

Thomas A Witten

List of Publications by Year in descending order

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100
papers

21,574
citations

34105

52
h-index

32842

100
g-index

100
all docs

100
docs citations

100
times ranked

16647
citing authors

#	ARTICLE	IF	CITATIONS
1	Excess semiannual variation in historical temperature records. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 764-772.	2.7	1
2	Chiral motion in colloidal electrophoresis. Physical Review E, 2020, 101, 062608.	2.1	2
3	Nucleation and shape dynamics of model nematic tactoids around adhesive colloids. Journal of Chemical Physics, 2020, 152, 084901.	3.0	3
4	A review of shaped colloidal particles in fluids: anisotropy and chirality. Reports on Progress in Physics, 2020, 83, 116601.	20.1	22
5	Cyclic annealing as an iterated random map. Physical Review E, 2019, 99, 052132.	2.1	16
6	Self-organizing motors divide active liquid droplets. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11125-11130.	7.1	44
7	Engineering single-polymer micelle shape using nonuniform spontaneous surface curvature. Physical Review E, 2018, 97, 032505.	2.1	3
8	Liquid behavior of cross-linked actin bundles. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2131-2136.	7.1	106
9	Geometrical frustration yields fibre formation in self-assembly. Nature Physics, 2017, 13, 1100-1104.	16.7	39
10	Screening, Hyperuniformity, and Instability in the Sedimentation of Irregular Objects. Physical Review Letters, 2017, 118, 158005.	7.8	24
11	Predicting tensorial electrophoretic effects in asymmetric colloids. Physical Review E, 2017, 96, 062613.	2.1	4
12	Self-folding origami at any energy scale. Nature Communications, 2017, 8, 15477.	12.8	41
13	Criterion for noise-induced synchronization: Application to colloidal alignment. Physical Review E, 2016, 94, 032207.	2.1	5
14	Self-Organizing Arrays of Size Scalable Nanoparticle Rings. ACS Nano, 2016, 10, 8947-8955.	14.6	10
15	Singular electrostatic energy of nanoparticle clusters. Physical Review E, 2016, 93, 022603.	2.1	5
16	Hydrodynamic interactions between two forced objects of arbitrary shape. II. Relative translation. Physical Review E, 2016, 93, 042609.	2.1	11
17	Shapeable sheet without plastic deformation. Physical Review E, 2015, 92, 052401.	2.1	13
18	Hydrodynamic interactions between two forced objects of arbitrary shape. I. Effect on alignment. Physics of Fluids, 2015, 27, .	4.0	15

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19	Water uptake profile in a model ion-exchange membrane: Conditions for water-rich channels. <i>Journal of Chemical Physics</i> , 2015, 142, 114906.	3.0	15
20	Ion mixing, hydration, and transport in aqueous ionic systems. <i>Journal of Chemical Physics</i> , 2015, 142, 184905.	3.0	13
21	Chloride Enhances Fluoride Mobility in Anion Exchange Membrane/Polycationic Systems. <i>Journal of Physical Chemistry C</i> , 2014, 118, 845-853.	3.1	24
22	Orientational ordering of colloidal dispersions by application of time-dependent external forces. <i>Physical Review E</i> , 2013, 88, 022307.	2.1	8
23	Anomalously fast kinetics of lipid monolayer buckling. <i>Physical Review E</i> , 2013, 88, 022405.	2.1	6
24	Shape and symmetry of a fluid-supported elastic sheet. <i>Physical Review E</i> , 2013, 88, 012401.	2.1	18
25	Wrinkle to fold transition: influence of the substrate response. <i>Soft Matter</i> , 2013, 9, 8177.	2.7	139
26	Full Alignment of Colloidal Objects by Programed Forcing. <i>Physical Review Letters</i> , 2013, 110, 028301.	7.8	12
27	Compression Induced Folding of a Sheet: An Integrable System. <i>Physical Review Letters</i> , 2011, 107, 164302.	7.8	96
28	Chiral sedimentation of extended objects in viscous media. <i>Physical Review E</i> , 2009, 79, 056307.	2.1	15
29	Robust fadeout profile of an evaporation stain. <i>Europhysics Letters</i> , 2009, 86, 64002.	2.0	28
30	Compressing nearly hard sphere fluids increases glass fragility. <i>Europhysics Letters</i> , 2009, 86, 10001.	2.0	121
31	Lateral stress relaxation and collapse in lipid monolayers. <i>Soft Matter</i> , 2008, 4, 2019.	2.7	62
32	Microscopic wrinkles on supported surfactant monolayers. <i>Physical Review E</i> , 2007, 76, 041608.	2.1	19
33	Stress focusing in elastic sheets. <i>Reviews of Modern Physics</i> , 2007, 79, 643-675.	45.6	334
34	Microscopic Folds and Macroscopic Jerks in Compressed Lipid Monolayers. <i>Journal of Physical Chemistry B</i> , 2006, 110, 10220-10223.	2.6	43
35	Kinetically driven self assembly of highly ordered nanoparticle monolayers. <i>Nature Materials</i> , 2006, 5, 265-270.	27.5	1,021
36	Geometric origin of excess low-frequency vibrational modes in weakly connected amorphous solids. <i>Europhysics Letters</i> , 2005, 72, 486-492.	2.0	321

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37	Anomalous Strength of Membranes with Elastic Ridges. <i>Physical Review Letters</i> , 2001, 87, 206105.	7.8	55
38	Unstable topography of biphasic surfactant monolayers. <i>Europhysics Letters</i> , 2000, 52, 171-177.	2.0	46
39	Conserved linking in single- and double-stranded polymers. <i>Journal of Chemical Physics</i> , 2000, 112, 10042-10048.	3.0	5
40	Contact line deposits in an evaporating drop. <i>Physical Review E</i> , 2000, 62, 756-765.	2.1	1,872
41	Stress in frictionless granular material: Adaptive network simulations. <i>Physical Review E</i> , 2000, 62, 2510-2516.	2.1	44
42	Limitations on the smooth confinement of an unstretchable manifold. <i>Journal of Mathematical Physics</i> , 2000, 41, 5107-5128.	1.1	19
43	Shear of Telechelic Brushes. <i>Physical Review Letters</i> , 1999, 82, 5076-5079.	7.8	62
44	Insights from soft condensed matter. <i>Reviews of Modern Physics</i> , 1999, 71, S367-S373.	45.6	71
45	Stress propagation through frictionless granular material. <i>Physical Review E</i> , 1999, 60, 687-696.	2.1	155
46	Quenched Degrees of Freedom in Symmetric Diblock Copolymer Thin Films. <i>Macromolecules</i> , 1998, 31, 3130-3135.	4.8	28
47	Polymer solutions: A geometric introduction. <i>Reviews of Modern Physics</i> , 1998, 70, 1531-1544.	45.6	36
48	Properties of ridges in elastic membranes. <i>Physical Review E</i> , 1997, 55, 1577-1589.	2.1	115
49	Stress Condensation in Crushed Elastic Manifolds. <i>Physical Review Letters</i> , 1997, 78, 1303-1306.	7.8	89
50	Capillary flow as the cause of ring stains from dried liquid drops. <i>Nature</i> , 1997, 389, 827-829.	27.8	5,383
51	Model for force fluctuations in bead packs. <i>Physical Review E</i> , 1996, 53, 4673-4685.	2.1	393
52	Individual entanglements in a simulated polymer melt. <i>Physical Review E</i> , 1996, 53, 1816-1822.	2.1	21
53	Fluctuations and Persistence Length of Charged Flexible Polymers. <i>Macromolecules</i> , 1995, 28, 5921-5927.	4.8	57
54	Force Fluctuations in Bead Packs. <i>Science</i> , 1995, 269, 513-515.	12.6	754

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55	Scaling Properties of Stretching Ridges in a Crumpled Elastic Sheet. <i>Science</i> , 1995, 270, 1482-1485.	12.6	284
56	Connection between Polymer Molecular Weight, Density, Chain Dimensions, and Melt Viscoelastic Properties. <i>Macromolecules</i> , 1994, 27, 4639-4647.	4.8	1,768
57	Mesoscopic self-assembly of gold islands on diblock copolymer films. <i>Applied Physics Letters</i> , 1994, 64, 422-424.	3.3	141
58	Phase Separation of Grafted Copolymers. <i>Macromolecules</i> , 1994, 27, 6428-6442.	4.8	26
59	Polymers grafted to convex surfaces: a variational approach. <i>Macromolecules</i> , 1994, 27, 449-457.	4.8	73
60	Equilibrium surface orientation of lamellae. <i>Macromolecules</i> , 1993, 26, 3194-3199.	4.8	109
61	Asymptotic Shape of a Fullerene Ball. <i>Europhysics Letters</i> , 1993, 23, 51-55.	2.0	80
62	Adsorption of end-functionalized polymers on colloidal spheres. <i>Macromolecules</i> , 1993, 26, 4632-4639.	4.8	31
63	Droplet Elasticity in Weakly Compressed Emulsions. <i>Europhysics Letters</i> , 1993, 22, 549-555.	2.0	79
64	Reinforcement of rubber by fractal aggregates. <i>Journal De Physique II</i> , 1993, 3, 367-383.	0.9	148
65	Stability criteria for emulsions. <i>Physical Review Letters</i> , 1992, 69, 2439-2442.	7.8	156
66	Architecture-controlled interaction between associating polymers. <i>Macromolecules</i> , 1992, 25, 2969-2976.	4.8	21
67	Bridging attraction by telechelic polymers. <i>Macromolecules</i> , 1992, 25, 5495-5503.	4.8	125
68	Correlations in grafted polymer layers. <i>Macromolecules</i> , 1992, 25, 296-307.	4.8	65
69	End-grafted polymer melt with nematic interaction. <i>Macromolecules</i> , 1992, 25, 4569-4574.	4.8	20
70	Concentration dependence of static and dynamic properties for polymeric stars in a good solvent. <i>Macromolecules</i> , 1991, 24, 2434-2440.	4.8	39
71	Polymers grafted to a convex surface. <i>Macromolecules</i> , 1991, 24, 693-703.	4.8	157
72	Phase separation in a grafted polymer layer. <i>Physical Review Letters</i> , 1991, 66, 1541-1544.	7.8	136

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73	Comparison of light scattering of colloidal dispersions with direct force measurements between analogous macroscopic surfaces. <i>Journal of Chemical Physics</i> , 1990, 93, 6057-6064.	3.0	16
74	Anisotropy in turbulent drag reduction. <i>Physical Review Letters</i> , 1990, 65, 2780-2783.	7.8	39
75	Friction in Granular Flows. <i>Europhysics Letters</i> , 1990, 11, 619-624.	2.0	111
76	Stress relaxation in the lamellar copolymer mesophase. <i>Macromolecules</i> , 1990, 23, 824-829.	4.8	191
77	Effects of polydispersity in the end-grafted polymer brush. <i>Macromolecules</i> , 1989, 22, 853-861.	4.8	318
78	Forces between mica surfaces across hydrocarbon liquids: effects of branching and polydispersity. <i>Macromolecules</i> , 1989, 22, 4247-4253.	4.8	72
79	Relaxation of self-entangled many-arm star polymers. <i>Macromolecules</i> , 1989, 22, 1904-1910.	4.8	102
80	End-confined polymers: corrections to the Newtonian limit. <i>Macromolecules</i> , 1989, 22, 489-490.	4.8	49
81	Theory of the grafted polymer brush. <i>Macromolecules</i> , 1988, 21, 2610-2619.	4.8	1,378
82	A Parabolic Density Profile for Grafted Polymers. <i>Europhysics Letters</i> , 1988, 5, 413-418.	2.0	343
83	Diffusion near absorbing fractals: Harmonic measure exponents for polymers. <i>Physical Review A</i> , 1987, 35, 1809-1824.	2.5	70
84	Theory of size distribution of associating polymer aggregates. I. Spherical aggregates. <i>Journal of Chemical Physics</i> , 1987, 87, 1824-1833.	3.0	50
85	Structure and Viscosity of Interpenetrating Polyelectrolyte Chains. <i>Europhysics Letters</i> , 1987, 3, 315-320.	2.0	86
86	Structure of many arm star polymers: a molecular dynamics simulation. <i>Macromolecules</i> , 1987, 20, 1376-1383.	4.8	239
87	Universal kinetics in reaction-limited aggregation. <i>Physical Review Letters</i> , 1987, 58, 274-277.	7.8	250
88	Colloid stabilization by long grafted polymers. <i>Macromolecules</i> , 1986, 19, 2509-2513.	4.8	307
89	Chain conformation and solubility of associating polymers. <i>Macromolecules</i> , 1986, 19, 732-739.	4.8	59
90	Scaling properties for the surfaces of fractal and nonfractal objects: An infinite hierarchy of critical exponents. <i>Physical Review A</i> , 1986, 34, 3325-3340.	2.5	193

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91	Tenuous Structures from Disorderly Growth Processes. <i>Science</i> , 1986, 232, 1607-1612.	12.6	133
92	Macrocystal Ordering in Star Polymer Solutions. <i>Europhysics Letters</i> , 1986, 2, 137-140.	2.0	137
93	Family of Exponents for Laplace's Equation near a Polymer. <i>Physical Review Letters</i> , 1986, 56, 2497-2500.	7.8	37
94	Surfaces, interfaces, and screening of fractal structures. <i>Physical Review A</i> , 1985, 32, 2364-2369.	2.5	148
95	Causality bound on the density of aggregates. <i>Physical Review A</i> , 1984, 29, 2966-2967.	2.5	112
96	Space-filling constraint on transport in random aggregates. <i>Physical Review B</i> , 1984, 30, 4093-4095.	3.2	104
97	Particle aggregation versus cluster aggregation in high dimensions. <i>Journal of Statistical Physics</i> , 1984, 36, 873-879.	1.2	41
98	Diffusion-limited aggregation. <i>Physical Review B</i> , 1983, 27, 5686-5697.	3.2	1,603
99	The interpenetration of two chain polymers in a good solvent. <i>Journal of Chemical Physics</i> , 1982, 77, 4247-4253.	3.0	32
100	Lifetime Effects of Positronium in Powders. <i>Physical Review Letters</i> , 1976, 36, 1269-1272.	7.8	32