer*



907

Modes of mechanical guidance of adhesion-independent cell migration

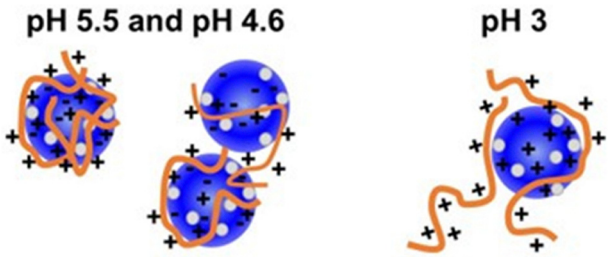
Hanna Luise Gertack, Peter A. E. Hampshire, Claudia Wohlgemuth, Ricard Alert and Sebastian Aland*



Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

926



The role of charge regulation on casein–chitosan complexation at low pH

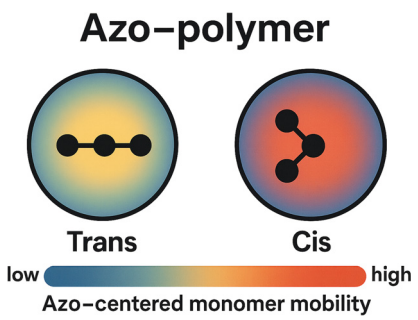
Rafael Leonardo Cruz Gomes da Silva, Nina S. Wang, Fernando L. Barroso da Silva and Denise F. S. Petri*

936

Development of self-assembled peptide hydrogels containing matrix-metalloproteinase degradable motifs for 3D lung cancer models

Burcu Sırma Tarım, Sedef Tamburacı and Ayben Top*

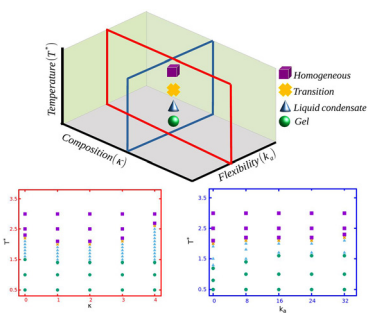
949



Isomer geometry controls local mobility in azopolymers: coarse-grained simulation insights

Cristian Balbuena

958



Effects of strong, monovalent and short-ranged monomer–monomer interactions on the phase separation of polymeric macromolecules

Masoud Mirzaei and Hossein Fazli*

This journal is © The Royal Society of Chemistry 2026

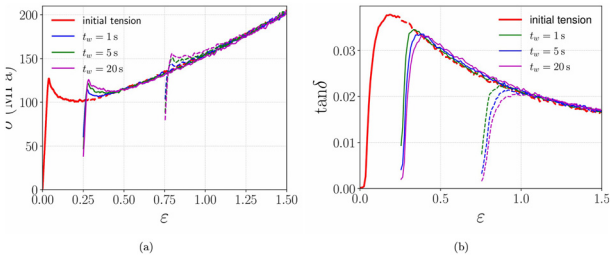
Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

967

Memory and recovery effects in the strain hardening regime of glassy polymers: theory and simulations

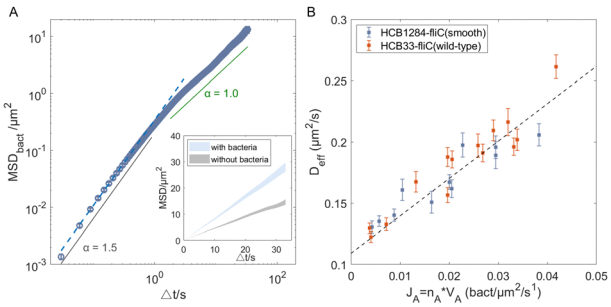
Thomas C. Merlette, Jérôme Hem, Caroline Crauste-Thibierge, Sergio Ciliberto, Jérôme Bikard and Didier R. Long*



979

Swimming velocity modulates enhanced diffusion in bacterial suspensions

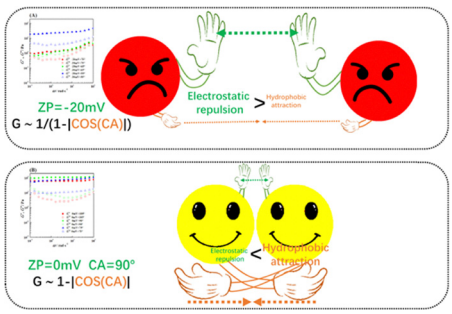
Shirui Ruan, Rui He,* Rongjing Zhang* and Junhua Yuan*



988

Insights into emulsion viscoelasticity correlated with particle hydrophobicity and surface charge

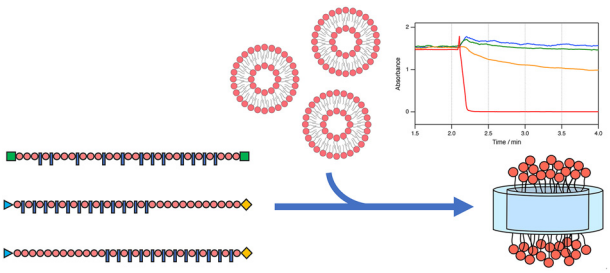
Yulong Jiang, Danhua Xie,* Jinquan Zheng and Jianbo Wu



994

Influence of block microstructure on the interaction of styrene-maleic acid copolymer aggregates and lipid nanodiscs

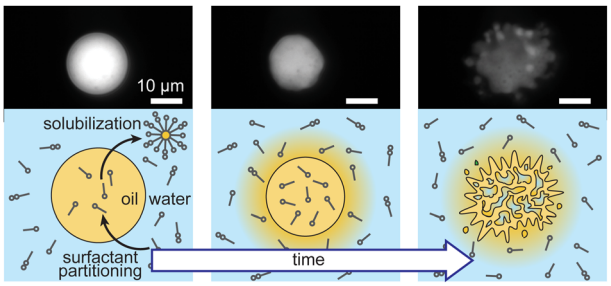
George M. Neville, Aya A. Nasser, James Doutch, Stephen King, Pedro Estrela, Paul Whitley, Gareth J. Price* and Karen J. Edler*



Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

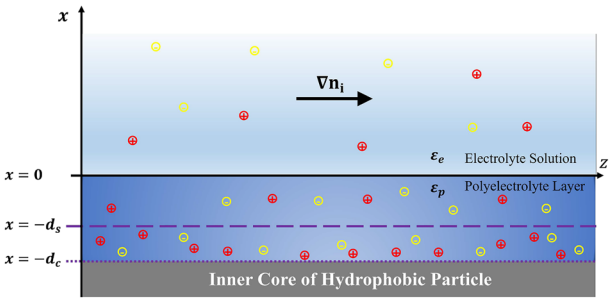
1008



Nonequilibrium surfactant partitioning into microdroplets generates local phase inversion conditions and interfacial instability

Samuel G. Birrer, Sanjana Krishna Mani, Bryan Kaehr, Ayusman Sen and Lauren D. Zarzar*

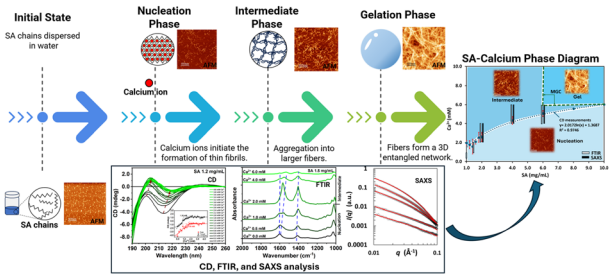
1020



Impact of slipping plane location and ion-partitioning on the diffusiophoresis of soft particles with hydrophobic inner core

Santanu Saha,* Saurabh K. Maurya, Hiroyuki Ohshima and Partha P. Gopmandal

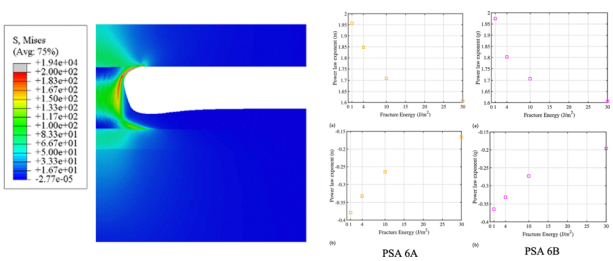
1033



Structural phases in Ca^{2+}-triggered alginate assembly and gelation: circular dichroism-guided multimodal analysis

Tatsuki Haga, Satoshi Hashimoto, Masaya Yoshida, Yudai Ono, Takeharu Haino, Yasuyuki Maki, Koichi Matsuo* and Mohamed I. A. Ibrahim*

1044



Stretching and debonding of adhesive fibril

Krupal Patel,* Matteo Ciccotti and Etienne Barthel

This journal is © The Royal Society of Chemistry 2026

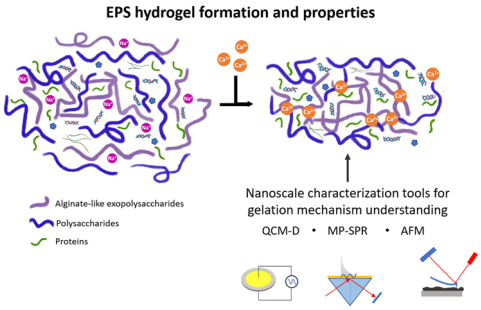
Open Access Article. Published on 28 January 2026. Downloaded on 2/19/2026 6:55:31 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

1054

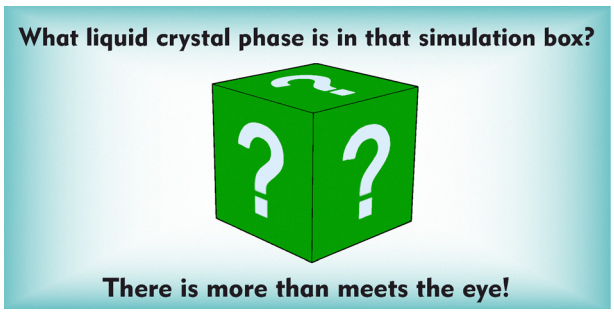
Understanding extracellular polymeric substances (EPS)-based hydrogel formation and properties at the nanoscale through MP-SPR and QCM-D techniques

Lisa Lopes da Costa, Abdo Bou-Sarkis, Corinne Rondeau-Mouro, Yolaine Bessiere, Céline Moreau and Ana Villares*



COMMENT

1066

Comment on "Coarsening in bent-core liquid crystals: a molecular dynamics study" by N. Birdi, N. B. Wilding, S. Puri and V. Banerjee, *Soft Matter*, 2025, 21, 4606

Wojciech Tomczyk* and Piotr Kubala