Hans Joachim SchÃ¶pe

List of Publications by Year
in descending order

58 papers	1,643 citations	236612 25 h-index	301761 39 g-index
59 all docs	59 docs citations	59 times ranked	1077 citing authors

#	Article	IF	Citations
1	Precursor-Mediated Crystallization Process in Suspensions of Hard Spheres. Physical Review Letters, 2010, 105, 025701.	2.9	175
2	Two-Step Crystallization Kinetics in Colloidal Hard-Sphere Systems. Physical Review Letters, 2006, 96, 175701.	2.9	164
3	Comparison of colloidal effective charges from different experiments. Journal of Chemical Physics, 2002, 116, 10981-10988.	1.2	84
4	Effect of polydispersity on the crystallization kinetics of suspensions of colloidal hard spheres when approaching the glass transition. Journal of Chemical Physics, 2007, 127, 084505.	1.2	74
5	Crystallization kinetics of polydisperse hard-sphere-like microgel colloids: Ripening dominated crystal growth above melting. Journal of Chemical Physics, 2009, 130, 084502.	1.2	56
6	Microscopic investigations of homogeneous nucleation in charged sphere suspensions. Journal of Chemical Physics, 2005, 123, 174902.	1.2	54
7	Response of the elastic properties of colloidal crystals to phase transitions and morphological changes. Journal of Chemical Physics, 1998, 109, 10068-10074.	1.2	53
8	A comparative study on the phase behaviour of highly charged colloidal spheres in a confining wedge geometry. Journal of Physics Condensed Matter, 2005, 17, S2779-S2786.	0.7	46
9	Self-Organized Cooperative Swimming at Low Reynolds Numbers. Langmuir, 2013, 29, 1738-1742.	1.6	40
10	Experimental determination of effective charges in aqueous suspensions of colloidal spheres. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2003, 222, 311-321.	2.3	39
11	Fast Microscopic Method for Large Scale Determination of Structure, Morphology, and Quality of Thin Colloidal Crystals. Langmuir, 2006, 22, 1828-1838.	1.6	35
12	Small changes in particle-size distribution dramatically delay and enhance nucleation in hard sphere colloidal suspensions. Physical Review E, 2006, 74, 060401.	0.8	35
13	Nucleation kinetics in deionized charged colloidal model systems: A quantitative study by means of classical nucleation theory. Physical Review E, 2007, 75, 051405.	0.8	35
14	Correlation between dynamical and structural heterogeneities in colloidal hard-sphere suspensions. Nature Physics, 2016, 12, 712-717.	6.5	35
15	Preparation and Characterization of Particles with Small Differences in Polydispersity. Langmuir, 2007, 23, 11534-11539.	1.6	33
16	Phase behaviour of deionized binary mixtures of charged colloidal spheres. Journal of Physics Condensed Matter, 2009, 21, 464116.	0.7	33
17	Communications: Complete description of re-entrant phase behavior in a charge variable colloidal model system. Journal of Chemical Physics, 2010, 132, 131102.	1.2	33
18	Colloidal crystallization in the quasi-two-dimensional induced by electrolyte gradients. Journal of Chemical Physics, 2012, 136, 164505.	1.2	32

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19	Heterogeneous nucleation of colloidal melts under the influence of shearing fields. Journal of Physics Condensed Matter, 2004, 16, S3885-S3902.	0.7	31
20	Heterogeneous and homogeneous crystal nucleation in colloidal hard-sphere like microgels at low metastabilities. Soft Matter, 2011, 7, 11267.	1.2	29
21	Crystallization in charged two-component suspensions. Journal of Chemical Physics, 2005, 122, 144901.	1.2	28
22	Seed- and wall-induced heterogeneous nucleation in charged colloidal model systems under microgravity. Physical Review E, 2011, 83, 051405.	0.8	27
23	Correlations between morphology, phase behavior and pair interaction in soft sphere solids. Journal of Chemical Physics, 2002, 116, 5901-5907.	1.2	26
24	Construction and stability of a close-packed structure observed in thin colloidal crystals. Physical Review E, 2007, 76, 050402.	0.8	26
25	Ripening-dominated crystallization in polydisperse hard-sphere-like colloids. Physical Review E, 2009, 79, 010601.	0.8	26
26	Heterogeneous and homogeneous crystal nucleation in a colloidal model system of charged spheres at low metastabilities. Soft Matter, 2011, 7, 5685.	1.2	24
27	Competition between heterogeneous and homogeneous nucleation near a flat wall. Journal of Physics Condensed Matter, 2009, 21, 464115.	0.7	23
28	Crystallization in suspensions of hard spheres: a Monte Carlo and molecular dynamics simulation study. Journal of Physics Condensed Matter, 2011, 23, 194120.	0.7	23
29	Crystalline multilayers of charged colloids in soft confinement: experiment versus theory. Journal of Physics Condensed Matter, 2012, 24, 464123.	0.7	22
30	Phase behavior of a de-ionized binary mixture of charged spheres in the presence of gravity. Journal of Chemical Physics, 2009, 131, 134501.	1.2	21
31	Confined colloidal crystals in and out of equilibrium. European Physical Journal: Special Topics, 2013, 222, 3011-3022.	1.2	20
32	Exotic crystal superstructures of colloidal crystals in confinement. Physical Review E, 2008, 77, 061401.	0.8	17
33	Effective charges along the melting line of colloidal crystals. Journal of Chemical Physics, 2006, 125, 194714.	1.2	16
34	Solidification of a colloidal hard sphere like model system approaching and crossing the glass transition. Soft Matter, 2014, 10, 5380.	1.2	16
35	Charged colloidal particles in a charged wedge: do they go in or out?. Journal of Physics Condensed Matter, 2008, 20, 404221.	0.7	15
36	Drastic Variation of the Microstructure Formation in a Charged Sphere Colloidal Model System by Adding Merely Tiny Amounts of Larger Particles. Crystal Growth and Design, 2010, 10, 2258-2266.	1.4	15

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37	Transient MoirÃ© rotation patterns in thin colloidal crystals. Soft Matter, 2010, 6, 5312.	1.2	15
38	A Hitchhikerâ€™s Guide to Particle Sizing Techniques. Langmuir, 2020, 36, 10307-10320.	1.6	15
39	Enhanced crystal stability in a binary mixture of charged colloidal spheres. Physical Review E, 2009, 80, 021407.	0.8	14
40	Structure and transport properties of charged sphere suspensions in (local) electric fields. European Physical Journal: Special Topics, 2013, 222, 2835-2853.	1.2	14
41	The cage effect in systems of hard spheres. Journal of Chemical Physics, 2017, 146, 104503.	1.2	14
42	Opaline Hydrogels: Polycrystalline Body-Centered-Cubic Bulk Material with an in Situ Variable Lattice Constant. Chemistry of Materials, 2007, 19, 6095-6100.	3.2	13
43	Micro-structure evolution of wall based crystals after casting of model suspensions as obtained from Bragg microscopy. Journal of Chemical Physics, 2012, 137, 094906.	1.2	13
44	Easy-use and low-cost fiber-based two-color dynamic light-scattering apparatus. Physical Review E, 2012, 85, 031401.	0.8	11
45	Experimental visualization of inoculation using a charged colloidal model system. Soft Matter, 2012, 8, 11034.	1.2	11
46	Polymer induced changes of the crystallization scenario in suspensions of hard sphere like microgel particles. Journal of Chemical Physics, 2012, 136, 234906.	1.2	10
47	From nuclei to micro-structure in colloidal crystallization: Investigating intermediate length scales by small angle laser light scattering. Journal of Chemical Physics, 2015, 143, 064903.	1.2	10
48	Heterogeneous nucleation and microstructure formation in colloidal model systems with various interactions. European Physical Journal: Special Topics, 2014, 223, 389-407.	1.2	9
49	Charged colloidal model systems under confinement in slit geometry: A new setup for optical microscopic studies. Review of Scientific Instruments, 2013, 84, 063907.	0.6	8
50	Space-resolved dynamic light scattering probing inhomogeneous dynamics in soft matter. AIP Conference Proceedings, 2013, , .	0.3	5
51	Regular Horizontal Patterning on Colloidal Crystals Produced by Vertical Deposition. , 2008, , 48-56.		3
52	Dynamic signature of the first order freezing transition in colloidal hard spheres. , 2013, , .		2
53	Coincidence of the freezing and the onset of caging in hard sphere and Lennard-Jones fluids. Journal of Chemical Physics, 2019, 151, 104501.	1.2	2
54	Solidification Experiments in Single-Component and Binary Colloidal Melts. , 0, , 185-211.		2

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55	The kinetics of crystallization and vitrification in colloidal hard spheres. , 2013, , .		1
56	Entropic Identification of the First Order Freezing Transition of a Suspension of Hard Sphere Particles. Physical Review Letters, 2020, 124, 205701.	2.9	1
57	Crystallization of hard-sphere colloids -- deviations from classical nucleation theory. , 2006, , .		0
58	Consistence of the Mean Field Description of Charged Colloidal Crystal Properties. , 0, , 88-94.		0