

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(27) 5263–5466 (2024)



Cover

See Farhang Radjai *et al.*, pp. 5296–5313.
Image reproduced by permission of Farhang Radjai from *Soft Matter*, 2024, 20, 5296.



Inside cover

See Rui Xiao, Huaping Wu *et al.*, pp. 5314–5323.
Image reproduced by permission of Ye Tian from *Soft Matter*, 2024, 20, 5314.

EDITORIAL

5271

Introduction to Soft Robotics

Anand Kumar Mishra, Zhihong Nie,* Jamie Paik and Robert Shepherd*

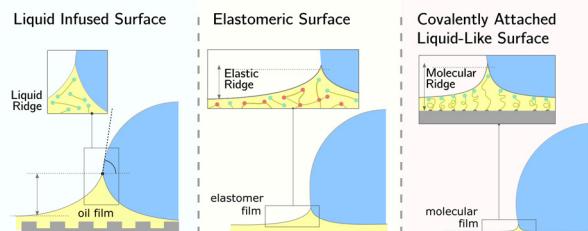


REVIEW

5273

Wetting on silicone surfaces

Lukas Hauer,* Abhinav Naga, Rodrique G. M. Badr, Jonathan T. Pham, William S. Y. Wong and Doris Vollmer



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%**

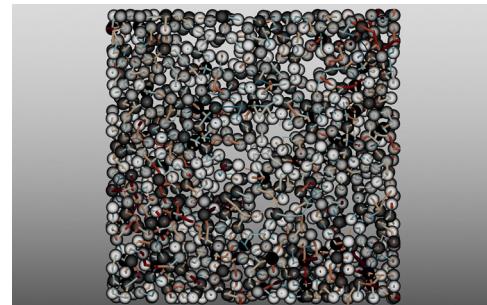


PAPERS

5296

Dynamic compaction of cohesive granular materials: scaling behavior and bonding structures

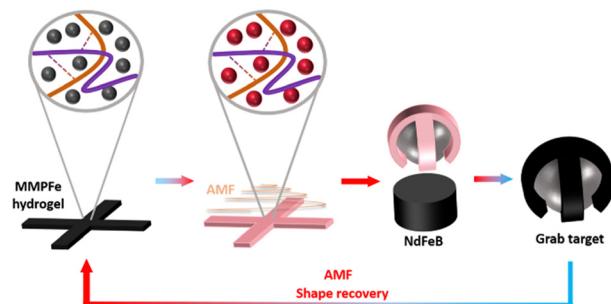
Max Sonzogni, Jean-Mathieu Vanson, Katerina Ioannidou, Yvan Reynier, Sébastien Martinet and Farhang Radjai*



5314

Magnetic-field induced shape memory hydrogels for deformable actuators

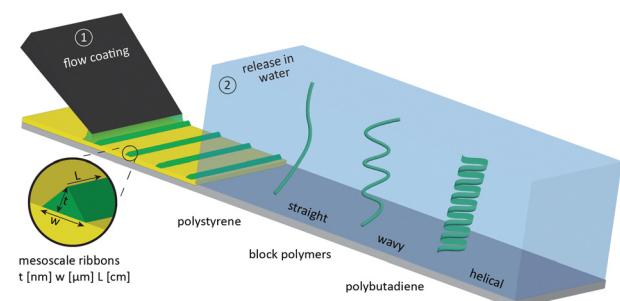
Ye Tian, Zhirui Xu, Hao Qi, Xiaojun Lu, Ting Jiang, Liqian Wang, Guang Zhang, Rui Xiao* and Huaping Wu*



5324

Fabricating mesoscale polymer ribbons with tunable mechanical properties via evaporative deposition and dewetting

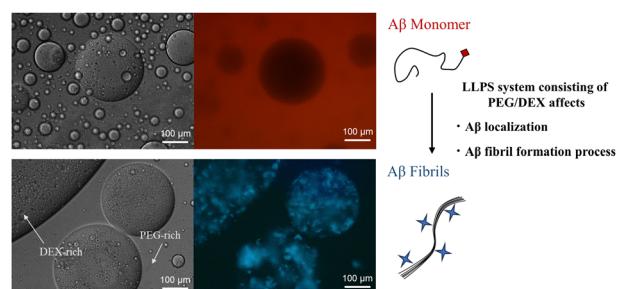
Cornelia Meissner, M. Saad Bhamla, Todd Emrick* and Alfred J. Crosby*



5331

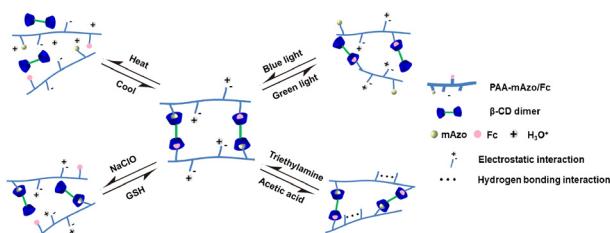
Liquid–liquid phase separation induced by crowding condition affects amyloid- β aggregation mechanism

Ryuki Kobayashi and Hideki Nabika*



PAPERS

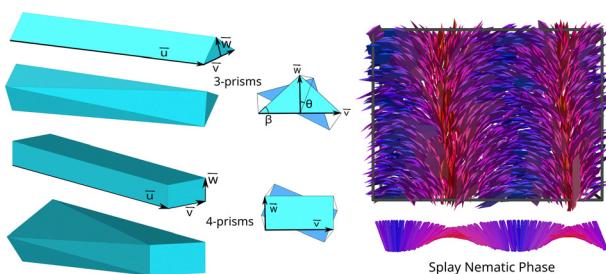
5343



A quadruple-stimuli responsive supramolecular hydrogel constructed from a poly(acrylic acid) derivative and β -cyclodextrin dimer

Hongchao Yan, Juan Wang, Xichan He, Dongsheng Yu, Yuan Qiu,* Yonggui Liao* and Xiaolin Xie

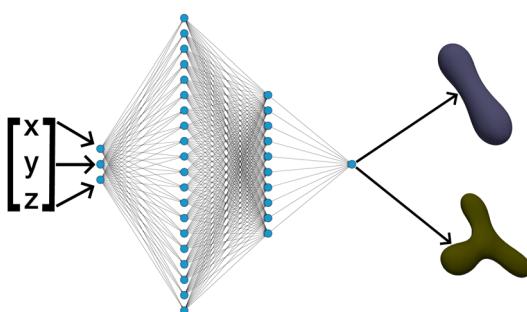
5351



The effect of particle geometry and initial configuration on the phase behavior of twisted convex n -prisms

Poshika Gandhi* and Anja Kuhnhold

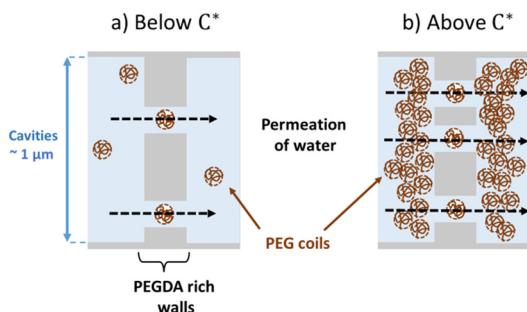
5359



Neural-network-based solver for vesicle shapes predicted by the Helfrich model

Yousef Rohanizadegan,* Hong Li and Jeff Z. Y. Chen*

5367



Tuning the water intrinsic permeability of PEGDA hydrogel membranes by adding free PEG chains of varying molar masses

Malak Alaa Eddine, Alain Carvalho, Marc Schmutz, Thomas Salez, Sixtine de Chateauneuf-Randon, Bruno Bresson, Nadège Pantoustier, Cécile Monteux* and Sabrina Belbekhouche*

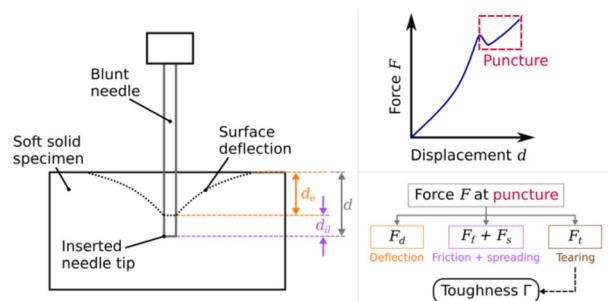


PAPERS

5377

Force decomposition and toughness estimation from puncture experiments in soft solids

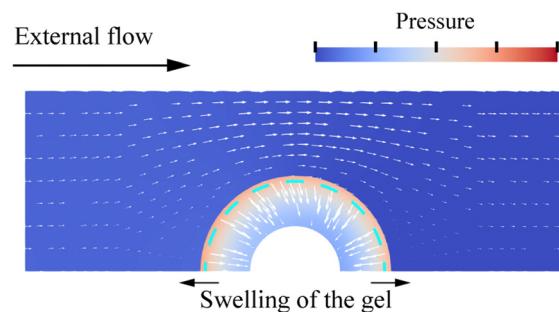
Pranav Shrestha,* Curtis Geffner, Matthew Jaffey, Zhongnan Wu, Martina Iapichino, Mattia Bacca and Boris Stoeber*



5389

A theory of hydrogel mechanics that couples swelling and external flow

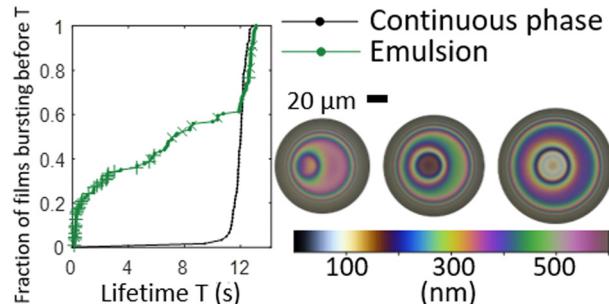
Zelai Xu, Pengtao Yue and James J. Feng*



5407

How emulsified droplets induce the bursting of suspended films of liquid mixtures

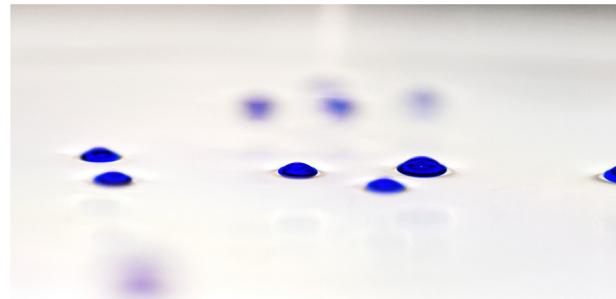
Léa Delance, Enric Santanach-Carreras, Nicolas Passade-Boupat, François Lequeux, Laurence Talini* and Emilie Verneuil



5417

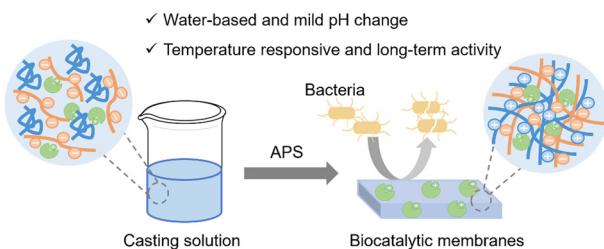
Electrically mediated self-assembly and manipulation of drops at an interface

Paul R. Kaneelil,* J. Pedro de Souza, Günther Turk, Amir A. Pahlavan and Howard A. Stone*



PAPERS

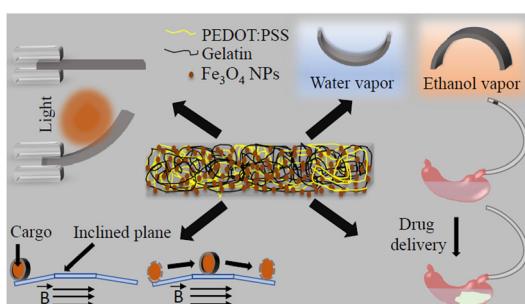
5425



Biocatalytic PEI–PSS membranes through aqueous phase separation: influence of casting solution pH and operational temperature

Lijie Li, Muhammad Irshad Baig, Wiebe M. de Vos and Saskia Lindhoud*

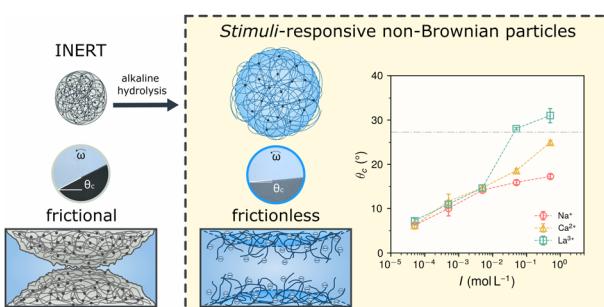
5435



Responsive soft actuator: harnessing multi-vapor, light, and magnetic field stimuli

Vipin Kumar and Dillip K. Satapathy*

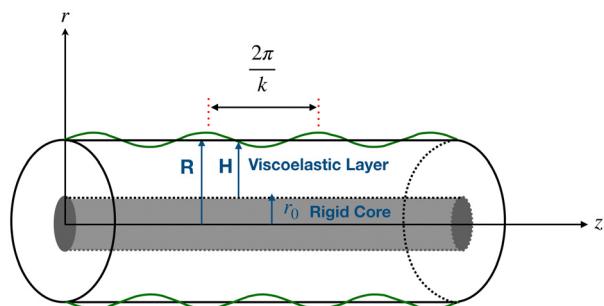
5447



Granular aqueous suspensions with controlled interparticular friction and adhesion

Lily Blaiset, Bruno Bresson, Ludovic Olanier, Élisabeth Guazzelli,* Matthieu Roché* and Nicolas Sanson*

5456



Plateau–Rayleigh instability of a soft layer coated on a rigid cylinder

Bharti, Andreas Carlson and Tak Shing Chan*

