Grzegorz Szamel

List of Publications by Year
in descending order

98 papers	3,306 citations	136940 32 h-index	155644 55 g-index
99 all docs	99 docs citations	99 times ranked	1573 citing authors

#	Article	IF	Citations
1	Microscopic analysis of sound attenuation in low-temperature amorphous solids reveals quantitative importance of non-affine effects. Journal of Chemical Physics, 2022, 156, 144502.	3.0	13
2	An alternative, dynamic density functional-like theory for time-dependent density fluctuations in glass-forming fluids. Journal of Chemical Physics, 2022, 156, 191102.	3.0	4
3	Interplay between percolation and glassiness in the random Lorentz gas. Physical Review E, 2021, 103, L030104.	2.1	12
4	Long-ranged velocity correlations in dense systems of self-propelled particles. Europhysics Letters, 2021, 133, 60002.	2.0	29
5	The Einstein effective temperature can predict the tagged active particle density. Journal of Chemical Physics, 2021, 154, 184901.	3.0	4
6	Mean-Field Caging in a Random Lorentz Gas. Journal of Physical Chemistry B, 2021, 125, 6244-6254.	2.6	11
7	Dynamics of liquids in the large-dimensional limit. Physical Review E, 2021, 104, 054606.	2.1	11
8	Low-Frequency Excess Vibrational Modes in Two-Dimensional Glasses. Physical Review Letters, 2021, 127, 248001.	7.8	16
9	Energy transport in glasses. Soft Matter, 2020, 16, 775-783.	2.7	4
10	Stability dependence of local structural heterogeneities of stable amorphous solids. Soft Matter, 2020, 16, 914-920.	2.7	11
11	Single active particle engine utilizing a nonreciprocal coupling between particle position and self-propulsion. Physical Review E, 2020, 102, 042605.	2.1	5
12	Active matter: Quantifying the departure from equilibrium. Physical Review E, 2020, 102, 022607.	2.1	24
13	Sound attenuation in finite-temperature stable glasses. Soft Matter, 2020, 16, 7165-7171.	2.7	6
14	Sound attenuation in stable glasses. Soft Matter, 2019, 15, 7018-7025.	2.7	40
15	Theory for the single-particle dynamics in glassy mixtures with particle size swaps. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 104016.	2.3	3
16	Viscoelastic shear stress relaxation in two-dimensional glass-forming liquids. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2015-2020.	7.1	18
17	Glassy dynamics in dense systems of active particles. Journal of Chemical Physics, 2019, 150, 200901.	3.0	82
18	Mode-coupling theory for the steady-state dynamics of active Brownian particles. Journal of Chemical Physics, 2019, 150, 124901.	3.0	22

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19	Stochastic thermodynamics for self-propelled particles. Physical Review E, 2019, 100, 050603.	2.1	32
20	Low-frequency vibrational modes of stable glasses. Nature Communications, 2019, 10, 26.	12.8	124
21	Theory for the dynamics of glassy mixtures with particle size swaps. Physical Review E, 2018, 98, .	2.1	10
22	Comparison of single particle dynamics at the center and on the surface of equilibrium glassy films. Journal of Chemical Physics, 2018, 149, 074501.	3.0	7
23	A microscopic model of the Stokesâ€“Einstein relation in arbitrary dimension. Journal of Chemical Physics, 2018, 148, 224503.	3.0	28
24	Evaluating linear response in active systems with no perturbing field. Europhysics Letters, 2017, 117, 50010.	2.0	33
25	Simple Theory for the Dynamics of Mean-Field-Like Models of Glass-Forming Fluids. Physical Review Letters, 2017, 119, 155502.	7.8	32
26	How active forces influence nonequilibrium glass transitions. New Journal of Physics, 2017, 19, 125006.	2.9	57
27	Dynamic heterogeneity in two-dimensional supercooled liquids: comparison of bond-breaking and bond-orientational correlations. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 074008.	2.3	6
28	Kinetic stability and energetics of simulated glasses createdby constant pressure cooling. Journal of Chemical Physics, 2016, 145, 184505.	3.0	4
29	The nonequilibrium glassy dynamics of self-propelled particles. Soft Matter, 2016, 12, 7136-7149.	2.7	78
30	Theory for the dynamics of dense systems of athermal self-propelled particles. Physical Review E, 2016, 93, 012603.	2.1	59
31	Glassy dynamics of athermal self-propelled particles: Computer simulations and a nonequilibrium microscopic theory. Physical Review E, 2015, 91, 062304.	2.1	102
32	Reduced strength and extent of dynamic heterogeneity in a strong glass former as compared to fragile glass formers. Journal of Chemical Physics, 2015, 143, 244501.	3.0	11
33	Cooling-rate dependence of kinetic and mechanical stabilities of simulated glasses. Journal of Chemical Physics, 2015, 142, 244508.	3.0	6
34	Fundamental differences between glassy dynamics in two and three dimensions. Nature Communications, 2015, 6, 7392.	12.8	126
35	Large and Long-Range Dynamic Correlations in Supercooled Fluids Revealed via Four-Point Correlation Functions. Journal of Physical Chemistry B, 2015, 119, 9188-9194.	2.6	15
36	Long-range correlations in glasses and glassy fluids. Journal of Physics Condensed Matter, 2015, 27, 194125.	1.8	4

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37	Long-Range Spatial Correlations of Particle Displacements and the Emergence of Elasticity. Physical Review Letters, 2015, 114, 025501.	7.8	23
38	Self-propelled particle in an external potential: Existence of an effective temperature. Physical Review E, 2014, 90, 012111.	2.1	210
39	Universal Features of Dynamic Heterogeneity in Supercooled Liquids. Physical Review Letters, 2014, 112, 097801.	7.8	89
40	Dynamic heterogeneities above and below the mode-coupling temperature: Evidence of a dynamic crossover. Journal of Chemical Physics, 2013, 138, 12A523.	3.0	51
41	Mode-coupling theory and beyond: A diagrammatic approach. Progress of Theoretical and Experimental Physics, 2013, 2013, .	6.6	17
42	Glassy dynamics of partially pinned fluids: An alternative mode-coupling approach. Europhysics Letters, 2013, 101, 66005.	2.0	29
43	Breakdown of a renormalized perturbation expansion around mode-coupling theory of the glass transition. Europhysics Letters, 2013, 103, 56003.	2.0	1
44	Characterizing dynamic length scales in glass-forming liquids. Nature Physics, 2012, 8, 696-697.	16.7	26
45	Effective temperatures of a driven, strongly anisotropic Brownian system. Physical Review E, 2011, 83, 061407.	2.1	9
46	Emergence of Long-Range Correlations and Rigidity at the Dynamic Glass Transition. Physical Review Letters, 2011, 107, 105505.	7.8	39
47	Analysis of a growing dynamic length scale in a glass-forming binary hard-sphere mixture. Physical Review E, 2011, 83, 051501.	2.1	65
48	Diverging length scale of the inhomogeneous mode-coupling theory: A numerical investigation. Physical Review E, 2010, 81, 031507.	2.1	16
49	Dynamic Heterogeneity in a Glass Forming Fluid: Susceptibility, Structure Factor, and Correlation Length. Physical Review Letters, 2010, 105, 217801.	7.8	78
50	Scaling of the glassy dynamics of soft repulsive particles: A mode-coupling approach. Physical Review E, 2010, 81, 031505.	2.1	25
51	Increasing the density melts ultrasoft colloidal glasses. Physical Review E, 2010, 82, 060501.	2.1	78
52	Three-point susceptibilitiesÏ‡n(k;t)andÏ‡ns(k;t): Mode-coupling approximation. Physical Review E, 2009, 79, 021503.	2.1	2
53	Anisotropic spatially heterogeneous dynamics on the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>relaxation time scales studied via a four-point correlation function. Physical Review E, 2009, 79, 051502.	2.1	22
54	Single-chain dynamics in a semidilute polymer solution under steady shear. Journal of Chemical Physics, 2008, 128, 224910.	3.0	11

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55	Divergent Four-Point Dynamic Density Correlation Function of a Glassy Suspension. Physical Review Letters, 2008, 101, 205701.	7.8	14
56	Dynamics of interacting Brownian particles: A diagrammatic formulation. Journal of Chemical Physics, 2007, 127, 084515.	3.0	25
57	Anisotropic spatially heterogeneous dynamics in a model glass-forming binary mixture. Journal of Physics Condensed Matter, 2007, 19, 205125.	1.8	15
58	Structure of a semidilute polymer solution under steady shear. Journal of Chemical Physics, 2007, 127, 114905.	3.0	9
59	Nature of the breakdown in the Stokes-Einstein relationship in a hard sphere fluid. Journal of Chemical Physics, 2006, 124, 214501.	3.0	166
60	Time scale for the onset of Fickian diffusion in supercooled liquids. Physical Review E, 2006, 73, 011504.	2.1	43
61	Four-point susceptibility of a glass-forming binary mixture: Brownian dynamics. Physical Review E, 2006, 74, 021507.	2.1	32
62	Relaxation in a glassy binary mixture: Mode-coupling-like power laws, dynamic heterogeneity, and a new non-Gaussian parameter. Physical Review E, 2005, 72, 011205.	2.1	91
63	Comment on â€œFrequency dependence and equilibration of the specific heat of glass-forming liquidsâ€• Physical Review E, 2005, 72, 023201; discussion 023202.	2.1	6
64	Relaxation in a glassy binary mixture: Comparison of the mode-coupling theory to a Brownian dynamics simulation. Physical Review E, 2005, 72, 031508.	2.1	115
65	Self-Diffusion in Sheared Colloidal Suspensions: Violation Of Fluctuation-Dissipation Relation. Physical Review Letters, 2004, 93, 178301.	7.8	20
66	Lifetime of dynamic heterogeneities in a binary Lennard-Jones mixture. Physical Review E, 2004, 70, 052501.	2.1	20
67	Is a â€œhomogeneousâ€•description of dynamic heterogeneities possible?. Journal of Chemical Physics, 2004, 121, 3355-3358.	3.0	7
68	Colloidal Glass Transition: Beyond Mode-Coupling Theory. Physical Review Letters, 2003, 90, 228301.	7.8	73
69	Thin films of asymmetric triblock copolymers: A Monte Carlo study. Journal of Chemical Physics, 2003, 118, 905-913.	3.0	39
70	Kinetic theory for dilute dipolar systems. Journal of Chemical Physics, 2002, 117, 8886-8891.	3.0	0
71	Nonequilibrium structure and rheology of concentrated colloidal suspensions: Linear response. Journal of Chemical Physics, 2001, 114, 8708-8717.	3.0	21
72	Influence of topological constraints on the statics and dynamics of ring polymers. Physical Review E, 2001, 63, 052801.	2.1	69

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73	The Role of Attractive Interactions in Self-Diffusion. Journal of Physical Chemistry B, 2000, 104, 10647-10652.	2.6	16
74	A theory for dynamic friction on a molecular bond. Journal of Chemical Physics, 1999, 110, 6827-6835.	3.0	9
75	Density, temperature, and bond-length dependence of dynamic friction on a molecular bond. Journal of Chemical Physics, 1999, 111, 4698-4703.	3.0	1
76	A theory for self-diffusion in liquids. Journal of Chemical Physics, 1999, 110, 3009-3022.	3.0	15
77	Glauber dynamics of the SK model: theory and simulations in the low-temperature phase. Journal of Physics A, 1998, 31, 10053-10063.	1.6	3
78	Glauber dynamics of the SK model: theory and simulations in the high-temperature phase. Journal of Physics A, 1998, 31, 10045-10052.	1.6	3
79	Tagged chain diffusion equation and effective friction tensor in dense polymer solutions. Journal of Chemical Physics, 1998, 108, 368-375.	3.0	6
80	Computer simulation study of the structure and dynamics of ring polymers. Journal of Chemical Physics, 1998, 109, 6184-6192.	3.0	102
81	Structure and dynamics of ring polymers. Journal of Chemical Physics, 1998, 108, 4705-4708.	3.0	87
82	Kinetic theory approach to the SK spin glass model with Glauber dynamics. Journal of Physics A, 1997, 30, 5727-5733.	1.6	4
83	Long-lived interchain contacts in polymer melts. Journal of Chemical Physics, 1997, 107, 10793-10798.	3.0	10
84	Statistical mechanics of dissipative transport in crystals. Journal of Statistical Physics, 1997, 87, 1067-1082.	1.2	16
85	Crossover to entangled dynamics in polymer solutions and melts. Journal of Chemical Physics, 1995, 103, 1934-1945.	3.0	39
86	On the interpretation of â€˜â€˜rippleâ€™â€™ polymer interdiffusion experiments in terms of models for bulk singleâ€chain dynamics. Journal of Chemical Physics, 1995, 102, 2222-2238.	3.0	8
87	Mode-coupling theory of entangled polymer fluids. Transport Theory and Statistical Physics, 1995, 24, 947-977.	0.4	20
88	Local structure and orientational correlations in fluids composed of linear triatomic molecules. Molecular Physics, 1994, 82, 937-955.	1.7	10
89	Reptation as a dynamic meanâ€field theory: Self and tracer diffusion in a simple model of rodlike polymers. Journal of Chemical Physics, 1994, 100, 3127-3141.	3.0	44
90	Reptation as a dynamic mean-field theory: Study of a simple model of rodlike polymers. Physical Review Letters, 1993, 70, 3744-3747.	7.8	49

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91	Comment on â€˜â€˜Large fluctuations in polymer solutions under shearâ€™â€™. Physical Review Letters, 1993, 70, 1894-1894.	7.8	4
92	Structure and rheology of semidilute suspension under shear. Physical Review E, 1993, 48, 4632-4636.	2.1	34
93	Slow modes in crystals: A method to study elastic constants. Physical Review B, 1993, 48, 112-118.	3.2	24
94	Self-diffusion in sheared suspensions: Violation of the Einstein relation. Physical Review A, 1992, 45, R2173-R2176.	2.5	10
95	Dynamical properties of hard-sphere suspensions. Physical Review A, 1992, 46, 4999-5011.	2.5	35
96	Long-time self-diffusion coefficients of suspensions. Physical Review A, 1992, 46, 5012-5019.	2.5	24
97	Mode-coupling theory of the glass transition in colloidal systems. Physical Review A, 1991, 44, 8215-8219.	2.5	125
98	Comment on symmetry properties of the linear Enskog kinetic operators. Journal of Statistical Physics, 1989, 55, 381-387.	1.2	2