Matthias Schmidt

List of Publications by Year
in descending order

144 papers	4,791 citations	117625 34 h-index	118850 62 g-index
145 all docs	145 docs citations	145 times ranked	2173 citing authors

#	Article	IF	Citations
1	Power functional theory for many-body dynamics. Reviews of Modern Physics, 2022, 94, .	45.6	31
2	Shear and Bulk Acceleration Viscosities in Simple Fluids. Physical Review Letters, 2022, 128, 094502.	7.8	5
3	Why Noetherâ€™s theorem applies to statistical mechanics. Journal of Physics Condensed Matter, 2022, 34, 213001.	1.8	11
4	Sedimentation of colloidal plate-sphere mixtures and inference of particle characteristics from stacking sequences. Physical Review Research, 2022, 4, .	3.6	6
5	Dynamic decay and superadiabatic forces in the van Hove dynamics of bulk hard sphere fluids. SciPost Physics, 2022, 12, .	4.9	4
6	Force density functional theory in- and out-of-equilibrium. Physical Review E, 2022, 106, .	2.1	14
7	Universality in Driven and Equilibrium Hard Sphere Liquid Dynamics. Physical Review Letters, 2021, 126, 058002.	7.8	9
8	Phase separation of active Brownian particles in two dimensions: anything for a quiet life. Molecular Physics, 2021, 119, .	1.7	15
9	Custom flow in molecular dynamics. Physical Review Research, 2021, 3, .	3.6	7
10	Noetherâ€™s theorem in statistical mechanics. Communications Physics, 2021, 4, .	5.3	23
11	Gravity-induced phase phenomena in plate-rod colloidal mixtures. Communications Physics, 2021, 4, .	5.3	12
12	Adaptive Brownian Dynamics. Journal of Chemical Physics, 2021, 155, 134107.	3.0	17
13	Shear-induced deconfinement of hard disks. Colloid and Polymer Science, 2020, 298, 895-906.	2.1	10
14	Flow and Structure in Nonequilibrium Brownian Many-Body Systems. Physical Review Letters, 2020, 125, 018001.	7.8	24
15	Superadiabatic demixing in nonequilibrium colloids. Communications Physics, 2020, 3, .	5.3	16
16	Memory-induced motion reversal in Brownian liquids. Soft Matter, 2020, 16, 1518-1526.	2.7	15
17	Crystal structures in binary hard-sphere colloid-droplet mixtures with patchy cross interactions. Physical Review E, 2020, 101, 012608.	2.1	9
18	Fluctuation Profiles in Inhomogeneous Fluids. Physical Review Letters, 2020, 125, 268004.	7.8	11

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19	Active interface polarization as a state function. Physical Review Research, 2020, 2, .	3.6	15
20	Phase coexistence of active Brownian particles. Physical Review E, 2019, 100, 052604.	2.1	38
21	Power functional theory for active Brownian particles: General formulation and power sum rules. Journal of Chemical Physics, 2019, 150, 074112.	3.0	19
22	Custom flow in overdamped Brownian dynamics. Physical Review E, 2019, 99, 023306.	2.1	23
23	Superadiabatic Forces via the Acceleration Gradient in Quantum Many-Body Dynamics. Molecules, 2019, 24, 3660.	3.8	7
24	Non-negative Interfacial Tension in Phase-Separated Active Brownian Particles. Physical Review Letters, 2019, 123, 268002.	7.8	31
25	Active ideal sedimentation: exact two-dimensional steady states. Soft Matter, 2018, 14, 1614-1621.	2.7	19
26	Power functional theory for Newtonian many-body dynamics. Journal of Chemical Physics, 2018, 148, 044502.	3.0	19
27	Velocity Gradient Power Functional for Brownian Dynamics. Physical Review Letters, 2018, 120, 028001.	7.8	32
28	Structural Nonequilibrium Forces in Driven Colloidal Systems. Physical Review Letters, 2018, 121, 098002.	7.8	24
29	Better Than Counting: Density Profiles from Force Sampling. Physical Review Letters, 2018, 120, 218001.	7.8	34
30	Assembly of One-Patch Colloids into Clusters via Emulsion Droplet Evaporation. Materials, 2017, 10, 361.	2.9	6
31	Superadiabatic forces in the dynamics of the one-dimensional Gaussian core model. Physical Review E, 2016, 94, 022105.	2.1	8
32	Nonequilibrium Phase Behavior from Minimization of Free Power Dissipation. Physical Review Letters, 2016, 117, 208003.	7.8	28
33	Reentrant network formation in patchy colloidal mixtures under gravity. Physical Review E, 2016, 93, 030601.	2.1	14
34	Minimal model for dynamic bonding in colloidal transient networks. Physical Review E, 2016, 93, 042601.	2.1	3
35	Assembly of open clusters of colloidal dumbbells via droplet evaporation. Physical Review E, 2016, 93, 052609.	2.1	10
36	Dynamic pair correlations and superadiabatic forces in a dense Brownian liquid. Journal of Chemical Physics, 2016, 145, 064506.	3.0	12

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37	Particle conservation in dynamical density functional theory. Journal of Physics Condensed Matter, 2016, 28, 244024.	1.8	17
38	Quantum power functional theory for many-body dynamics. Journal of Chemical Physics, 2015, 143, 174108.	3.0	16
39	Confinement of two-dimensional rods in slit pores and square cavities. Journal of Chemical Physics, 2015, 142, 174701.	3.0	47
40	Free power dissipation from functional line integration. Molecular Physics, 2015, 113, 2873-2880.	1.7	9
41	Sedimentation stacking diagram of binary colloidal mixtures and bulk phases in the plane of chemical potentials. Journal of Physics Condensed Matter, 2015, 27, 194115.	1.8	12
42	Power functional theory for the dynamic test particle limit. Journal of Physics Condensed Matter, 2015, 27, 194106.	1.8	24
43	Dynamic correlations in Brownian many-body systems. Journal of Chemical Physics, 2014, 140, 034104.	3.0	25
44	Superadiabatic Forces in Brownian Many-Body Dynamics. Physical Review Letters, 2014, 113, 167801.	7.8	40
45	Full Canonical Information from Grand-Potential Density-Functional Theory. Physical Review Letters, 2014, 113, 238304.	7.8	30
46	Bulk fluid phase behaviour of colloidal plateletâ€“sphere and plateletâ€“polymer mixtures. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2013, 371, 20120259.	3.4	19
47	The phase stacking diagram of colloidal mixtures under gravity. Soft Matter, 2013, 9, 8636.	2.7	29
48	Effect of controlled corrugation on capillary condensation of colloidâ€“polymer mixtures. Soft Matter, 2013, 9, 3994.	2.7	2
49	Power functional theory for Brownian dynamics. Journal of Chemical Physics, 2013, 138, 214101.	3.0	97
50	Nonequilibrium Ornstein-Zernike relation for Brownian many-body dynamics. Journal of Chemical Physics, 2013, 139, 104108.	3.0	39
51	Particle nanosomes with tailored silhouettes. Soft Matter, 2012, 8, 1928-1933.	2.7	11
52	Floating nematic phase in colloidal platelet-sphere mixtures. Scientific Reports, 2012, 2, 789.	3.3	41
53	Isometric and metamorphic operations on the space of local fundamental measures. Molecular Physics, 2011, 109, 1253-1263.	1.7	2
54	Statics and dynamics of inhomogeneous liquids via the internal-energy functional. Physical Review E, 2011, 84, 051203.	2.1	14

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55	Phase behaviour of binary mixtures of diamagnetic colloidal platelets in an external magnetic field. Journal of Physics Condensed Matter, 2011, 23, 194111.	1.8	3
56	Radial distribution functions of non-additive hard sphere mixtures via Percusâ€™ test particle route. Journal of Physics Condensed Matter, 2011, 23, 325104.	1.8	4
57	Density functional for ternary non-additive hard sphere mixtures. Journal of Physics Condensed Matter, 2011, 23, 415101.	1.8	5
58	Monte Carlo computer simulations and electron microscopy of colloidal cluster formation via emulsion droplet evaporation. Journal of Chemical Physics, 2011, 135, 244501.	3.0	23
59	Variational principle of classical density functional theory via Levyâ€™s constrained search method. Physical Review E, 2011, 83, 061133.	2.1	16
60	First-order layering and critical wetting transitions in nonadditive hard-sphere mixtures. Physical Review E, 2011, 83, 050602.	2.1	7
61	Computer simulations of colloidal transport on a patterned magnetic substrate. Physical Review E, 2011, 83, 041411.	2.1	2
62	Density functional for hard hyperspheres from a tensorial-diagrammatic series. Physical Review E, 2011, 83, 021201.	2.1	7
63	Sedimentation equilibrium of colloidal platelets in an aligning magnetic field. Journal of Chemical Physics, 2010, 132, 144509.	3.0	8
64	Binary non-additive hard sphere mixtures: fluid demixing, asymptotic decay of correlations and free fluid interfaces. Journal of Physics Condensed Matter, 2010, 22, 325108.	1.8	23
65	The van Hove distribution function for Brownian hard spheres: Dynamical test particle theory and computer simulations for bulk dynamics. Journal of Chemical Physics, 2010, 133, 224505.	3.0	98
66	Laterally driven interfaces in the three-dimensional Ising lattice gas. Physical Review E, 2010, 82, 021126.	2.1	4
67	Bulk phase behavior of binary hard platelet mixtures from density functional theory. Physical Review E, 2010, 81, 041401.	2.1	19
68	Lateral transport of thermal capillary waves. Europhysics Letters, 2010, 89, 10006.	2.0	2
69	Nanoparticle assembly by confinement in wrinkles: experiment and simulations. Soft Matter, 2010, 6, 5860.	2.7	49
70	Test particle limit for the pair structure of quenched-annealed fluid mixtures. Physical Review E, 2009, 79, 031405.	2.1	6
71	Quenched-annealed density functional theory for interfacial behavior of hard rods at a hard rod matrix. Journal of Chemical Physics, 2009, 131, 214705.	3.0	5
72	Life at ultralow interfacial tension: wetting, waves and droplets in demixed colloid-polymer mixtures. European Physical Journal B, 2008, 64, 341-347.	1.5	26

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73	Interfaces in confined Ising models: Kawasaki, Glauber and sheared dynamics. Journal of Physics Condensed Matter, 2008, 20, 494237.	1.8	3
74	Non-equilibrium sedimentation of colloids: confocal microscopy and Brownian dynamics simulations. Journal of Physics Condensed Matter, 2008, 20, 494222.	1.8	12
75	Structure and stability of isotropic states of hard platelet fluids. Physical Review E, 2008, 78, 041201.	2.1	22
76	Interfaces in Driven Ising Models: Shear Enhances Confinement. Physical Review Letters, 2008, 101, 067203.	7.8	19
77	Capillary nematization of hard colloidal platelets confined between two parallel hard walls. Journal of Physics Condensed Matter, 2007, 19, 326103.	1.8	33
78	Fundamental measure density functional theory for nonadditive hard-core mixtures: The one-dimensional case. Physical Review E, 2007, 76, 031202.	2.1	18
79	Dynamics in inhomogeneous liquids and glasses via the test particle limit. Physical Review E, 2007, 75, 040501.	2.1	61
80	A relationship of mean-field theory for a driven lattice gas to an exact equilibrium density functional. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 13209-13215.	2.1	9
81	Entropic Wetting and the Free Isotropicâ˜Nematic Interface of Hard Colloidal Platelets. Journal of Physical Chemistry B, 2007, 111, 7825-7835.	2.6	27
82	Nonequilibrium Sedimentation of Colloids on the Particle Scale. Physical Review Letters, 2007, 98, 188304.	7.8	122
83	Peel or coat spheres by convolution, repeatedly. Journal of Mathematical Physics, 2007, 48, 123507.	1.1	5
84	Phase behavior and structure of model colloid-polymer mixtures confined between two parallel planar walls. Physical Review E, 2006, 73, 051502.	2.1	41
85	Density functional theory for colloidal mixtures of hard platelets, rods, and spheres. Physical Review E, 2006, 73, 011409.	2.1	71
86	Entropic interfaces in hard-core model amphiphilic mixtures. Journal of Colloid and Interface Science, 2005, 281, 495-502.	9.4	4
87	Replica density functional theory: an overview. Journal of Physics Condensed Matter, 2005, 17, S3481-S3486.	1.8	28
88	Lattice density functional for colloid-polymer mixtures: Comparison of two fundamental measure theories. Physical Review E, 2005, 72, 031405.	2.1	7
89	Wetting, Drying, and Layering of Colloid-Polymer Mixtures at Porous Interfaces. Physical Review Letters, 2005, 94, 078303.	7.8	15
90	Wall-fluid and liquid-gas interfaces of model colloid-polymer mixtures by simulation and theory. Physical Review E, 2005, 71, 051403.	2.1	38

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91	Mixtures of charged colloid and neutral polymer: Influence of electrostatic interactions on demixing and interfacial tension. Journal of Chemical Physics, 2005, 122, 244911.	3.0	27
92	Simulation and theory of fluid demixing and interfacial tension of mixtures of colloids and nonideal polymers. Physical Review E, 2005, 71, 051406.	2.1	24
93	Wall tensions of model colloidâ€“polymer mixtures. Journal of Physics Condensed Matter, 2004, 16, L1-L8.	1.8	25
94	Competition between sedimentation and phase coexistence of colloidal dispersions under gravity. Journal of Physics Condensed Matter, 2004, 16, S4185-S4194.	1.8	22
95	Rosenfeld functional for non-additive hard spheres. Journal of Physics Condensed Matter, 2004, 16, L351-L357.	1.8	35
96	The contact angle of the colloidal liquidâ€“gas interface and a hard wall. Journal of Physics Condensed Matter, 2004, 16, S4169-S4184.	1.8	16
97	Density functional theory for sphere-needle mixtures: Toward finite rod thickness. Physical Review E, 2004, 70, 022501.	2.1	17
98	Floating Liquid Phase in Sedimenting Colloid-Polymer Mixtures. Physical Review Letters, 2004, 93, 088303.	7.8	35
99	Direct Visual Observation of Thermal Capillary Waves. Science, 2004, 304, 847-850.	12.6	417
100	Capillary evaporation in colloidâ€“polymer mixtures selectively confined to a planar slit. Journal of Physics Condensed Matter, 2004, 16, S4159-S4168.	1.8	23
101	Replica Density Functional Study of One-Dimensional Hard Core Fluids in Porous Media. Journal of Statistical Physics, 2004, 116, 1683-1702.	1.2	23
102	Isotropic-nematic transition of hard rods immersed in random sphere matrices. Journal of Chemical Physics, 2004, 121, 12067-12073.	3.0	12
103	Laser-induced condensation in colloidâ€”polymer mixtures. Molecular Physics, 2003, 101, 1651-1658.	1.7	18
104	Hard sphere fluids in random fiber networks. Journal of Chemical Physics, 2003, 119, 3495-3500.	3.0	10
105	Hard body amphiphiles at a hard wall. Molecular Physics, 2003, 101, 2225-2231.	1.7	3
106	Hard sphere fluids at surfaces of porous media. Physical Review E, 2003, 68, 021106.	2.1	9
107	Capillary condensation and interface structure of a model colloid-polymer mixture in a porous medium. Physical Review E, 2003, 68, 061404.	2.1	15
108	Statistical mechanics of inhomogeneous model colloidâ€”polymer mixtures. Molecular Physics, 2003, 101, 3349-3384.	1.7	80

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109	Fluid demixing in colloidâ€“polymer mixtures: Influence of polymer interactions. Journal of Chemical Physics, 2003, 118, 1541-1549.	3.0	42
110	Simulation and theory of fluidâ€“fluid interfaces in binary mixtures of hard spheres and hard rods. Journal of Physics Condensed Matter, 2003, 15, S3421-S3428.	1.8	18
111	Geometry-based density functional theory: an overview. Journal of Physics Condensed Matter, 2003, 15, S101-S106.	1.8	18
112	Capillary condensation of colloidâ€“polymer mixtures confined between parallel plates. Journal of Physics Condensed Matter, 2003, 15, S3411-S3420.	1.8	37
113	Freezing in the presence of disorder: a lattice study. Journal of Physics Condensed Matter, 2003, 15, 4695-4708.	1.8	13
114	Entropic wetting of a colloidal rod-sphere mixture. Europhysics Letters, 2003, 63, 549-555.	2.0	25
115	Colloidal rod-sphere mixtures: Fluid-fluid interfaces and the Onsager limit. Physical Review E, 2002, 66, 031401.	2.1	45
116	Demixing of colloid-polymer mixtures in poor solvents. Physical Review E, 2002, 65, 061410.	2.1	15
117	Density-functional theory for fluids in porous media. Physical Review E, 2002, 66, 041108.	2.1	40
118	Penetrability in model colloidâ€“polymer mixtures. Journal of Chemical Physics, 2002, 117, 6308-6312.	3.0	46
119	Do effective interactions depend on the choice of coordinates?. Physical Review E, 2002, 65, 022801.	2.1	3
120	Colloids, polymers, and needles: Demixing phase behavior. Physical Review E, 2002, 65, 021508.	2.1	24
121	Density functional theory for a model colloidÂpolymer mixture: bulk fluid phases. Journal of Physics Condensed Matter, 2002, 14, 9353-9382.	1.8	68
122	Model colloidÂpolymer mixtures in porous matrices: density functional versus integral equations. Journal of Physics Condensed Matter, 2002, 14, 12099-12117.	1.8	28
123	Colloid-induced polymer compression. Journal of Physics Condensed Matter, 2002, 14, 12051-12062.	1.8	26
124	Density functional theory for random sequential adsorption. Journal of Physics Condensed Matter, 2002, 14, 12119-12127.	1.8	7
125	Soft Interaction between Dissolved Flexible Dendrimers:â€‰ Theory and Experiment. Macromolecules, 2001, 34, 2914-2920.	4.8	102
126	Density functional theory for colloidal rod-sphere mixtures. Physical Review E, 2001, 63, 050201.	2.1	69

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127	Amphiphilic hard body mixtures. Physical Review E, 2001, 64, 051115.	2.1	21
128	Freezing transition of hard hyperspheres. Physical Review E, 2001, 65, 016108.	2.1	45
129	Colloids confined to a flexible container. Physical Review E, 2001, 63, 051401.	2.1	9
130	Density-functional theory for structure and freezing of star polymer solutions. Journal of Chemical Physics, 2001, 114, 5450-5456.	3.0	22
131	Density Functional for a Model Colloid-Polymer Mixture. Physical Review Letters, 2000, 85, 1934-1937.	7.8	147
132	Fluid of penetrable spheres:â€,â€,Testing the universality of the bridge functional. Physical Review E, 2000, 62, 5006-5010.	2.1	32
133	Topological defects in nematic droplets of hard spherocylinders. Physical Review E, 2000, 62, 5081-5091.	2.1	53
134	Colloidal particles in emulsions. Physical Review E, 2000, 61, 5445-5451.	2.1	13
135	Density functional for the Widom-Rowlinson model. Physical Review E, 2000, 63, .	2.1	32
136	Density functional for additive mixtures. Physical Review E, 2000, 62, 3799-3802.	2.1	30
137	Fluid structure from density-functional theory. Physical Review E, 2000, 62, 4976-4981.	2.1	39
138	Anab initiodensity functional for penetrable spheres. Journal of Physics Condensed Matter, 1999, 11, 10163-10169.	1.8	63
139	Density-functional theory for soft interactions by dimensional crossover. Physical Review E, 1999, 60, R6291-R6294.	2.1	47
140	Fundamental-measure free-energy density functional for hard spheres: Dimensional crossover and freezing. Physical Review E, 1997, 55, 4245-4263.	2.1	349
141	Phase diagram of hard spheres confined between two parallel plates. Physical Review E, 1997, 55, 7228-7241.	2.1	234
142	Freezing between Two and Three Dimensions. Physical Review Letters, 1996, 76, 4552-4555.	7.8	200
143	Dimensional crossover and the freezing transition in density functional theory. Journal of Physics Condensed Matter, 1996, 8, L577-L581.	1.8	98
144	MC-simulation of the 3D,q=3 Potts model. European Physical Journal B, 1994, 95, 327-330.	1.5	16