# Jens Glaser

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8068057/publications.pdf

Version: 2024-02-01

| 114 | 10,435 | 76196 | 32761 |
|---|---|---|---|
| papers | citations | 40 h-index | 100 g-index |

| 116 | 116 | 116 | 10230 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Anisotropy of building blocks and their assembly into complex structures. Nature Materials, 2007, 6, 557-562. | 13.3 | 2,440 |
| 2 | Predictive Self-Assembly of Polyhedra into Complex Structures. Science, 2012, 337, 453-457. | 6.0 | 882 |
| 3 | Self-Assembly of CdTe Nanocrystals into Free-Floating Sheets. Science, 2006, 314, 274-278. | 6.0 | 824 |
| 4 | Self-Assembly of Patchy Particles. Nano Letters, 2004, 4, 1407-1413. | 4.5 | 722 |
| 5 | Strong scaling of general-purpose molecular dynamics simulations on GPUs. Computer Physics Communications, 2015, 192, 97-107. | 3.0 | 546 |
| 6 | HOOMD-blue: A Python package for high-performance molecular dynamics and hard particle Monte Carlo simulations. Computational Materials Science, 2020, 173, 109363. | 1.4 | 326 |
| 7 | Competition of shape and interaction patchiness for self-assembling nanoplates. Nature Chemistry, 2013, 5, 466-473. | 6.6 | 278 |
| 8 | Understanding shape entropy through local dense packing. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E4812-21. | 3.3 | 199 |
| 9 | Crystalline Assemblies and Densest Packings of a Family of Truncated Tetrahedra and the Role of Directional Entropic Forces. ACS Nano, 2012, 6, 609-614. | 7.3 | 190 |
| 10 | Entropically Patchy Particles: Engineering Valence through Shape Entropy. ACS Nano, 2014, 8, 931-940. | 7.3 | 175 |
| 11 | Rigid body constraints realized in massively-parallel molecular dynamics on graphics processing units. Computer Physics Communications, 2011, 182, 2307-2313. | 3.0 | 164 |
| 12 | Clathrate colloidal crystals. Science, 2017, 355, 931-935. | 6.0 | 162 |
| 13 | Pseudo-random number generation for Brownian Dynamics and Dissipative Particle Dynamics simulations on GPU devices. Journal of Computational Physics, 2011, 230, 7191-7201. | 1.9 | 148 |
| 14 | Shape-dependent ordering of gold nanocrystals into large-scale superlattices. Nature Communications, 2017, 8, 14038. | 5.8 | 141 |
| 15 | Supercomputer-Based Ensemble Docking Drug Discovery Pipeline with Application to Covid-19. Journal of Chemical Information and Modeling, 2020, 60, 5832-5852. | 2.5 | 134 |
| 16 | freud: A software suite for high throughput analysis of particle simulation data. Computer Physics Communications, 2020, 254, 107275. | 3.0 | 133 |
| 17 | Role of isostaticity and load-bearing microstructure in the elasticity of yielded colloidal gels. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16029-16034. | 3.3 | 132 |
| 18 | Computational self-assembly of a one-component icosahedral quasicrystal. Nature Materials, 2015, 14, 109-116. | 13.3 | 129 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Glass transition and rheological redundancy in F-actin solutions. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 20199-20203. | 3.3 | 120 |
| 20 | Quasicrystalline nanocrystal superlattice with partial matching rules. Nature Materials, 2017, 16, 214-219. | 13.3 | 114 |
| 21 | Shape Alloys of Nanorods and Nanospheres from Self-Assembly. Nano Letters, 2013, 13, 4980-4988. | 4.5 | 104 |
| 22 | Universality of Block Copolymer Melts. Physical Review Letters, 2014, 113, 068302. | 2.9 | 102 |
| 23 | Terminal supraparticle assemblies from similarly charged protein molecules and nanoparticles. Nature Communications, 2014, 5, 3593. | 5.8 | 97 |
| 24 | Simple data and workflow management with the signac framework. Computational Materials Science, 2018, 146, 220-229. | 1.4 | 91 |
| 25 | A Directional Entropic Force Approach to Assemble Anisotropic Nanoparticles into Superlattices. Angewandte Chemie - International Edition, 2013, 52, 13980-13984. | 7.2 | 90 |
| 26 | Universal Phenomenology of Symmetric Diblock Copolymers near the Orderâ€“Disorder Transition. Macromolecules, 2015, 48, 819-839. | 2.2 | 83 |
| 27 | Phase diagram of hard tetrahedra. Journal of Chemical Physics, 2011, 135, 194101. | 1.2 | 76 |
| 28 | Why large icosahedral viruses need scaffolding proteins. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10971-10976. | 3.3 | 72 |
| 29 | The glassy wormlike chain. New Journal of Physics, 2007, 9, 416-416. | 1.2 | 71 |
| 30 | Supercharging enables organized assembly of synthetic biomolecules. Nature Chemistry, 2019, 11, 204-212. | 6.6 | 70 |
| 31 | Scalable Metropolis Monte Carlo for simulation of hard shapes. Computer Physics Communications, 2016, 204, 21-30. | 3.0 | 69 |
| 32 | Simultaneous Nanoâ€•and Microscale Control of Nanofibrous Microspheres Selfâ€Assembled from Starâ€Shaped Polymers. Advanced Materials, 2015, 27, 3947-3952. | 11.1 | 63 |
| 33 | Shape and Symmetry Determine Two-Dimensional Melting Transitions of Hard Regular Polygons. Physical Review X, 2017, 7, . | 2.8 | 61 |
| 34 | Colloidal fibers and rings by cooperative assembly. Nature Communications, 2019, 10, 3936. | 5.8 | 61 |
| 35 | Entropic colloidal crystallization pathways via fluidâ€“fluid transitions and multidimensional prenucleation motifs. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14843-14851. | 3.3 | 60 |
| 36 | Massively parallel Monte Carlo for many-particle simulations on GPUs. Journal of Computational Physics, 2013, 254, 27-38. | 1.9 | 58 |

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|---|---|---|---|
| 37 | Collective and Single-Chain Correlations in Disordered Melts of Symmetric Diblock Copolymers: Quantitative Comparison of Simulations and Theory. Macromolecules, 2014, 47, 851-869. | 2.2 | 56 |
| 38 | Efficient neighbor list calculation for molecular simulation of colloidal systems using graphics processing units. Computer Physics Communications, 2016, 203, 45-52. | 3.0 | 53 |
| 39 | Stability of the double gyroid phase to nanoparticle polydispersity in polymer-tethered nanosphere systems. Soft Matter, 2010, 6, 1693. | 1.2 | 46 |
| 40 | Capping Ligand Vortices as â€œAtomic Orbitalsâ€•in Nanocrystal Self-Assembly. ACS Nano, 2017, 11, 11273-11282. | 7.3 | 43 |
| 41 | The entropic bond in colloidal crystals. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16703-16710. | 3.3 | 42 |
| 42 | Metastable orientational order of colloidal discoids. Nature Communications, 2015, 6, 8507. | 5.8 | 40 |
| 43 | GPU accelerated Discrete Element Method (DEM) molecular dynamics for conservative, faceted particle simulations. Journal of Computational Physics, 2017, 334, 460-467. | 1.9 | 38 |
| 44 | The emergence of valency in colloidal crystals through electron equivalents. Nature Materials, 2022, 21, 580-587. | 13.3 | 37 |
| 45 | Rational design of nanomaterials from assembly and reconfigurability of polymer-tethered nanoparticles. MRS Communications, 2015, 5, 397-406. | 0.8 | 36 |
| 46 | Test of a scaling hypothesis for the structure factor of disordered diblock copolymer melts. Soft Matter, 2012, 8, 11310. | 1.2 | 34 |
| 47 | Efficient Phase Diagram Sampling by Active Learning. Journal of Physical Chemistry B, 2020, 124, 1275-1284. | 1.2 | 33 |
| 48 | Tube Width Fluctuations in F-Actin Solutions. Physical Review Letters, 2010, 105, 037801. | 2.9 | 30 |
| 49 | Generalised Einstein relation for hot Brownian motion. Europhysics Letters, 2011, 96, 60009. | 0.7 | 30 |
| 50 | Inverse design of simple pair potentials for the self-assembly of complex structures. Journal of Chemical Physics, 2018, 149, 204102. | 1.2 | 30 |
| 51 | Thermal and athermal three-dimensional swarms of self-propelled particles. Physical Review E, 2012, 86, 011136. | 0.8 | 29 |
| 52 | Influence of Softness on the Stability of Binary Colloidal Crystals. ACS Nano, 2019, 13, 13829-13842. | 7.3 | 29 |
| 53 | Binding kinetics of lock and key colloids. Journal of Chemical Physics, 2015, 142, 174909. | 1.2 | 28 |
| 54 | Using depletion to control colloidal crystal assemblies of hard cuboctahedra. Soft Matter, 2016, 12, 5199-5204. | 1.2 | 27 |

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|---|---|---|---|
| 55 | Supraparticle Nanoassemblies with Enzymes. Chemistry of Materials, 2019, 31, 7493-7500. | 3.2 | 24 |
| 56 | High-throughput virtual laboratory for drug discovery using massive datasets. International Journal of High Performance Computing Applications, 2021, 35, 452-468. | 2.4 | 24 |
| 57 | Non-close-packed three-dimensional quasicrystals. Journal of Physics Condensed Matter, 2017, 29, 234005. | 0.7 | 22 |
| 58 | Dendrimer Ligand Directed Nanoplate Assembly. ACS Nano, 2019, 13, 14241-14251. | 7.3 | 22 |
| 59 | Effect of Defective Microstructure and Film Thickness on the Reflective Structural Color of Self-Assembled Colloidal Crystals. ACS Applied Materials & Interfaces, 2020, 12, 9842-9850. | 4.0 | 22 |
| 60 | A theory of entropic bonding. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, . | 3.3 | 22 |
| 61 | Phase separation and state oscillation of active inertial particles. Soft Matter, 2020, 16, 2847-2853. | 1.2 | 21 |
| 62 | Pressure in rigid body molecular dynamics. Computational Materials Science, 2020, 173, 109430. | 1.4 | 19 |
| 63 | Supercomputing Pipelines Search for Therapeutics Against COVID-19. Computing in Science and Engineering, 2021, 23, 7-16. | 1.2 | 19 |
| 64 | Anisotropic nanocrystal shape and ligand design for co-assembly. Science Advances, 2021, 7, . | 4.7 | 19 |
| 65 | A parallel algorithm for implicit depletant simulations. Journal of Chemical Physics, 2015, 143, 184110. | 1.2 | 18 |
| 66 | Shape allophiles improve entropic assembly. Soft Matter, 2015, 11, 7250-7256. | 1.2 | 18 |
| 67 | Hit Expansion of a Noncovalent SARS-CoV-2 Main Protease Inhibitor. ACS Pharmacology and Translational Science, 2022, 5, 255-265. | 2.5 | 17 |
| 68 | Universal folding pathways of polyhedron nets. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E6690-E6696. | 3.3 | 16 |
| 69 | Identity crisis in alchemical space drives the entropic colloidal glass transition. Nature Communications, 2019, 10, 64. | 5.8 | 16 |
| 70 | Openâ€source molecular modeling software in chemical engineering focusing on the Molecular Simulation Design Framework. AICHE Journal, 2021, 67, e17206. | 1.8 | 16 |
| 71 | A mean-field approach to simulating anisotropic particles. Journal of Chemical Physics, 2020, 153, 084106. | 1.2 | 13 |
| 72 | Tube-width fluctuations of entangled stiff polymers. Physical Review E, 2011, 84, 051801. | 0.8 | 12 |

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|---|---|---|---|
| 73 | Tunable emergent structures and traveling waves in mixtures of passive and contact-triggered-active particles. Soft Matter, 2017, 13, 6332-6339. | 1.2 | 11 |
| 74 | Phase behavior and design rules for plastic colloidal crystals of hard polyhedra via consideration of directional entropic forces. Soft Matter, 2019, 15, 5380-5389. | 1.2 | 11 |
| 75 | Strain fields in repulsive colloidal crystals. Physical Review Materials, 2018, 2, . | 0.9 | 11 |
| 76 | Dynamic structure factor of a stiff polymer in a glassy solution. European Physical Journal E, 2008, 26, 123-36. | 0.7 | 10 |
| 77 | Shapes within shapes: how particles arrange inside a cavity. Soft Matter, 2018, 14, 3012-3017. | 1.2 | 10 |
| 78 | FCC â†" BCC Phase Transitions in Convex and Concave Hard Particle Systems. Journal of Physical Chemistry B, 2019, 123, 9038-9043. | 1.2 | 10 |
| 79 | Moving beyond the constraints of chemistry via crystal structure discovery with isotropic multiwell pair potentials. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 10 |
| 80 | Unexpected Dependence of Photonic Band Gap Size on Randomness in Self-Assembled Colloidal Crystals. Physical Review Letters, 2021, 126, 208002. | 2.9 | 10 |
| 81 | How to Professionally Develop Reusable Scientific Softwareâ€"And When Not To. Computing in Science and Engineering, 2019, 21, 66-79. | 1.2 | 9 |
| 82 | Shape-driven entropic self-assembly of an open, reconfigurable, binary hostâ€"guest colloidal crystal. Soft Matter, 2021, 17, 2840-2848. | 1.2 | 9 |
| 83 | Folding and stability of helical bundle proteins from coarseâ€grained models. Proteins: Structure, Function and Bioinformatics, 2013, 81, 1200-1211. | 1.5 | 8 |
| 84 | Alchemical molecular dynamics for inverse design. Molecular Physics, 2019, 117, 3968-3980. | 0.8 | 8 |
| 85 | Implementation of metal-friendly EAM/FS-type semi-empirical potentials in HOOMD-blue: A GPU-accelerated molecular dynamics software. Journal of Computational Physics, 2018, 359, 352-360. | 1.9 | 7 |
| 86 | Ordered Networks of Gold Nanoparticles Crosslinked by Dithiolâ€Oligomers. Particle and Particle Systems Characterization, 2018, 35, 1800097. | 1.2 | 7 |
| 87 | Thermodynamic Equilibrium of Binary Nanocrystal Superlattices. Journal of Physical Chemistry C, 2021, 125, 18936-18945. | 1.5 | 7 |
| 88 | Effect of Particles of Irregular Size on the Microstructure and Structural Color of Self-Assembled Colloidal Crystals. Langmuir, 2021, 37, 13300-13308. | 1.6 | 7 |
| 89 | Particle anisotropy tunes emergent behavior in active colloidal systems. Soft Matter, 2022, 18, 1044-1053. | 1.2 | 7 |
| 90 | Tuning Stoichiometry to Promote Formation of Binary Colloidal Superlattices. Physical Review Letters, 2022, 128, 188001. | 2.9 | 7 |

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|---|---|---|---|
| 91 | Hierarchical self-assembly of hard cube derivatives. Soft Matter, 2019, 15, 3733-3739. | 1.2 | 6 |
| 92 | Unified memory in HOOMD-blue improves node-level strong scaling. Computational Materials Science, 2020, 173, 109359. | 1.4 | 6 |
| 93 | Assembly of nanocrystal clusters by solvent evaporation: icosahedral order and the breakdown of the Maxwell regime. Soft Matter, 2020, 16, 7350-7358. | 1.2 | 6 |
| 94 | Scale-free, programmable design of morphable chain loops of kilobots and colloidal motors. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8700-8710. | 3.3 | 6 |
| 95 | On the Thermodynamic Stability of Binary Superlattices of Polystyrene-Functionalized Nanocrystals. Macromolecules, 2020, 53, 9929-9942. | 2.2 | 6 |
| 96 | Calculation of critical nucleation rates by the persistent embryo method: application to quasi hard sphere models. Soft Matter, 2018, 14, 9185-9193. | 1.2 | 5 |
| 97 | Designing active particles for colloidal microstructure manipulation via strain field alchemy. Soft Matter, 2019, 15, 6086-6096. | 1.2 | 5 |
| 98 | Sculpting crystals one Burgers vector at a time: Toward colloidal lattice robot swarms. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 5 |
| 99 | Accelerated annealing of colloidal crystal monolayers by means of cyclically applied electric fields. Scientific Reports, 2021, 11, 11042. | 1.6 | 5 |
| 100 | rowan: A Python package for working with quaternions. Journal of Open Source Software, 2018, 3, 787. | 2.0 | 5 |
| 101 | Topological order in densely packed anisotropic colloids. Physical Review E, 2019, 100, 032608. | 0.8 | 3 |
| 102 | Pinning dislocations in colloidal crystals with active particles that seek stacking faults. Soft Matter, 2020, 16, 4182-4191. | 1.2 | 3 |
| 103 | The role of complementary shape in protein dimerization. Soft Matter, 2021, 17, 7376-7383. | 1.2 | 3 |
| 104 | A route to hierarchical assembly of colloidal diamond. Soft Matter, 2022, 18, 304-311. | 1.2 | 3 |
| 105 | Structural Color Spectral Response of Dense Structures of Discoidal Particles Generated by Evaporative Assembly. Journal of Physical Chemistry B, 2022, 126, 1315-1324. | 1.2 | 3 |
| 106 | Fluctuations of Stiff Polymers and Cell Mechanics. , 0, , . | | 2 |
| 107 | Principle of corresponding states for hard polyhedron fluids. Molecular Physics, 2019, 117, 3518-3526. | 0.8 | 2 |
| 108 | Particle shape tunes fragility in hard polyhedron glass-formers. Soft Matter, 2021, 17, 600-610. | 1.2 | 2 |

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|---|---|---|---|
| 109 | Formation of a single quasicrystal upon collision of multiple grains. Nature Communications, 2021, 12, 5790. | 5.8 | 2 |
| 110 | The alchemical energy landscape for a pentameric cluster. Journal of Chemical Physics, 2020, 152, 014106. | 1.2 | 2 |
| 111 | Inverse design of isotropic pair potentials using digital alchemy with a generalized Fourier potential. European Physical Journal B, 2021, 94, 1. | 0.6 | 2 |
| 112 | Nanocomposite tectons as unifying systems for nanoparticle assembly. Soft Matter, 2022, 18, 2176-2192. | 1.2 | 2 |
| 113 | DYNAMICS OF STICKY POLYMER SOLUTIONS. , 2008, , . | | 1 |
| 114 | Synthesizable nanoparticle eigenshapes for colloidal crystals. Nanoscale, 2021, 13, 13301-13309. | 2.8 | 0 |