

Gilles Tarjus

List of Publications by Year in descending order

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89
papers

4,165
citations

101543

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63
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90
docs citations

90
times ranked

2360
citing authors

#	ARTICLE	IF	CITATIONS
1	Statistical mechanics of coupled supercooled liquids in finite dimensions. <i>SciPost Physics</i> , 2022, 12, .	4.9	10
2	Static self-induced heterogeneity in glass-forming liquids: Overlap as a microscope. <i>Journal of Chemical Physics</i> , 2022, 156, .	3.0	8
3	A perspective on the fragility of glass-forming liquids. <i>Journal of Non-Crystalline Solids: X</i> , 2022, 14, 100100.	1.2	5
4	Rare events and disorder control the brittle yielding of well-annealed amorphous solids. <i>Physical Review Research</i> , 2022, 4, .	3.6	4
5	Random-field Ising model criticality in a glass-forming liquid. <i>Physical Review E</i> , 2020, 102, 042129.	2.1	12
6	Random-field Ising and O(N) models: theoretical description through the functional renormalization group. <i>European Physical Journal B</i> , 2020, 93, 1.	1.5	23
7	Role of fluctuations in the yielding transition of two-dimensional glasses. <i>Physical Review Research</i> , 2020, 2, .	3.6	24
8	On the overlap between configurations in glassy liquids. <i>Journal of Chemical Physics</i> , 2020, 153, 224502.	3.0	9
9	Dimensional reduction breakdown and correction to scaling in the random-field Ising model. <i>Physical Review E</i> , 2020, 102, 062154.	2.1	5
10	Benchmarking the nonperturbative functional renormalization group approach on the random elastic manifold model in and out of equilibrium. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2019, 2019, 103301.	2.3	5
11	Can the glass transition be explained without a growing static length scale?. <i>Journal of Chemical Physics</i> , 2019, 150, 094501.	3.0	38
12	Glassy dynamics of dense particle assemblies on a spherical substrate. <i>Journal of Chemical Physics</i> , 2018, 148, 164501.	3.0	16
13	Criticality of the random field Ising model in and out of equilibrium: A nonperturbative functional renormalization group description. <i>Physical Review B</i> , 2018, 97, .	3.2	28
14	Random-field Ising-like effective theory of the glass transition. I. Mean-field models. <i>Physical Review B</i> , 2018, 98, .	3.2	15
15	Random field Ising-like effective theory of the glass transition. II. Finite-dimensional models. <i>Physical Review B</i> , 2018, 98, .	3.2	16
16	Random critical point separates brittle and ductile yielding transitions in amorphous materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6656-6661.	7.1	195
17	From Glass Formation to Icosahedral Ordering by Curving Three-Dimensional Space. <i>Physical Review Letters</i> , 2017, 118, 215501.	7.8	33
18	Avoided criticality and slow relaxation in frustrated two-dimensional models. <i>Physical Review B</i> , 2017, 96, .	3.2	4

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19	Point-to-set lengths, local structure, and glassiness. <i>Physical Review E</i> , 2016, 94, 032605.	2.1	43
20	Phase diagram and criticality of the random anisotropy model in the large- N limit. <i>Physical Review B</i> , 2016, 94, .	3.2	7
21	Spinodals with Disorder: From Avalanches in Random Magnets to Glassy Dynamics. <i>Physical Review Letters</i> , 2016, 116, 145701.	7.8	40
22	Avalanches and perturbation theory in the random-field Ising model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2016, 2016, 023207.	2.3	7
23	Role of fluctuations in the phase transitions of coupled plaquette spin models of glasses. <i>SciPost Physics</i> , 2016, 1, .	4.9	12
24	Activated dynamic scaling in the random-field Ising model: A nonperturbative functional renormalization group approach. <i>Physical Review B</i> , 2015, 91, .	3.2	14
25	Mode-coupling approach for the slow dynamics of a liquid on a spherical substrate. <i>Journal of Chemical Physics</i> , 2015, 143, 084505.	3.0	9
26	Critical behaviour of the random-field Ising model with long-range interactions in one dimension. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P10017.	2.3	11
27	Same universality class for the critical behavior in and out of equilibrium in a quenched random field. <i>Physical Review B</i> , 2014, 89, .	3.2	9
28	Quenched disorder and vestigial nematicity in the pseudogap regime of the cuprates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 7980-7985.	7.1	191
29	Dynamics of a monodisperse Lennard-Jones system on a sphere. <i>Molecular Physics</i> , 2014, 112, 1330-1335.	1.7	15
30	Random-Field-like Criticality in Glass-Forming Liquids. <i>Physical Review Letters</i> , 2014, 112, 175701.	7.8	50
31	Fixed points and their stability in the functional renormalization group of random field models. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P06010.	2.3	8
32	Geometrical frustration and static correlations in hard-sphere glass formers. <i>Journal of Chemical Physics</i> , 2013, 138, 12A515.	3.0	36
33	Decorrelation of the static and dynamic length scales in hard-sphere glass formers. <i>Physical Review E</i> , 2013, 87, 042305.	2.1	67
34	Avalanches and Dimensional Reduction Breakdown in the Critical Behavior of Disordered Systems. <i>Physical Review Letters</i> , 2013, 110, 135703.	7.8	17
35	Fragility of the mean-field scenario of structural glasses for disordered spin models in finite dimensions. <i>Physical Review B</i> , 2013, 87, .	3.2	16
36	Dimensional reduction and its breakdown in the three-dimensional long-range random-field Ising model. <i>Physical Review B</i> , 2013, 88, .	3.2	13

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37	A Viewpoint, Model and Theory for Supercooled Liquids. Progress of Theoretical Physics Supplement, 2013, 126, 289-299.	0.1	3
38	Nonperturbative functional renormalization group for random field models and related disordered systems. IV. Supersymmetry and its spontaneous breaking. Physical Review B, 2012, 85, .	3.2	54
39	Nonperturbative functional renormalization group for random field models and related disordered systems. III. Superfield formalism and ground-state dominance. Physical Review B, 2012, 85, .	3.2	46
40	Geometrical Frustration and Static Correlations in a Simple Glass Former. Physical Review Letters, 2012, 108, 035701.	7.8	85
41	Hierarchical reference theory of critical fluids in disordered porous media. Molecular Physics, 2011, 109, 2863-2887.	1.7	7
42	The role of attractive forces in viscous liquids. Journal of Chemical Physics, 2011, 134, 214503.	3.0	86
43	Renormalization Group Analysis of the Random First-Order Transition. Physical Review Letters, 2011, 106, 115705.	7.8	36
44	Supersymmetry and Its Spontaneous Breaking in the Random Field Ising Model. Physical Review Letters, 2011, 107, 041601.	7.8	74
45	Bootstrap Percolation and Kinetically Constrained Models on Hyperbolic Lattices. Journal of Statistical Physics, 2010, 138, 411-430.	1.2	17
46	Growing Static and Dynamic Length Scales in a Glass-Forming Liquid. Physical Review Letters, 2010, 104, 065701.	7.8	68
47	Structure and dynamics of topological defects in a glassy liquid on a negatively curved manifold. Physical Review E, 2010, 81, 031504.	2.1	22
48	Critical test of the mode-coupling theory of the glass transition. Physical Review E, 2010, 82, 031502.	2.1	71
49	Thermodynamics and structure of simple liquids in the hyperbolic plane. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P04022.	2.3	9
50	Nonperturbative Effect of Attractive Forces in Viscous Liquids. Physical Review Letters, 2009, 103, 170601.	7.8	139
51	In search of a theory of supercooled liquids. Nature Materials, 2008, 7, 831-833.	27.5	110
52	Tuning the Fragility of a Glass-Forming Liquid by Curving Space. Physical Review Letters, 2008, 101, 155701.	7.8	60
53	Comment on "Correlation between Dynamic Heterogeneity and Medium-Range Order in Two-Dimensional Glass-Forming Liquids": Physical Review Letters, 2008, 100, 099601; discussion 99602.	7.8	5
54	Nonperturbative functional renormalization group for random field models and related disordered systems. I. Effective average action formalism. Physical Review B, 2008, 78, .	3.2	55

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55	Nonperturbative functional renormalization group for random field models and related disordered systems. II. Results for the random field $O(N)$ model. <i>Physical Review B</i> , 2008, 78, .	3.2	55
56	On the correlation between fragility and stretching in glass-forming liquids. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 076102.	1.8	58
57	Temperature versus density effects in glassforming liquids and polymers: A scaling hypothesis and its consequences. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 4888-4894.	3.1	48
58	Two-loop functional renormalization group of the random field and random anisotropy $O(N)$ models. <i>Physical Review B</i> , 2006, 74, .	3.2	32
59	Unified Picture of Ferromagnetism, Quasi-Long-Range Order, and Criticality in Random-Field Models. <i>Physical Review Letters</i> , 2006, 96, 087202.	7.8	73
60	Are defect models consistent with the entropy and specific heat of glass formers?. <i>Journal of Chemical Physics</i> , 2005, 123, 044510.	3.0	22
61	Nonperturbative Functional Renormalization Group for Random-Field Models: The Way Out of Dimensional Reduction. <i>Physical Review Letters</i> , 2004, 93, 267008.	7.8	75
62	Response to: "Comment on "Disentangling density and temperature effects in the viscous slowing down of glassforming liquids" [J. Chem. Phys. 121, 11503 (2004)]. <i>Journal of Chemical Physics</i> , 2004, 121, 11505.		9
63	Temperature, density, and pressure dependence of relaxation times in supercooled liquids. <i>Journal of Chemical Physics</i> , 2002, 116, 5033.	3.0	83
64	Apparent polyamorphism and frustration. <i>Journal of Non-Crystalline Solids</i> , 2002, 307-310, 630-636.	3.1	25
65	H ₂ O below 277 K: A Novel Picture. <i>Journal of Physical Chemistry B</i> , 2001, 105, 6620-6627.	2.6	36
66	Energy Landscapes Composed of Continuous Intertwining Equipotential Ribbons. <i>Journal of Physical Chemistry B</i> , 2001, 105, 11854-11858.	2.6	4
67	The viscous slowing down of supercooled liquids as a temperature-controlled super-Arrhenius activated process: a description in terms of frustration-limited domains. <i>Journal of Physics Condensed Matter</i> , 2000, 12, 6497-6508.	1.8	49
68	Enhanced saturation coverages in adsorption-desorption processes. <i>Journal of Chemical Physics</i> , 2000, 112, 1483-1488.	3.0	12
69	A heterogeneous picture of τ relaxation for fragile supercooled liquids. <i>Journal of Chemical Physics</i> , 2000, 112, 10368-10378.	3.0	46
70	A Particle-Level Model of Irreversible Protein Adsorption with a Postadsorption Transition. <i>Journal of Colloid and Interface Science</i> , 1998, 207, 317-323.	9.4	85
71	SuperArrhenius character of supercooled glass-forming liquids. <i>Journal of Non-Crystalline Solids</i> , 1998, 235-237, 86-100.	3.1	46
72	Observed anomalies in supercooled liquids described by frustration-limited domain theory. <i>The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties</i> , 1998, 77, 245-256.	0.6	25

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73	The Kauzmann paradox interpreted via the theory of frustration- limited-domains. Journal of Chemical Physics, 1998, 109, 5481-5486.	3.0	41
74	Supercooled liquids and the glass transition: Temperature as the control variable. Journal of Chemical Physics, 1998, 109, 8010-8015.	3.0	178
75	Distribution function analysis of the structure of depleted particle configurations. Physical Review E, 1997, 56, R1299-R1301.	2.1	18
76	A kinetic model of partially reversible protein adsorption. Journal of Chemical Physics, 1997, 106, 761-770.	3.0	69
77	A Viewpoint, Model and Theory for Supercooled Liquids. Progress of Theoretical Physics Supplement, 1997, 126, 289-299.	0.1	27
78	Fitting of viscosity: Distinguishing the temperature dependences predicted by various models of supercooled liquids. Physical Review E, 1996, 53, 751-758.	2.1	124
79	Kinetics of irreversible adsorption with a particle conformational change: A density expansion approach. Physical Review E, 1996, 53, 785-798.	2.1	28
80	A thermodynamic theory of supercooled liquids. Physica A: Statistical Mechanics and Its Applications, 1995, 219, 27-38.	2.6	388
81	Breakdown of the Stokes-Einstein relation in supercooled liquids. Journal of Chemical Physics, 1995, 103, 3071-3073.	3.0	314
82	Interaction-Induced Spectra as a Tool for the Study of Structure in Supercooled Liquids and Glasses. , 1995, , 235-248.		1
83	Reexamination of the depolarized-light-scattering spectra of glass-forming liquids. Physical Review E, 1994, 50, 1711-1716.	2.1	26
84	Irreversible adsorption of macromolecules at a liquid-solid interface: Theoretical studies of the effects of conformational change. Journal of Chemical Physics, 1994, 101, 7064-7073.	3.0	48
85	Some consequences of the $\hat{\lambda} \pm \hat{\lambda}^2$ bifurcation of relaxations in supercooled liquids. Journal of Non-Crystalline Solids, 1994, 172-174, 61-68.	3.1	6
86	Connection between integrated intensities of depolarized-light-scattering spectra and mesoscopic order in liquids. Physical Review E, 1993, 47, 4210-4214.	2.1	2
87	Molecular rattling in two-dimensional fluids: Simulations and theory. Journal of Chemical Physics, 1992, 96, 593-604.	3.0	22
88	Random sequential addition: A distribution function approach. Journal of Statistical Physics, 1991, 63, 167-202.	1.2	93
89	Study of the integrated intensity of depolarized light scattering spectra of tetrahedral molecules. Journal of Chemical Physics, 1990, 93, 2246-2257.	3.0	27