Stefan Egelhaaf

List of Publications by Year
in descending order

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86 papers	4,230 citations	126708 33 h-index	110170 64 g-index
87 all docs	87 docs citations	87 times ranked	2951 citing authors

#	Article	IF	Citations
1	Multiple Glassy States in a Simple Model System. Science, 2002, 296, 104-106.	6.0	703
2	Yielding behavior of repulsion- and attraction-dominated colloidal glasses. Journal of Rheology, 2008, 52, 649-676.	1.3	249
3	Glasses in hard spheres with short-range attraction. Physical Review E, 2004, 69, 011503.	0.8	202
4	Yielding of colloidal glasses. Europhysics Letters, 2006, 75, 624-630.	0.7	163
5	Nonlinear rheology of colloidal gels with intermediate volume fraction. Journal of Rheology, 2011, 55, 673-706.	1.3	150
6	Structure, dynamics, and rheology of colloid-polymer mixtures: From liquids to gels. Journal of Chemical Physics, 2009, 130, 134907.	1.2	134
7	Yielding of Hard-Sphere Glasses during Start-Up Shear. Physical Review Letters, 2012, 108, 098303.	2.9	130
8	Small-Angle Neutron Scattering (SANS) Study of Vesicles and Lamellar Sheets Formed from Mixtures of an Anionic and a Cationic Surfactant. Journal of Physical Chemistry B, 1999, 103, 9888-9897.	1.2	123
9	Anomalous dynamics of intruders in a crowded environment of mobile obstacles. Nature Communications, 2016, 7, 11133.	5.8	114
10	Confocal microscopy of colloidal particles: Towards reliable, optimum coordinates. Advances in Colloid and Interface Science, 2008, 136, 65-92.	7.0	100
11	From equilibrium to steady state: the transient dynamics of colloidal liquids under shear. Journal of Physics Condensed Matter, 2008, 20, 404210.	0.7	97
12	Residual Stresses in Glasses. Physical Review Letters, 2013, 110, 215701.	2.9	95
13	Tension and Stiffness of the Hard Sphere Crystal-Fluid Interface. Physical Review Letters, 2012, 108, 226101.	2.9	84
14	Creep and flow of glasses: strain response linked to the spatial distribution of dynamical heterogeneities. Scientific Reports, 2015, 5, 11884.	1.6	78
15	Mode-selective dynamic light scattering: theory versus experimental realization. Applied Optics, 1995, 34, 3546.	2.1	72
16	Yielding and crystallization of colloidal gels under oscillatory shear. Physical Review E, 2007, 76, 041402.	0.8	70
17	Colloids in one dimensional random energy landscapes. Soft Matter, 2012, 8, 2714.	1.2	70
18	Colloids in light fields: Particle dynamics in random and periodic energy landscapes. European Physical Journal: Special Topics, 2013, 222, 2995-3009.	1.2	64

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19	Crystallization seeds favour crystallization only during initial growth. Nature Communications, 2015, 6, 7110.	5.8	64
20	Non-equilibrium behavior of sticky colloidal particles: beads, clusters and gels. European Physical Journal E, 2005, 16, 77-80.	0.7	57
21	Heterogeneous crystallization of hard-sphere colloids near a wall. Soft Matter, 2011, 7, 8050.	1.2	57
22	Yielding of binary colloidal glasses. Soft Matter, 2013, 9, 4524.	1.2	56
23	Extended law of corresponding states for protein solutions. Journal of Chemical Physics, 2015, 142, 174905.	1.2	56
24	Adhesion promotes phase separation in mixed-lipid membranes. Europhysics Letters, 2008, 84, 48003.	0.7	55
25	Long-Lived Neighbors Determine the Rheological Response of Glasses. Physical Review Letters, 2017, 118, 018002.	2.9	52
26	Directed percolation identified as equilibrium pre-transition towards non-equilibrium arrested gel states. Nature Communications, 2016, 7, 11817.	5.8	51
27	Particle dynamics in two-dimensional random-energy landscapes: Experiments and simulations. Physical Review E, 2013, 88, 022125.	0.8	50
28	Start-up shear of concentrated colloidal hard spheres: Stresses, dynamics, and structure. Journal of Rheology, 2016, 60, 603-623.	1.3	50
29	Protein crystallization: scaling of charge and salt concentration in lysozyme solutions. Journal of Physics Condensed Matter, 2000, 12, L569-L574.	0.7	48
30	Dynamics of dilute colloidal suspensions in modulated potentials. Soft Matter, 2011, 7, 2064-2075.	1.2	47
31	Protein phase behavior and crystallization: Effect of glycerol. Journal of Chemical Physics, 2007, 127, 125102.	1.2	45
32	Effect of glycerol and dimethyl sulfoxide on the phase behavior of lysozyme: Theory and experiments. Journal of Chemical Physics, 2012, 136, 015102.	1.2	38
33	Plastic rearrangements in colloidal gels investigated by LAOS and LS-Echo. Journal of Rheology, 2014, 58, 1395-1417.	1.3	36
34	Colloidal suspensions in modulated light fields. Journal of Physics Condensed Matter, 2008, 20, 404220.	0.7	33
35	Different mechanisms for dynamical arrest in largely asymmetric binary mixtures. Physical Review E, 2015, 91, 032308.	0.8	33
36	Glassy dynamics in asymmetric binary mixtures of hard spheres. Physical Review E, 2019, 99, 042603.	0.8	33

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37	Transient dynamics in dense colloidal suspensions under shear: shear rate dependence. Journal of Physics Condensed Matter, 2012, 24, 464104.	0.7	31
38	Brownian particles on rough substrates: Relation between intermediate subdiffusion and asymptotic long-time diffusion. Physical Review E, 2013, 88, 062133.	0.8	31
39	A fiberâ€opticsâ€based light scattering instrument for timeâ€resolved simultaneous static and dynamic measurements. Review of Scientific Instruments, 1996, 67, 540-545.	0.6	30
40	Transient dynamics during stress overshoots in binary colloidal glasses. Soft Matter, 2014, 10, 6546-6555.	1.2	30
41	Size-Dependent Localization in Polydisperse Colloidal Glasses. Physical Review Letters, 2017, 119, 048003.	2.9	28
42	Tuning proteinâ€“protein interactions using cosolvents: specific effects of ionic and non-ionic additives on protein phase behavior. Physical Chemistry Chemical Physics, 2016, 18, 10270-10280.	1.3	27
43	Lipid organization and the morphology of solid-like domains in phase-separating binary lipid membranes. Journal of Physics Condensed Matter, 2006, 18, L415-L420.	0.7	26
44	Microliter viscometry using a bright-field microscope: Î·-DDM. Soft Matter, 2018, 14, 7016-7025.	1.2	25
45	Time- and ensemble-averages in evolving systems: the case of Brownian particles in random potentials. Physical Chemistry Chemical Physics, 2016, 18, 18887-18895.	1.3	23
46	Experimental creation and characterization of random potential-energy landscapes exploiting speckle patterns. Physical Review A, 2016, 93, .	1.0	23
47	Combined holographic-mechanical optical tweezers: Construction, optimization, and calibration. Review of Scientific Instruments, 2009, 80, 083703.	0.6	22
48	Dynamics of individual colloidal particles in one-dimensional random potentials: a simulation study. Journal of Physics Condensed Matter, 2012, 24, 464116.	0.7	22
49	Second Virial Coefficient As Determined from Protein Phase Behavior. Journal of Physical Chemistry Letters, 2016, 7, 4008-4014.	2.1	22
50	Time-dependent flow in arrested states â€“ transient behaviour. European Physical Journal: Special Topics, 2013, 222, 2803-2817.	1.2	21
51	Structure of colloidal gels at intermediate concentrations: the role of competing interactions. Soft Matter, 2016, 12, 9303-9313.	1.2	19
52	Binary colloidal glasses under transient stress- and strain-controlled shear. Journal of Rheology, 2018, 62, 149-159.	1.3	19
53	Droplet Structure in Phosphocholine Microemulsions. Langmuir, 1997, 13, 2490-2493.	1.6	18
54	Traveling band formation in feedback-driven colloids. Physical Review E, 2019, 100, 022609.	0.8	17

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55	Shape of Ocr, the Gene 0.3 Protein of Bacteriophage T7:Â Modeling Based on Light Scattering Experimentsâ€. Biochemistry, 2001, 40, 9944-9949.	1.2	16
56	Solid-like domains in fluid membranes. Journal of Physics Condensed Matter, 2005, 17, S3341-S3346.	0.7	15
57	Different scenarios of dynamic coupling in glassy colloidal mixtures. Physical Chemistry Chemical Physics, 2018, 20, 18630-18638.	1.3	14
58	Additivity of the Specific Effects of Additives on Protein Phase Behavior. Journal of Physical Chemistry B, 2015, 119, 14986-14993.	1.2	12
59	Triple Junction at the Triple Point Resolved on the Individual Particle Level. Physical Review Letters, 2017, 119, 128001.	2.9	12
60	Glasses of dynamically asymmetric binary colloidal mixtures: Quiescent properties and dynamics under shear. AIP Conference Proceedings, 2013, , .	0.3	11
61	The crystallization enthalpy and entropy of protein solutions: microcalorimetry, van't Hoff determination and linearized Poissonâ€“Boltzmann model of tetragonal lysozyme crystals. Physical Chemistry Chemical Physics, 2021, 23, 2686-2696.	1.3	11
62	Binary colloidal glasses: linear viscoelasticity and its link to the microscopic structure and dynamics. Soft Matter, 2019, 15, 2232-2244.	1.2	10
63	Colloids exposed to random potential energy landscapes: From particle number density to particle-potential and particle-particle interactions. Journal of Chemical Physics, 2016, 145, 044905.	1.2	9
64	One- and two-component colloidal glasses under transient shear. European Physical Journal: Special Topics, 2017, 226, 3023-3037.	1.2	9
65	Interactions in protein solutions close to liquidâ€“liquid phase separation: ethanol reduces attractions via changes of the dielectric solution properties. Physical Chemistry Chemical Physics, 2021, 23, 22384-22394.	1.3	9
66	Swelling and shrinking kinetics of a lamellar gel phase. Applied Physics Letters, 2008, 92, 174105.	1.5	8
67	Diffusion of Anisotropic Particles in Random Energy Landscapesâ€”An Experimental Study. Frontiers in Physics, 2020, 7, .	1.0	8
68	Investigation of moderately turbid suspensions by heterodyne near field scattering. Soft Matter, 2017, 13, 5961-5969.	1.2	7
69	Precipitation from amorphous solid dispersions in biorelevant dissolution testing: The polymorphism of regorafenib. International Journal of Pharmaceutics, 2021, 603, 120716.	2.6	7
70	Two-dimensional Brownian motion of anisotropic dimers. Physical Review E, 2021, 104, 014605.	0.8	7
71	Soft matter dynamics: A versatile microgravity platform to study dynamics in soft matter. Review of Scientific Instruments, 2021, 92, 124503.	0.6	7
72	Neutron, fluorescence, and optical imaging: An in situ combination of complementary techniques. Review of Scientific Instruments, 2015, 86, 093706.	0.6	6

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73	Solvent and solute ingress into hydrogels resolved by a combination of imaging techniques. Journal of Chemical Physics, 2016, 144, 204903.	1.2	6
74	Dense colloidal mixtures in an external sinusoidal potential. Journal of Chemical Physics, 2018, 148, 114903.	1.2	6
75	Stress versus strain controlled shear: Yielding and relaxation of concentrated colloidal suspensions. Journal of Rheology, 2021, 65, 1219-1233.	1.3	6
76	First-passage statistics of colloids on fractals: Theory and experimental realization. Science Advances, 2022, 8, eabk0627.	4.7	5
77	Reciprocal Space Study of Brownian Yet Non-Gaussian Diffusion of Small Tracers in a Hard-Sphere Glass. Frontiers in Physics, 0, 10, .	1.0	5
78	Universal effective interactions of globular proteins close to liquid-liquid phase separation: corresponding-states behavior reflected in the structure factor. Journal of Chemical Physics, 0, , .	1.2	5
79	Layering and packing in confined colloidal suspensions. Soft Matter, 2022, 18, 4699-4714.	1.2	5
80	From normal diffusion to superdiffusion: Photothermal heating of plasmonic core-shell microgels. Physical Review E, 2019, 100, 052605.	0.8	4
81	Rheology of colloidal and metallic glass formers. Colloid and Polymer Science, 2020, 298, 681-696.	1.0	4
82	Note: Using a KÃ¶sters prism to create a fringe pattern. Review of Scientific Instruments, 2017, 88, 056102.	0.6	3
83	Shear-induced crystallisation in binary colloidal suspensions investigated using confocal microscopy. JPhys Materials, 2020, 3, 035004.	1.8	3
84	ArGSLab: a tool for analyzing experimental or simulated particle networks. Soft Matter, 2021, 17, 8354-8362.	1.2	2
85	Solid-Like Domains in Mixed Lipid Bilayers. Behavior Research Methods, 2014, , 137-154.	2.3	1
86	Dynamics of Colloids and Macromolecules. , 2018, , 1-10.		0