

# Soft Matter

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## IN THIS ISSUE

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### Cover

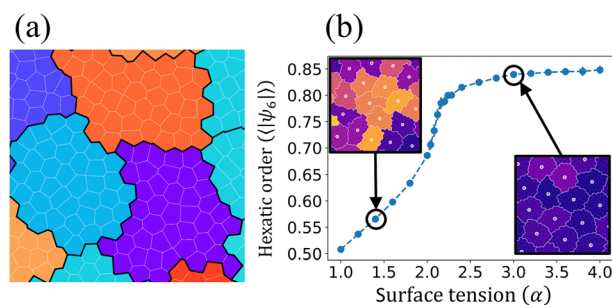
See Hossein Nemati and J. de Graaf, pp. 8337–8352. Image reproduced by permission of Hossein Nemati from *Soft Matter*, 2024, 20, 8337.

## PAPERS

8337

### The cellular Potts model on disordered lattices

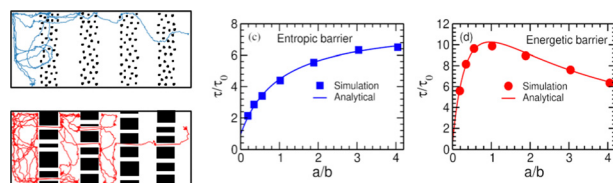
Hossein Nemati\* and J. de Graaf



8353

### Nature of barriers determines first passage times in heterogeneous media

Moumita Dasgupta,\* Sougata Guha, Leon Armbruster, Dibyendu Das and Mithun K. Mitra\*



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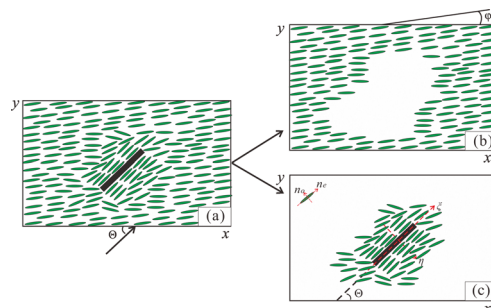
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8363

### A macroscopic magneto-optical response resulting from local effects in ferronematic liquid crystals

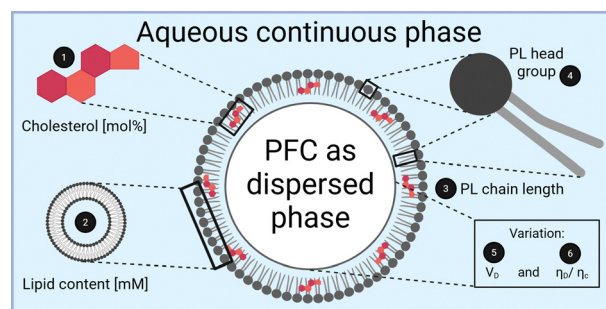
Xiangshen Meng, Xiaowei Li, Jian Li, Yueqiang Lin, Xiaodong Liu and Zhenghong He\*



8373

### Emulsifying mechanisms of phospholipids in high-pressure homogenization of perfluorocarbon nanoemulsions

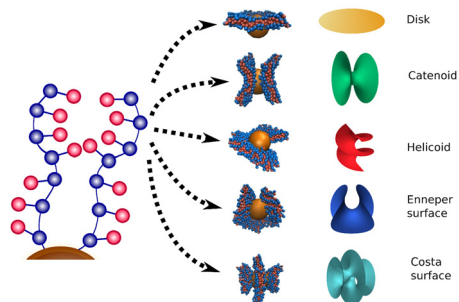
Larissa J. Lubitz, Harden Rieger and Gero Leneweit\*



8385

### Self-assembly of amphiphilic homopolymers grafted onto spherical nanoparticles: complete embedded minimal surfaces and a machine learning algorithm for their recognition

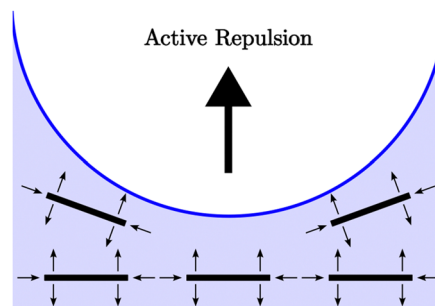
D. A. Mitkovskiy, A. A. Lazutin, A. L. Talis and V. V. Vasilevskaya\*



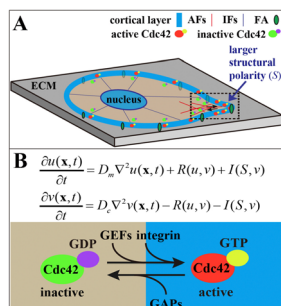
8395

### Controlling wall-particle interactions with activity

Luke Neville,\* Jens Eggers and Tanniemola B. Liverpool



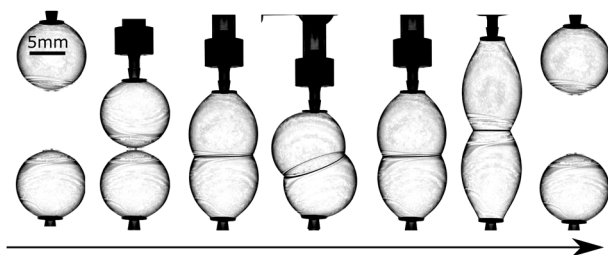
8407



## Chemo-mechanical model of cell polarization initiated by structural polarity

Hexiang Wang, Zhimeng Jia and Yuqiang Fang\*

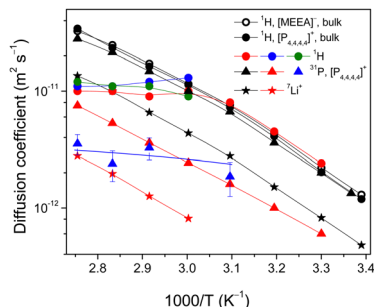
8420



## Bubbles and drops between circular frames: shape, force and stability analysis

Friedrich Walzel,\* Jonathan Dijoux, Leandro Jacomine, Élodie Harle, Pierre Muller, Thierry Charitat and Wiebke Drenckhan

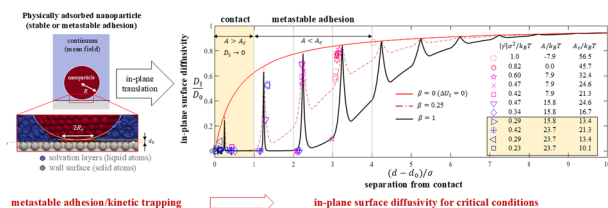
8436



## Nanoconfinement effects on the dynamics of an ionic liquid-based electrolyte probed by multinuclear NMR

Andrei Filippov,\* Maiia Rudakova, Victor P. Archipov and Faiz Ullah Shah\*

8446



## The surface diffusivity of nanoparticles physically adsorbed at a solid-liquid interface

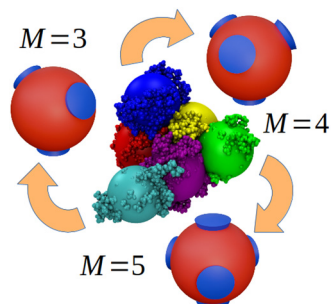
Troy Singletary, Nima Iranmanesh and Carlos E. Colosqui\*



8455

### Effective patchiness from critical points of a coarse-grained protein model with explicit shape and charge anisotropy

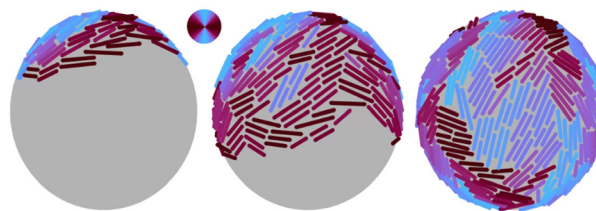
Jens Weimar, Frank Hirschmann and Martin Oettel\*



8468

### Strain rate controls alignment in growing bacterial monolayers

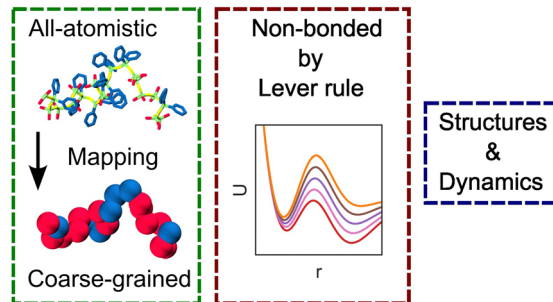
Blake Langeslay and Gabriel Juarez\*



8480

### Development of a coarse-grained molecular dynamics model for poly(dimethyl-co-diphenyl)siloxane

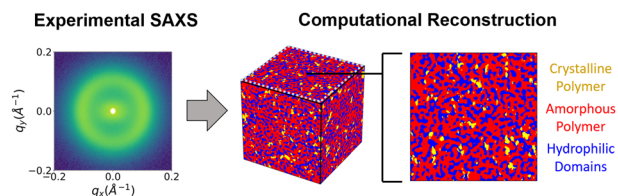
Weikang Xian, Amitesh Maiti, Andrew P. Saab and Ying Li\*



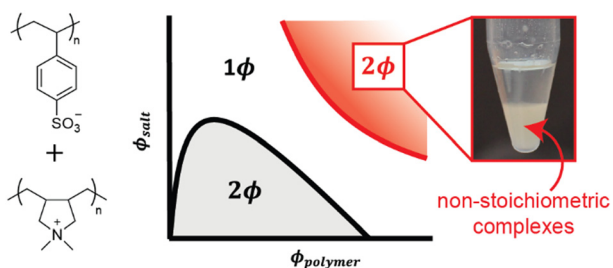
8493

### Random field reconstruction of three-phase polymer structures with anisotropy from 2D-small-angle scattering data

Stephen Kronenberger, Nitant Gupta, Benjamin Gould, Colin Peterson and Arthi Jayaraman\*



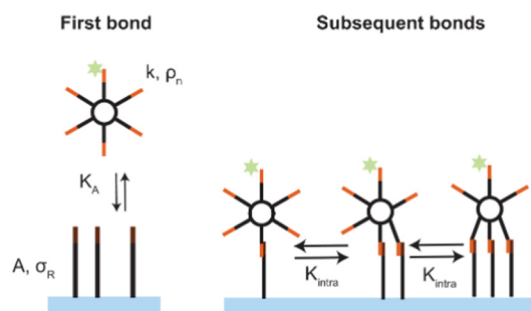
8505



### Segregative phase separation of strong polyelectrolyte complexes at high salt and high polymer concentrations

Conner H. Chee, Rotem Benharush, Lexi R. Knight and Jennifer E. Laaser\*

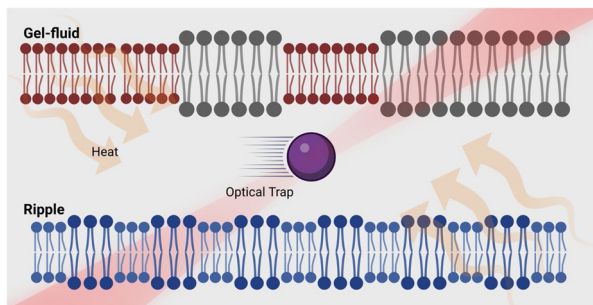
8515



### Optimality and cooperativity in superselective surface binding by multivalent DNA nanostars

Christine Linne, Eva Heemskerk, Jos W. Zwanikken, Daniela J. Kraft\* and Liedewij Laan\*

8524



### Mechanical characterization of freestanding lipid bilayers with temperature-controlled phase

Arash Yahyazadeh Shourabi, Roland Kieffer, Djanick de Jong, Daniel Tam\* and Marie-Eve Aubin-Tam\*

