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Soft Matter

Where physics meets chemistry meets biology for fundamental soft matter research

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IN THIS ISSUE

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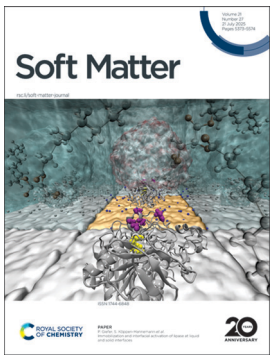


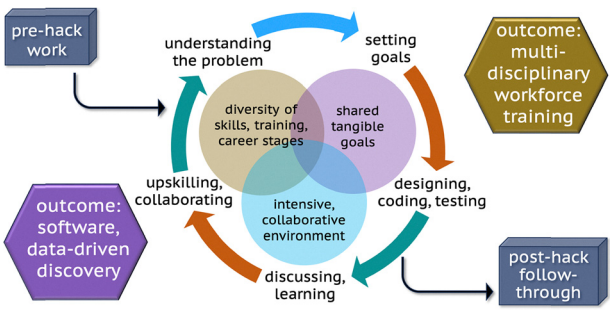
Cover
See P. Giefer, S. Köppen-Hannemann *et al.*, pp. 5398–5412. Image reproduced by permission of Patrick Giefer and Susan Köppen-Hannemann from *Soft Matter*, 2025, **21**, 5398.

TUTORIAL REVIEW

5381

Hacktive matter: data-driven discovery through hackathon-based cross-disciplinary coding

Megan T. Valentine* and Rae M. Robertson-Anderson*

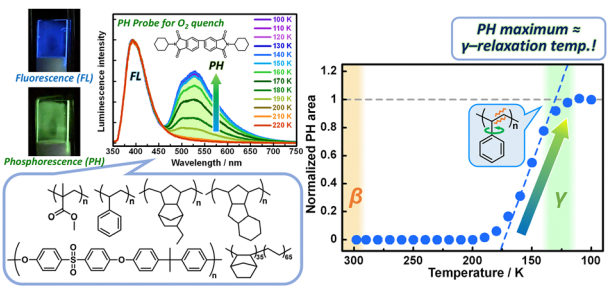


COMMUNICATION

5393

Precise detection of local relaxation of amorphous polymers at low temperatures *via* O_2 diffusion probed by a dual-luminescent imide compound

Rika Watanabe, Marina Doi, Haonan Liu, Masatoshi Tokita and Shinji Ando*



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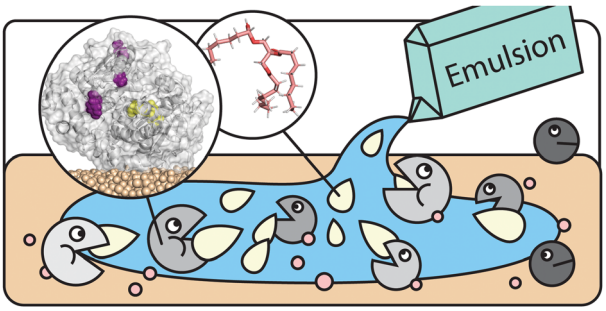
PAPERS

5398

Immobilization and interfacial activation of lipase at liquid and solid interfaces

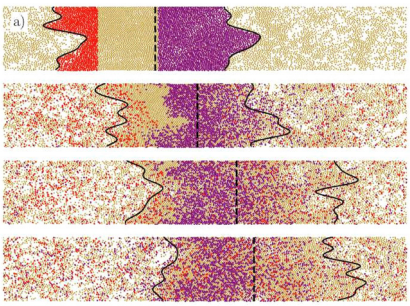
P. Giefer,* U. Fritsching, L. Colombi Ciacchi and S. Köppen-Hannemann*



5413

Dynamics and rupture of doped motility induced phase separation

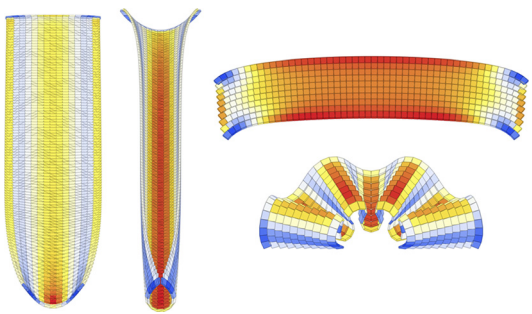
Rodrigo Fernández-Quevedo García,* Enrique Chacón, Pedro Tarazona and Chantal Valeriani*



5423

Self-limiting states of polar misfits: frustrated assembly of warped-jigsaw particles

Michael Wang and Gregory M. Grason



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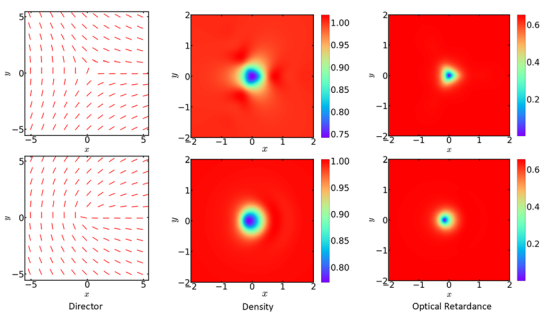
Self consistent field theory of isotropic–nematic interfaces and disclinations in a semiflexible molecule nematic

Longyu Qing* and Jorge Viñals



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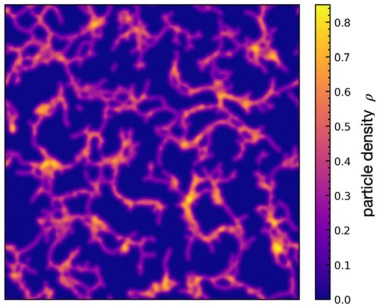
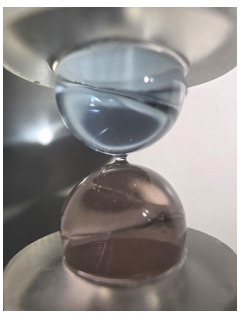
5459



Fluctuation induced network patterns in active matter with spatially correlated noise

Sebastian Fehlinger, Kai Cui, Arooj Sajjad, Heinz Koeppl and Benno Liebchen*

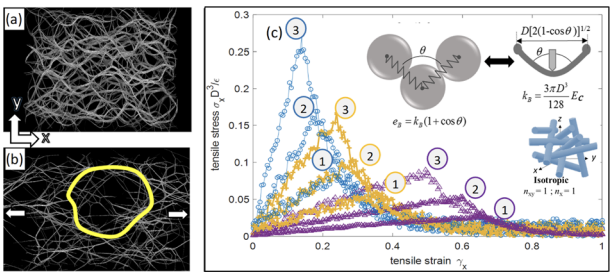
5468



Capillary-induced adhesive contact dynamics determines dissipation and flow structure in wetted hydrogel packings

Zohreh Farmani, Jing Wang, Ralf Stannarius and Joshua A. Dijksman*

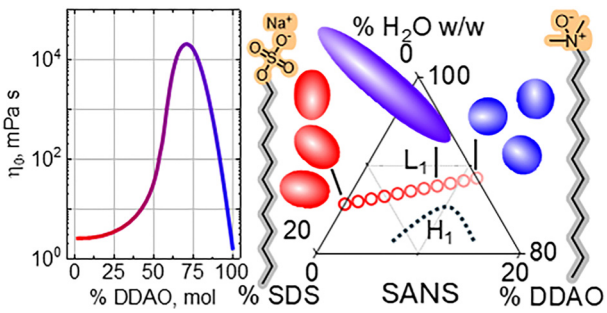
5480



Micromechanical modelling of cellulose hydrogel composites based on coarse-grained molecular dynamics

Mauricio R. Bonilla, Sridhar K. Kannam, Matthew T. Downton, Monika S. Doblin, Antony Bacic, Michael J. Gidley and Jason R. Stokes*

5494



SANS and rheology of elongated SDS–DDAO mixed micelles near the phase boundary

Luis M. G. Torquato, Gunjan Tyagi, Zain Ahmad, Liva Donina, Najet Mahmoudi, Rebecca Fong, Paul F. Luckham and João T. Cabral*

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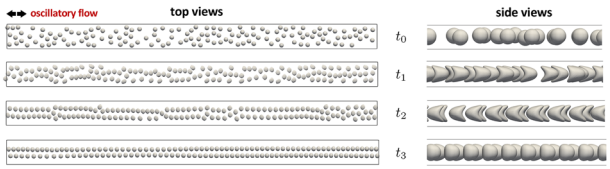
5503

Oscillatory flow improves hydrodynamic ordering of soft suspensions in rectangular channels

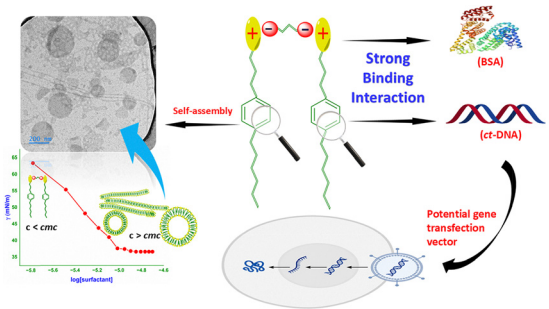
Paul C. Millett



5515

Unravelling the self-assembly of a novel cationic pseudo-gemini surfactant and its monomeric counterpart: interactions with DNA and BSA in aqueous medium at neutral pH

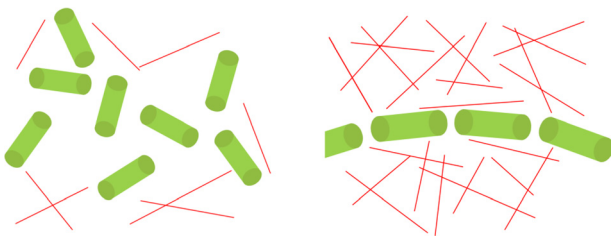
Homen Dahal, Sachin Soren, Shashi Kumar and Joykrishna Dey*



5529

Brownian dynamics simulation of the diffusion of rod-like nanoparticles in polymeric gels

Mohammad-Reza Rokhforouz, Don D. Sin, Sarah Hedtrich and James J. Feng*



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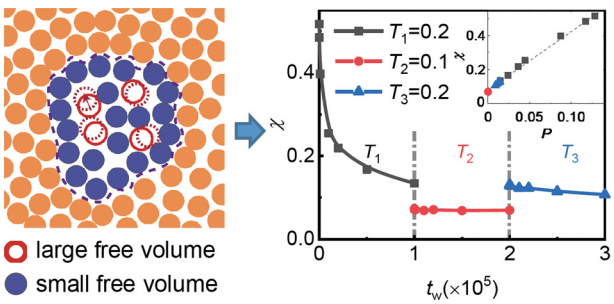
Unraveling molecular mechanisms of aging dynamics in the Kob–Andersen model: the role of free volume

Yifan Yang, Yuyuan Lu,* Yaozhang Yang, Xia Wang and Lijia An



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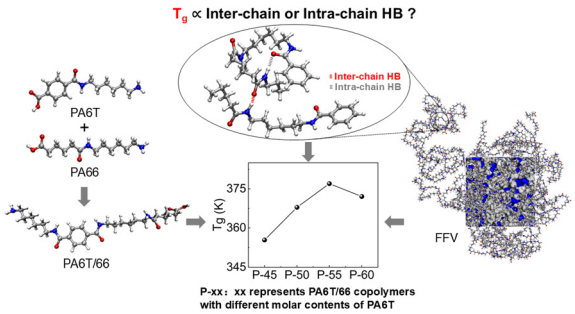
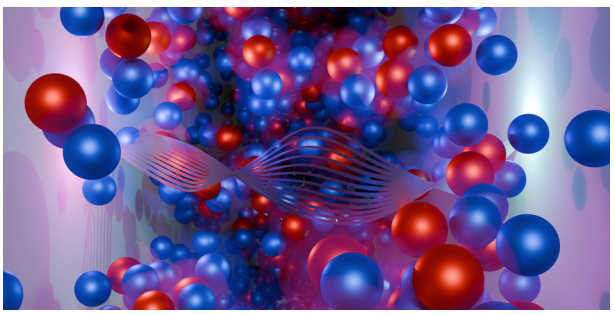


Investigating glass transition in a PA6T/66 copolymer through molecular dynamics simulations

Lele Wei, Liping Zhu, Jin Wen* and Meifang Zhu

5562



Solvent-induced ion clusters generate long-ranged double-layer forces at high ionic strengths

David Ribar, Clifford E. Woodward and Jan Forsman*

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