Orientational ordering of closely packed Janus particles

*Kota Mitsumoto, Hajime Yoshino*

We study the orientational ordering of 2-dimensional closely packed Janus particles by extensive Monte Carlo simulations.

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Capillary-driven binding of thin triangular prisms at fluid interfaces

*Joseph A. Ferrar, Deshpreet Singh Bedi, Shangnan Zhou, Peijun Zhu, Xiaoming Mao, Michael J. Solomon*

Thin, triangular prisms self-assemble into open networks via capillary interactions at flat air-water interfaces.

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Study on influencing factors of Pickering emulsions stabilized by hydroxyapatite nanoparticles with nonionic surfactants
**Soft Matter**, 2018, Advance Article

**DOI**: 10.1039/C8SM00241J, Paper

Na Song, Ai-juan Wang, Jun-ming Li, Zhuo Zhu, Huijun Shi, Xiao-long Ma, Dejun Sun

Varied properties of Pickering emulsions stabilized by hydroxyapatite nanoparticles with nonionic surfactant sorbitan monooleate as well as their corresponding composite morphologies. To cite this article before page numbers are assigned, use the DOI form of citation above.

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**Molecular organizations of conical mesogenic fullerenes**

**Soft Matter**, 2018, Advance Article

**DOI**: 10.1039/C7SM02459B, Paper

Silvia Orlandi, Claudio Zannoni

Model conical shape fullerene-mesogenic compounds yield a columnar liquid crystal phase where molecules stack in polar columnar aggregates.

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**Against the Rules: Pressure Induced Transition from High to Reduced Order**

**Soft Matter**, 2018, Accepted Manuscript

**DOI**: 10.1039/C8SM00212F, Paper

Frederik Neuhaus, Dennis Mueller, Radu Tanasescu, Cristina Stefaniu, Pierre-Leonard Zaffalon, Sandor Balog, Takashi Ishikawa, Renate Reiter, Gerald Brezesinski, Andreas Zumbuehl

Envisioning the next generation of drug delivery nanocontainers requires more in-depth information on the fundamental physical forces at play in bilayer membranes. In order to achieve this, we combine chemical...

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**Flexible h-BN Foam Sheets for Multifunctional Electronic Packaging Materials with Ultrahigh Thermostability**

*Soft Matter*, 2018, Accepted Manuscript
DOI: 10.1039/C8SM00521D, Paper

Deul Kim, Artavazd Kirakosyan, Jae Woong Lee, Jong-Ryul Jeong, Jihoon Choi

Recent development of the electronic packaging materials based on low dimensional materials such as carbon nanotubes, graphene, and hexagonal boron nitride (h-BN) exhibits advantageous electrical, thermal, and mechanical properties for...

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**Study of the thixotropic behaviors of ferrofluids**

![Graph showing thixotropic behaviors](Image)

*Soft Matter*, 2018, Advance Article
DOI: 10.1039/C8SM00478A, Paper

Zhenkun Li, Decai Li, Yibiao Chen, Hongchao Cui

Ferrofluids exhibit significant thixotropic behaviors under a magnetic field, which are induced by the presence and evolution of different microstructures.

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**Anomalous toluene transport in model segmented polyurethane-urea/clay nanocomposites**

*Soft Matter*, 2018, Advance Article
DOI: 10.1039/C7SM02202F, Paper

![Diagram showing dry and swollen states](Image)
The kinetics of liquid solvent sorption in polymeric systems and their nanocomposites often deviate from normal Fickian behaviour.

Few advanced mechanics of materials solutions have found broader and more enduring applications than Emil Winkler's beam on elastic foundation analysis, first published in 1867. Of particular note is its extensive use in adhesion mechanics, including modified forms for soft matter and viscous liquid interlayers.

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simultaneous high shape fixity ratio and shape recovery ratio, a novel semi-crystalline slide ring shape memory...

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**Magneto-capillary dynamics of amphiphilic Janus particles at curved liquid interfaces**

*Soft Matter*, 2018, Accepted Manuscript
DOI: 10.1039/C8SM00518D, Communication
Wenjie Fei, Michelle M Driscoll, Paul Chaikin, Kyle J.M. Bishop

A homogeneous magnetic field can exert no net force on a colloidal particle. However, by coupling the particle’s orientation to its position on a curved interface, even static homogeneous fields...

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**Hunting Mermaids in Real Space: Known Knowns, Known Unknowns and Unknown Unknowns**

*Soft Matter*, 2018, Accepted Manuscript
DOI: 10.1039/C8SM00400E, Review Article
Paddy Royall

We review efforts to realise so-called mermaid (or short-ranged attraction/long ranged repulsion) interactions in 3d real space. The repulsive and attractive contributions to these interactions in charged colloids and colloid-polymer...

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**Metachronal motion of artificial magnetic cilia**

*Soft Matter*, 2018, Accepted Manuscript
DOI: 10.1039/C8SM00549D, Communication
Srinivas Hanasoge, Peter J. Hesketh, Alexander Alexeev

Organisms use hair-like cilia that beat in a metachronal fashion to actively transport fluid and suspended particles. Metachronal motion emerges due to a phase difference between beating cycles of neighboring...

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**Synchronization of self-propelled soft pendulums**

*Soft Matter*, 2018, Advance Article
DOI: 10.1039/C8SM00517F, Paper
Satoshi Nakata, Katsuhiko Kayahara, Masakazu Kuze, Elliott Ginder, Masaharu Nagayama, Hiraku Nishimori
We investigated self-propelled motions of thin filaments atop water, where we focused on understanding pendulum-type oscillations and synchronization.
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**Maximum in density heterogeneities of active swimmers**

*Soft Matter*, 2018, Advance Article
DOI: 10.1039/C7SM02301D, Paper

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Fabian Jan Schwarzendahl, Marco G. Mazza
A maximum in density heterogeneities of active swimmers results from the competition of hydrodynamics and steric interactions.
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**Restructuring of poly(2-ethyl-2-oxazoline)/tannic acid multilayers into fibers**

*Soft Matter*, 2018, Advance Article
DOI: 10.1039/C8SM00381E, Paper

E. Beruhil Adatoz, S. Hendessi, C. W. Ow-Yang, A. L. Demirel
Free floating PEOX/TA multilayer sheet restructures into pH-responsive fibers of hydrogen-bonded
Nanoparticle adsorption dynamics at fluid interfaces

Measurement and models of nanoparticle adsorption dynamics at fluid interfaces are used to understand how transport and interactions together determine dynamic interfacial properties.

Single particle states of colloidal particles in 2D periodic potentials

Colloidal particles when subjected to a periodic array of potential wells are observed to adopt discrete stable configurations depending on the particle size/array wavelength ratio.
**Soft Matter**, 2018, **14**, 3387-3396

**DOI**: 10.1039/C8SM00383A, Paper

Tero Kamarainen, Mariko Ago, Jani Seitsonen, Janne Raula, Esko I. Kauppinen, Janne Ruokolainen, Orlando J. Rojas

Spectral topographical analysis of wrinkled and crumpled colloidal particle surfaces utilizing cryo-electron tomography and spherical harmonic models.

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