Thomas B SchrÃ¸der

List of Publications by Year
in descending order

66 papers	5,766 citations	101543 36 h-index	102487 66 g-index
67 all docs	67 docs citations	67 times ranked	3429 citing authors

#	Article	IF	Citations
1	Universality of ac conduction in disordered solids. Reviews of Modern Physics, 2000, 72, 873-892.	45.6	1,140
2	Molecular Dynamics Simulation of a Polymer Melt with a Nanoscopic Particle. Macromolecules, 2002, 35, 4481-4492.	4.8	464
3	Pressure-energy correlations in liquids. IV. â€œIsomorphsâ€• in liquid phase diagrams. Journal of Chemical Physics, 2009, 131, 234504.	3.0	297
4	Crossover to potential energy landscape dominated dynamics in a model glass-forming liquid. Journal of Chemical Physics, 2000, 112, 9834-9840.	3.0	282
5	Effects of a nanoscopic filler on the structure and dynamics of a simulated polymer melt and the relationship to ultrathin films. Physical Review E, 2001, 64, 021802.	2.1	247
6	Scaling and Universality of ac Conduction in Disordered Solids. Physical Review Letters, 2000, 84, 310-313.	7.8	241
7	Pressure-energy correlations in liquids. I. Results from computer simulations. Journal of Chemical Physics, 2008, 129, 184507.	3.0	210
8	Time-dependent, four-point density correlation function description of dynamical heterogeneity and decoupling in supercooled liquids. Journal of Chemical Physics, 2000, 112, 509-512.	3.0	204
9	Pressure-energy correlations in liquids. II. Analysis and consequences. Journal of Chemical Physics, 2008, 129, 184508.	3.0	170
10	Strong Pressure-Energy Correlations in van der Waals Liquids. Physical Review Letters, 2008, 100, 015701.	7.8	154
11	Predicting the density-scaling exponent of a glass-forming liquid from Prigogineâ€“Defay ratio measurements. Nature Physics, 2011, 7, 816-821.	16.7	122
12	Pressure-energy correlations in liquids. III. Statistical mechanics and thermodynamics of liquids with hidden scale invariance. Journal of Chemical Physics, 2009, 131, 234503.	3.0	112
13	Repulsive Reference Potential Reproducing the Dynamics of a Liquid with Attractions. Physical Review Letters, 2010, 105, 157801.	7.8	102
14	Pressure-energy correlations in liquids. V. Isomorphs in generalized Lennard-Jones systems. Journal of Chemical Physics, 2011, 134, 164505.	3.0	102
15	Geometry of Slow Structural Fluctuations in a Supercooled Binary Alloy. Physical Review Letters, 2010, 104, 105701.	7.8	100
16	What Is a Simple Liquid?. Physical Review X, 2012, 2, .	8.9	95
17	Hidden scale invariance in molecular van der Waals liquids: A simulation study. Physical Review E, 2009, 80, 041502.	2.1	84
18	Simplicity of condensed matter at its core: Generic definition of a Roskilde-simple system. Journal of Chemical Physics, 2014, 141, 204502.	3.0	82

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19	ac Hopping Conduction at Extreme Disorder Takes Place on the Percolating Cluster. Physical Review Letters, 2008, 101, 025901.	7.8	79
20	Thermodynamics of freezing and melting. Nature Communications, 2016, 7, 12386.	12.8	75
21	Communication: Thermodynamics of condensed matter with strong pressure-energy correlations. Journal of Chemical Physics, 2012, 136, 061102.	3.0	70
22	Revisiting the Stokes-Einstein relation without a hydrodynamic diameter. Journal of Chemical Physics, 2019, 150, 021101.	3.0	69
23	Stability of supercooled binary liquid mixtures. Journal of Chemical Physics, 2009, 130, 224501.	3.0	66
24	RUMD: A general purpose molecular dynamics package optimized to utilize GPU hardware down to a few thousand particles. SciPost Physics, 2017, 3, .	4.9	64
25	Isomorphs in Model Molecular Liquids. Journal of Physical Chemistry B, 2012, 116, 1018-1034.	2.6	59
26	Explaining why simple liquids are quasi-universal. Nature Communications, 2014, 5, 5424.	12.8	56
27	Potential energy landscape signatures of slow dynamics in glass forming liquids. Physica A: Statistical Mechanics and Its Applications, 1999, 270, 301-308.	2.6	50
28	Simplistic Coulomb Forces in Molecular Dynamics: Comparing the Wolf and Shifted-Force Approximations. Journal of Physical Chemistry B, 2012, 116, 5738-5743.	2.6	48
29	Feasibility of a single-parameter description of equilibrium viscous liquid dynamics. Physical Review E, 2008, 77, 011201.	2.1	46
30	Phase Diagram of Kob-Andersen-Type Binary Lennard-Jones Mixtures. Physical Review Letters, 2018, 120, 165501.	7.8	45
31	Predicting the Effective Temperature of a Glass. Physical Review Letters, 2010, 104, 125902.	7.8	43
32	Scaling of the dynamics of flexible Lennard-Jones chains. Journal of Chemical Physics, 2014, 141, 054904.	3.0	43
33	Cooee bitumen: Chemical aging. Journal of Chemical Physics, 2013, 139, 124506.	3.0	42
34	Invariants in the Yukawa system's thermodynamic phase diagram. Physics of Plasmas, 2015, 22, .	1.9	40
35	Freezing and melting line invariants of the Lennard-Jones system. Physical Chemistry Chemical Physics, 2016, 18, 14678-14690.	2.8	39
36	Strongly correlating liquids and their isomorphs. Journal of Non-Crystalline Solids, 2011, 357, 320-328.	3.1	37

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37	Computer simulations of the random barrier model. Physical Chemistry Chemical Physics, 2002, 4, 3173-3178.	2.8	36
38	Single-order-parameter description of glass-forming liquids: A one-frequency test. Journal of Chemical Physics, 2007, 126, 074502.	3.0	36
39	Isomorph invariance of the structure and dynamics of classical crystals. Physical Review B, 2014, 90, .	3.2	33
40	Glass-forming liquids: one or more â€˜orderâ€™ parameters?. Journal of Physics Condensed Matter, 2008, 20, 244113.	1.8	31
41	Statistical mechanics of Roskilde liquids: Configurational adiabats, specific heat contours, and density dependence of the scaling exponent. Journal of Chemical Physics, 2013, 139, 184506.	3.0	31
42	Communication: The Rosenfeld-Tarazona expression for liquidsâ€™ specific heat: A numerical investigation of eighteen systems. Journal of Chemical Physics, 2013, 139, 171101.	3.0	31
43	Isomorph invariance of Couette shear flows simulated by the SLLOD equations of motion. Journal of Chemical Physics, 2013, 138, 154505.	3.0	30
44	Estimating the density-scaling exponent of a monatomic liquid from its pair potential. Journal of Chemical Physics, 2014, 140, 124510.	3.0	30
45	Solid-like mean-square displacement in glass-forming liquids. Journal of Chemical Physics, 2020, 152, 141101.	3.0	30
46	Hopping in a supercooled binary Lennardâ€“Jones liquid. Journal of Non-Crystalline Solids, 1998, 235-237, 331-334.	3.1	26
47	Communication: Simple liquidsâ€™ high-density viscosity. Journal of Chemical Physics, 2018, 148, 081101.	3.0	25
48	Effective one-dimensionality of universal ac hopping conduction in the extreme disorder limit. Physical Review B, 1996, 54, 14884-14887.	3.2	24
49	Communication: Studies of the Lennard-Jones fluid in 2, 3, and 4 dimensions highlight the need for a liquid-state 1/d expansion. Journal of Chemical Physics, 2016, 144, 231101.	3.0	24
50	The EXP pair-potential system. II. Fluid phase isomorphs. Journal of Chemical Physics, 2018, 149, 114502.	3.0	24
51	Scaling of the dynamics of flexible Lennard-Jones chains: Effects of harmonic bonds. Journal of Chemical Physics, 2015, 143, 194503.	3.0	22
52	Crystallization Instability in Glass-Forming Mixtures. Physical Review X, 2019, 9, .	8.9	22
53	<i>NVU</i> dynamics. I. Geodesic motion on the constant-potential-energy hypersurface. Journal of Chemical Physics, 2011, 135, 104101.	3.0	17
54	The EXP pair-potential system. I. Fluid phase isotherms, isochores, and quasiuniversality. Journal of Chemical Physics, 2018, 149, 114501.	3.0	17

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55	Correlated Volumeâˆ’Energy Fluctuations of Phospholipid Membranes: A Simulation Study. Journal of Physical Chemistry B, 2010, 114, 2124-2130.	2.6	15
56	<i>NVU</i> dynamics. II. Comparing to four other dynamics. Journal of Chemical Physics, 2011, 135, 104102.	3.0	13
57	Density-temperature scaling of the fragility in a model glass-former. European Physical Journal E, 2013, 36, 141.	1.6	12
58	Communication: Pseudoisomorphs in liquids with intramolecular degrees of freedom. Journal of Chemical Physics, 2016, 145, 241103.	3.0	12
59	Variation of the dynamic susceptibility along an isochrone. Physical Review E, 2014, 90, 042310.	2.1	9
60	The EXP pair-potential system. III. Thermodynamic phase diagram. Journal of Chemical Physics, 2019, 150, 174501.	3.0	9
61	Does mesoscopic elasticity control viscous slowing down in glassforming liquids?. Journal of Chemical Physics, 2021, 155, 074502.	3.0	9
62	The EXP pair-potential system. IV. Isotherms, isochores, and isomorphs in the two crystalline phases. Journal of Chemical Physics, 2020, 152, 094505.	3.0	7
63	Isomorph Invariance of Higher-Order Structural Measures in Four Lennardâ€“Jones Systems. Molecules, 2021, 26, 1746.	3.8	4
64	Pair Potential That Reproduces the Shape of Isochrones in Molecular Liquids. Journal of Physical Chemistry B, 2016, 120, 7970-7974.	2.6	3
65	Hidden Scale Invariance in Polydisperse Mixtures of Exponential Repulsive Particles. Journal of Physical Chemistry B, 2021, 125, 317-327.	2.6	3
66	An energy landscape model for glass-forming liquids in three dimensions. Journal of Non-Crystalline Solids, 2006, 352, 5210-5215.	3.1	2