Open Access Article. Published on 12 February 2025. Downloaded on 10/24/2025 11:48:18 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 21(7) 1243–1428 (2025)

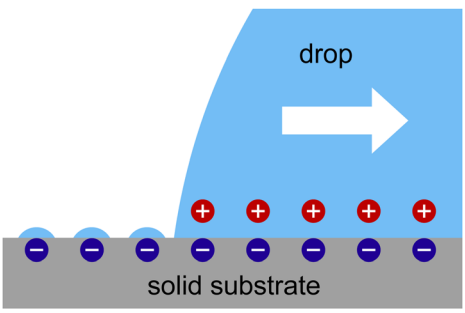
Cover
See Kuniyasu Saitoh and Brian P. Tighe, pp. 1263–1268. Image reproduced by permission of Kuniyasu Saitoh from *Soft Matter*, 2025, **21**, 1263.

REVIEW

1251

Liquid slide electrification: advances and open questions

Aaron D. Ratschow, Hans-Jürgen Butt,* Steffen Hardt and Stefan A. L. Weber

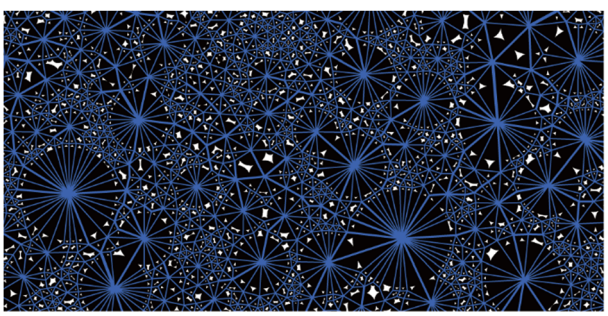


COMMUNICATION

1263

Jamming transition and normal modes of polydispersed soft particle packing

Kuniyasu Saitoh* and Brian P. Tighe



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 12 February 2025. Downloaded on 10/24/2025 11:48:18 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

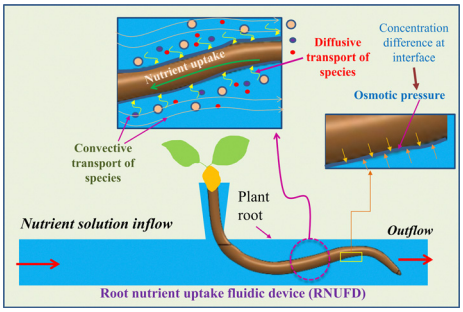
Open Access Article. Published on 12 February 2025. Downloaded on 10/24/2025 11:48:18 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

1269

Flow environment affects nutrient transport in soft plant roots

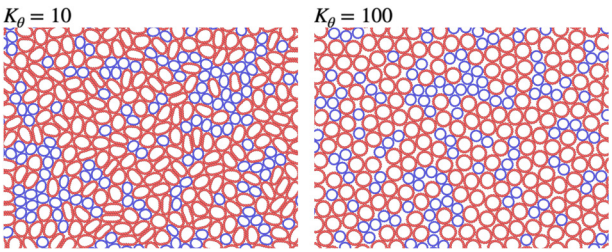
Sumit Kumar Mehta, Anirudha Talukdar, Suraj Panja, Jinmay Kalita, Somchai Wongwises and Pranab Kumar Mondal*



1286

Two-dimensional squishy glass: yielding under oscillatory shear

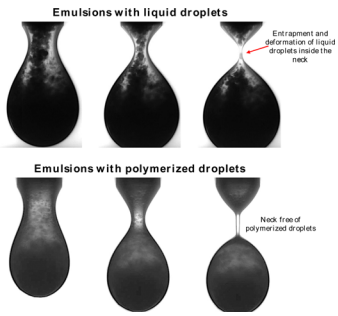
Sayantan Ghosh, Rahul Nayak, Satyavani Vemparala* and Pinaki Chaudhuri*



1296

Pinch-off dynamics of emulsion filaments before and after polymerization of the internal phase

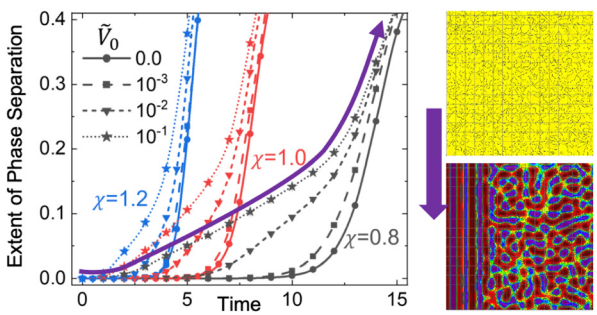
Parisa Bazazi* and Howard A. Stone



1308

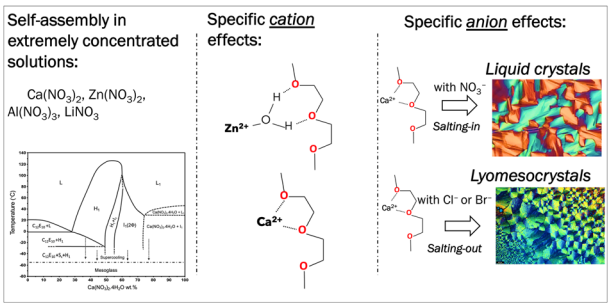
The effect of selective surface interaction on polymer phase separation with explicit polydispersity during polymerization

Hyeonmin Jeong, Junsi Gu, Paul Mwasame, Kshitish Patankar, Decai Yu and Charles E. Sing*



Open Access Article. Published on 12 February 2025. Downloaded on 10/24/2025 11:48:18 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

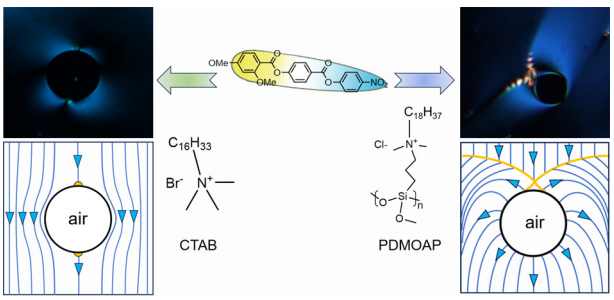
1323



Non-ionic surfactant self-assembly in calcium nitrate tetrahydrate and related salts

Yashfeen Zahid, Yizhen Li, Ömer Dag, Gregory G. Warr and Cemal Albayrak*

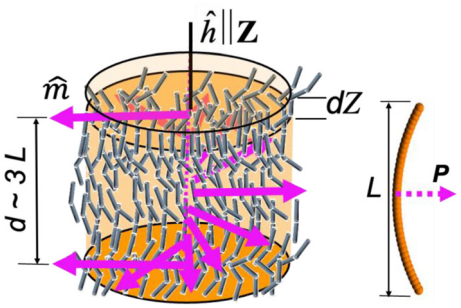
1333



Topological defects induced by air inclusions in ferroelectric nematic liquid crystals with ionic doping

Zhongjie Ma, Shengzhu Yi, Miao Jiang, Mingjun Huang, Satoshi Aya, Rui Zhang and Qi-Huo Wei*

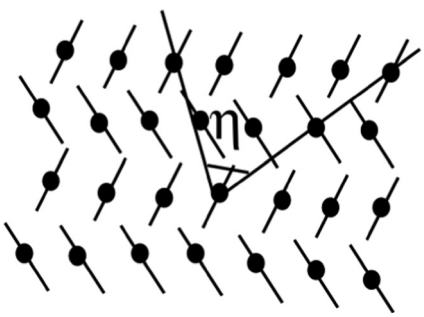
1341



Entropy stabilized form chirality in curved rod nematics: structure and symmetries

Alexandros G. Vanakaras, Edward T. Samulski* and Demetri J. Photinos

1353



Instabilities, thermal fluctuations, defects and dislocations in the crystal–R_I–R_{II} rotator phase transitions of *n*-alkanes

Soumya Kanti Ganguly and Prabir K. Mukherjee*

This journal is © The Royal Society of Chemistry 2025

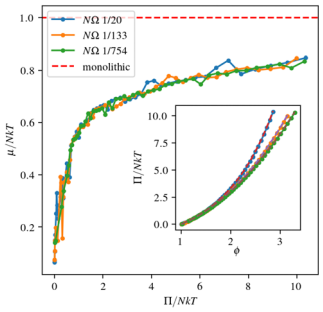
Open Access Article. Published on 12 February 2025. Downloaded on 10/24/2025 11:48:18 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

1363

A multi-body finite element model for hydrogel packings: linear response to shear

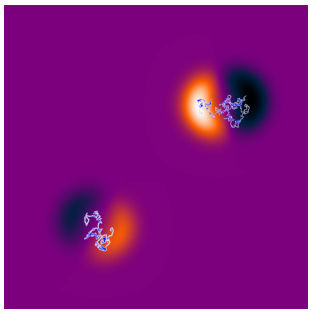
Ahmed Elgailani* and Craig E. Maloney



1373

One- and two-particle microrheology of soft materials based on optical-flow image analysis

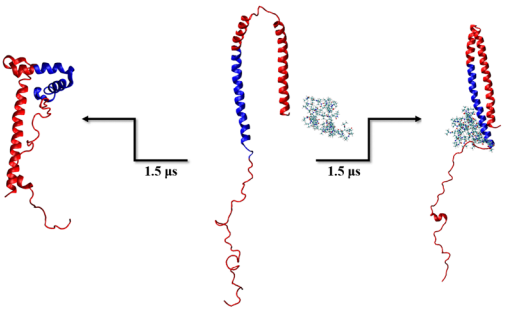
Matteo Brizioli, Manuel A. Escobedo-Sánchez, Patrick M. McCall, Yael Roichman, Veronique Trappe, Margaret L. Gardel, Stefan U. Egelhaaf, Fabio Giavazzi* and Roberto Cerbino*



1382

A study of alpha-synuclein and poly(*N*-isopropylacrylamide) complex formation through detailed atomistic simulations

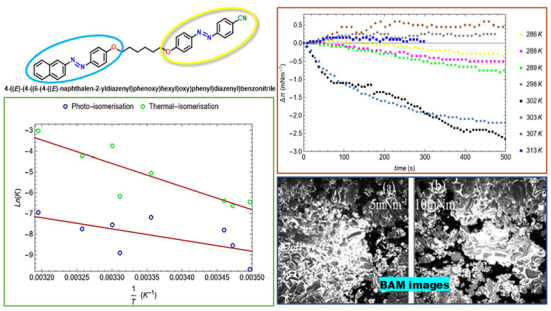
Sisem Ektirici and Vagelis Harmandaris*



1395

A study on the thermo-photoisomerization of a liquid crystalline dimer of cyanoazobenzene and naphthalene

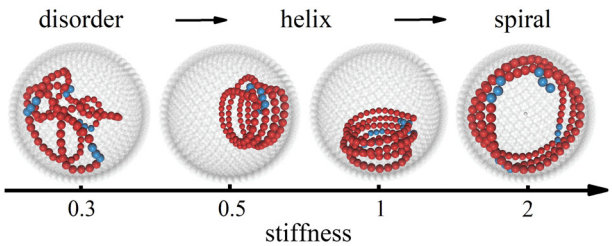
Mahima Rabari, A. K. Prajapati,* S. Mahesha, M. K. Akshaya and Bharat Kumar*



Open Access Article. Published on 12 February 2025. Downloaded on 10/24/2025 11:48:18 PM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

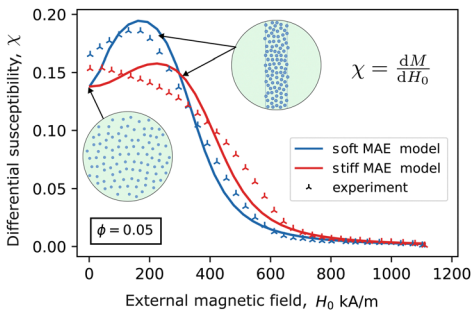
1401



Spiral and helical formation of passive and active polymers with stiffness heterogeneity in a spherical cavity

Ran Yan, Shihang Liu and Nanrong Zhao*

1416



Influence of matrix stiffness on microstructure evolution and magnetization of magneto-active elastomers

Mehran Roghani,* Dirk Romeis, Dmitry Borin and Marina Saphiannikova

This journal is © The Royal Society of Chemistry 2025