

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.

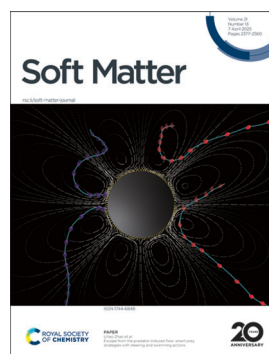
IN THIS ISSUE

ISSN 1744–6848 CODEN SMOABF 21(13) 2377–2560 (2025)



Cover

See Paul A. Janmey *et al.*, pp. 2400–2412.
Image reproduced by permission of Jakub A. Kochanowski from *Soft Matter*, 2025, 21, 2400.



Inside cover

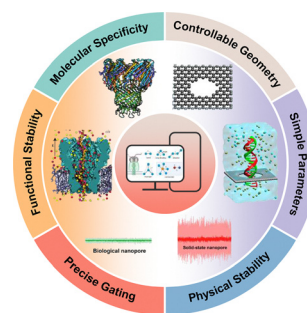
See Lihao Zhao *et al.*, pp. 2413–2421.
Image reproduced by permission of Lihao Zhao, Bocheng Li and Jingran Qiu from *Soft Matter*, 2025, 21, 2413.

PERSPECTIVE

2385

Probing nanopores: molecular dynamics insights into the mechanisms of DNA and protein translocation through solid-state and biological nanopores

Yuanshuo Zhang and Mingming Ding*

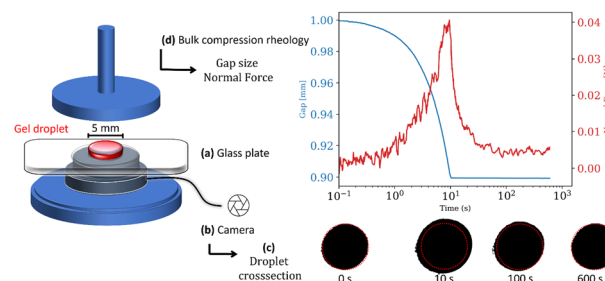


PAPERS

2400

Poroelasticity and permeability of fibrous polymer networks under compression

Paul Mollenkopf, Jakub A. Kochanowski, Yifei Ren, Kyle H. Vining, Paul A. Janmey* and Prashant K. Purohit



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

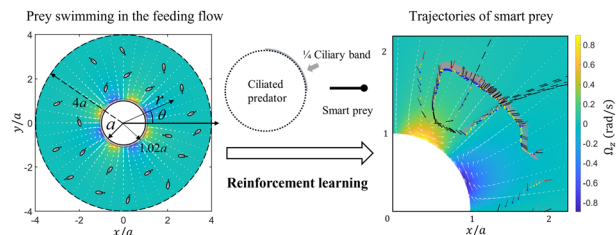
**SAVE
10%**



2413

Escape from the predator-induced flow: smart prey strategies with steering and swimming actions

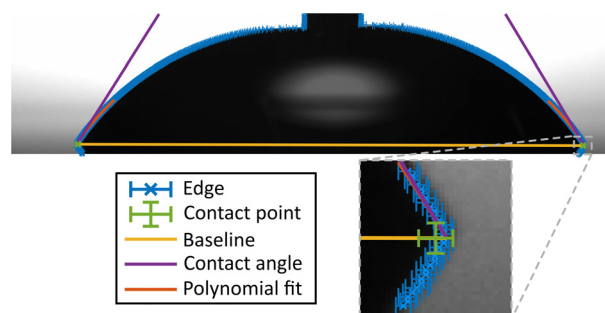
Bocheng Li, Jingran Qiu and Lihao Zhao*



2422

In situ error analysis in contact angle goniometry

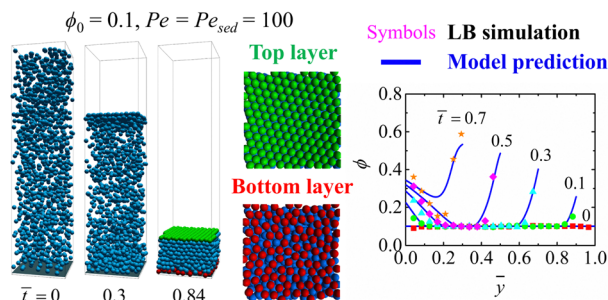
Heikki A. Nurmi,* Gentrit Zenuni, Sakari Lepikko, Reetta Saine, Maja Vuckovac and Robin H. A. Ras*



2430

Microstructural evolution in drying colloidal films driven by evaporation and sedimentation: lattice Boltzmann simulation and a mathematical model

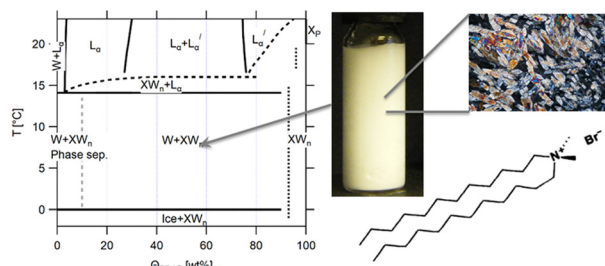
Jinseong Yun, Byoungjin Chun* and Hyun Wook Jung*



2445

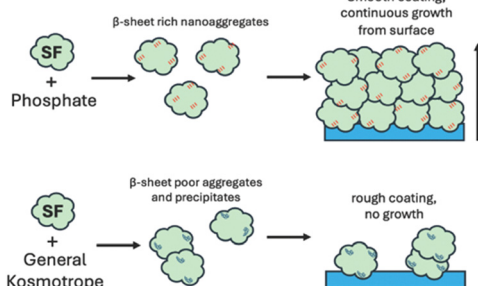
Physical science of the didodecyldimethylammonium bromide–water system: 1. Equilibrium phase behaviour

Louisa Reissig,* Wim Pyckhout-Hintzen, Simon Dalglish, Andrew R. Mount, Michael E. Cates, David J. Fairhurst* and Stefan E. Egelhaaf



PAPERS

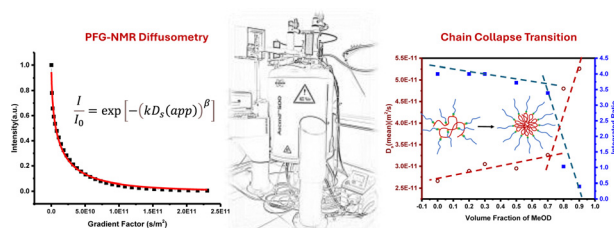
2461



The role of phosphate in silk fibroin self-assembly: a Hofmeister study

Caleb Wigham, Vrushali Varude, Henry O'Donnell and R. Helen Zha*

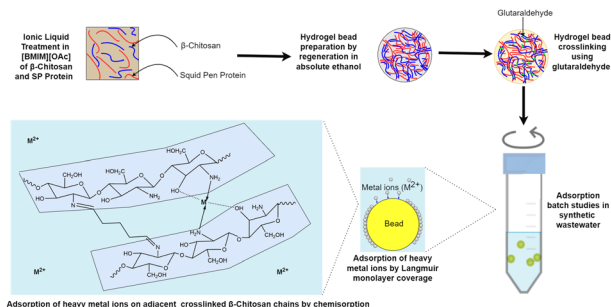
2471



Tracking solvent-induced conformational collapse of periodically grafted amphiphilic polymers using PFG NMR diffusometry

Harshita Sardana, B. V. N. Phani Kumar* and S. Ramakrishnan*

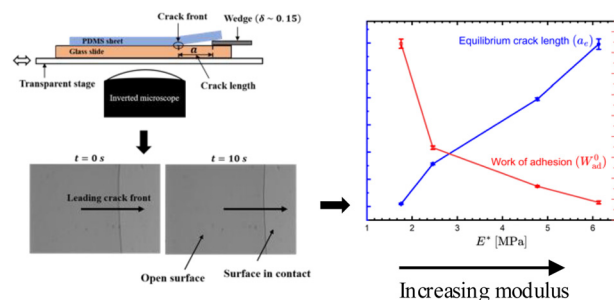
2480



Preparation of hybrid β-chitosan – squid pen protein hydrogel beads by ionic liquid regeneration for adsorption of copper(II) and zinc(II) from wastewater

Liyan Moralez, Pedro Nakasu* and Jason Hallett*

2493



Adhesion study at the interface of a PDMS-elastomer and borosilicate glass-slide: effect of modulus and thickness of the elastomer

Susheel Kumar, Chiranjit Majhi, Krishnacharya Khare and Manjesh K. Singh*

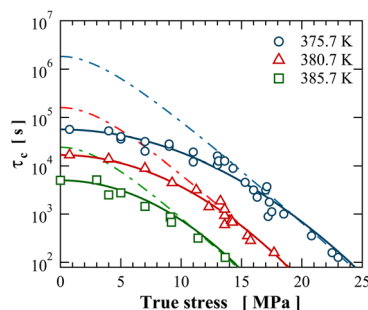


PAPERS

2502

Eyring theory for plasticity in amorphous polymers violates Curie's principle

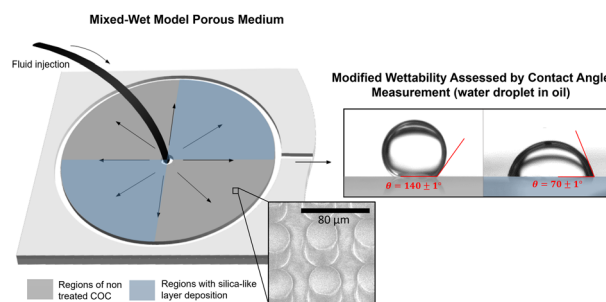
Thomas C. Merlette, Elian Masnada, Paul Sotta and Didier R. Long*



2509

Fabrication of COC micromodels with wettability heterogeneities: method and influence on fluid transport

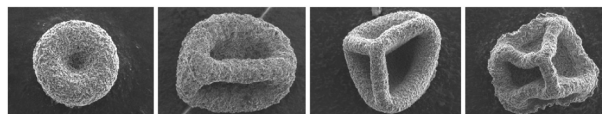
Camille Brigodiot,* Elliot Speirs, Cédric Guyon, Michaël Tatouliau and Nicolas Pannacci



2518

Evaporation driven buckling of a drop laden with graphene oxide nanosheets

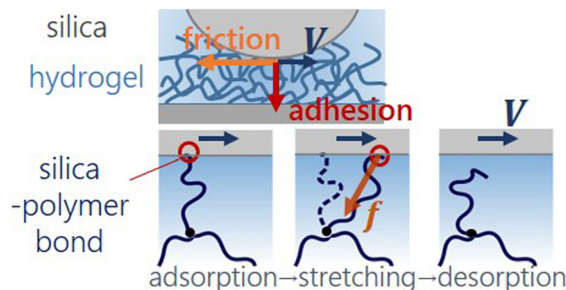
Suriya Prakash, Eva Krolis, Alvaro Marin and Lorenzo Botto*



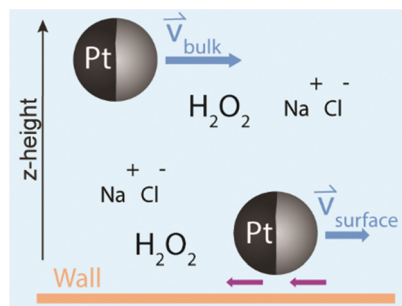
2529

Molecular adsorption induces normal stresses at frictional interfaces of hydrogels

Lola Ciapa, Yvette Tran, Christian Frétny, Antoine Chateaubinois* and Emilie Verneuil*



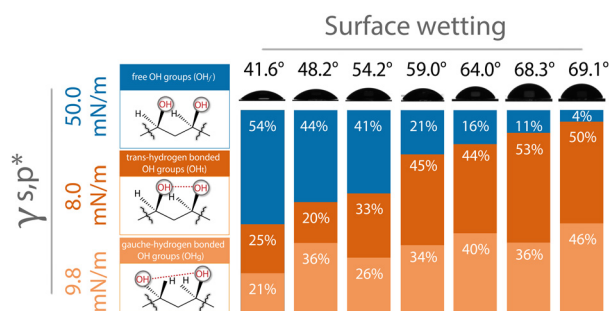
2541



The motion of catalytically active colloids approaching a surface

Julio Melio, Solenn Riedel, Ali Azadbakht, Silvana A. Caipa Cure, Tom M.J. Evers, Mehrad Babaei, Alireza Mashaghi, Joost de Graaf and Daniela J. Kraft*

2548



Quantitative rationalization of the unexpectedly moderate water wettability of poly(vinyl alcohol) surfaces: thermodynamic evaluation and prediction of surface hydrogen bonding

Zhuohuan Guo, Zhuoyuan Ma* and Dayang Wang*

