Joel Koplik

List of Publications by Year
in descending order

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121	9,684	57631	35952
papers	citations	44 h-index	97 g-index

126	126	126	5319
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Surfactant and dilatational viscosity effects on the deformation of liquid droplets in an electric field. Journal of Colloid and Interface Science, 2022, 607, 900-911.	5.0	7
2	Continuum and Molecular Dynamics Studies of the Hydrodynamics of Colloids Straddling a Fluid Interface. Annual Review of Fluid Mechanics, 2022, 54, 495-523.	10.8	5
3	Film deposition and dynamics of a self-propelled wetting droplet on a conical fibre. Journal of Fluid Mechanics, 2021, 907, .	1.4	5
4	Glassy dynamics and equilibrium state on the honeycomb lattice: Role of surface diffusion and desorption on surface crowding. Physical Review E, 2021, 103, 022801.	0.8	6
5	Adsorption kinetics and thermodynamic properties of a binary mixture of hard-core particles on a square lattice. Journal of Chemical Physics, 2021, 154, 074705.	1.2	6
6	Pairwise hydrodynamic interactions of spherical colloids at a gas-liquid interface. Journal of Fluid Mechanics, 2021, 915, .	1.4	6
7	Liquid-hexatic-solid phase transition of a hard-core lattice gas with third neighbor exclusion. Journal of Chemical Physics, 2019, 151, 104702.	1.2	19
8	Frictional force on sliding drops. Physical Review Fluids, 2019, 4, .	1.0	2
9	Molecular dynamics study of the translation and rotation of amphiphilic Janus nanoparticles at a vapor-liquid surface. Physical Review Fluids, 2019, 4, .	1.0	12
10	The Translational and Rotational Dynamics of a Colloid Moving Along the Air-Liquid Interface of a Thin Film. Scientific Reports, 2018, 8, 8910.	1.6	10
11	Self-propelled colloidal particle near a planar wall: A Brownian dynamics study. Physical Review Fluids, 2018, 3, .	1.0	24
12	Extracting the equation of state of lattice gases from random sequential adsorption simulations by means of the Gibbs adsorption isotherm. Physical Review E, 2017, 96, 052803.	0.8	35
13	Diffusivity and hydrodynamic drag of nanoparticles at a vapor-liquid interface. Physical Review Fluids, 2017, 2, .	1.0	21
14	Self-diffusiophoretic colloidal propulsion near a solid boundary. Physics of Fluids, 2016, 28, .	1.6	103
15	Nanoparticles at liquid interfaces: Rotational dynamics and angular locking. Journal of Chemical Physics, 2014, 140, 014904.	1.2	20
16	Multiscale liquid drop impact on wettable and textured surfaces. Physics of Fluids, 2014, 26, .	1.6	40
17	Velocity slip on curved surfaces. Physical Review E, 2014, 89, 023005.	0.8	20
18	Molecular Dynamics Simulations: Insight into Molecular Phenomena at Interfaces. Langmuir, 2014, 30, 11272-11283.	1.6	41

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19	Channeling and stress during fluid and suspension flow in self-affine fractures. Physical Review E, 2014, 89, 023010.	0.8	2
20	Colloidal Adsorption at Fluid Interfaces: Regime Crossover from Fast Relaxation to Physical Aging. Physical Review Letters, 2013, 111, 028302.	2.9	58
21	Molecular Dynamics Simulation of the Motion of Colloidal Nanoparticles in a Solute Concentration Gradient and a Comparison to the Continuum Limit. Physical Review Letters, 2013, 111, 184501.	2.9	18
22	The effect of capillary bridging on the Janus particle stability at the interface of two immiscible liquids. Soft Matter, 2013, 9, 4585.	1.2	28
23	Diffusiophoretic self-propulsion of colloids driven by a surface reaction: The sub-micron particle regime for exponential and van der Waals interactions. Physics of Fluids, 2013, 25, .	1.6	64
24	Suspension flow and sedimentation in self-affine fractures. Physics of Fluids, 2012, 24, 053303.	1.6	6
25	Micro- and nanoscale fluid flow on chemical channels. Soft Matter, 2012, 8, 9221.	1.2	14
26	Atomistic hybrid DSMC/NEMD method for nonequilibrium multiscale simulations. Journal of Computational Physics, 2010, 229, 1381-1400.	1.9	26
27	Molecular dynamics simulation of the equilibrium liquidâ€“vapor interphase with solidification. Fluid Phase Equilibria, 2010, 297, 77-89.	1.4	28
28	Nanoscale simulations of directional locking. Physics of Fluids, 2010, 22, .	1.6	35
29	Field-Induced Alignment of Flexible Polyelectrolytes in Solution. Physical Review Letters, 2010, 104, 218303.	2.9	2
30	Multiscale molecular simulations of argon vapor condensation onto a cooled substrate with bulk flow. Physics of Fluids, 2010, 22, .	1.6	11
31	Atomistic simulations of the wetting behavior of nanodroplets of water on homogeneous and phase separated self-assembled monolayers. Soft Matter, 2010, 6, 1297.	1.2	22
32	Wetting of hydrophobic substrates by nanodroplets of aqueous trisiloxane and alkyl polyethoxylate surfactant solutions. Chemical Engineering Science, 2009, 64, 4657-4667.	1.9	38
33	A molecular dynamics study of the motion of a nanodroplet of pure liquid on a wetting gradient. Journal of Chemical Physics, 2008, 129, 164708.	1.2	38
34	Dynamical Clustering of Counterions on Flexible Polyelectrolytes. Physical Review Letters, 2008, 100, 128301.	2.9	38
35	Hydrodynamic interaction of two particles in confined linear shear flow at finite Reynolds number. Physics of Fluids, 2007, 19, .	1.6	48
36	Shear Flow Pumping in Open Micro- and Nanofluidic Systems. Physical Review Letters, 2007, 98, 224504.	2.9	24

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37	Flow channeling in a single fracture induced by shear displacement. Geothermics, 2006, 35, 576-588.	1.5	87
38	Nanoscale Fluid Flows in the Vicinity of Patterned Surfaces. Physical Review Letters, 2006, 96, 114502.	2.9	47
39	Slip, Immiscibility, and Boundary Conditions at the Liquid-Liquid Interface. Physical Review Letters, 2006, 96, 044505.	2.9	55
40	Molecular Dynamics Study of the Influence of Surfactant Structure on Surfactant-Facilitated Spreading of Droplets on Solid Surfaces. Langmuir, 2005, 21, 12160-12170.	1.6	41
41	Molecular dynamics (MD) simulation on the collision of a nano-sized particle onto another nano-sized particle adhered on a flat substrate. Journal of Aerosol Science, 2005, 36, 1427-1443.	1.8	22
42	Microstructure and velocity fluctuations in sheared suspensions. Journal of Fluid Mechanics, 2004, 511, 237-263.	1.4	38
43	Molecular dynamics simulation of liquid bridge extensional flows. Journal of Non-Newtonian Fluid Mechanics, 2003, 109, 51-89.	1.0	13
44	Extensional rupture of model non-Newtonian fluid filaments. Physical Review E, 2003, 67, 011502.	0.8	7
45	MOLECULAR DYNAMICS SIMULATIONS OF NON-NEWTONIAN EXTENSIONAL FLUID FLOWS. International Journal of Modern Physics B, 2003, 17, 27-32.	1.0	1
46	Adsorption Phenomena in the Transport of a Colloidal Particle through a Nanochannel Containing a Partially Wetting Fluid. Physical Review Letters, 2002, 89, 244501.	2.9	35
47	Dynamics of nanoscale droplets. Physical Review E, 2002, 65, 021504.	0.8	16
48	Deterministic and stochastic behaviour of non-Brownian spheres in sheared suspensions. Journal of Fluid Mechanics, 2002, 460, 307-335.	1.4	106
49	MOLECULAR ASPECTS OF CONTACT-LINE DYNAMICS. , 2002, , 89-103.		0
50	Network model for deep bed filtration. Physics of Fluids, 2001, 13, 1076-1086.	1.6	44
51	Boundary Conditions at a Fluid-Solid Interface. Physical Review Letters, 2001, 86, 803-806.	2.9	293
52	The Tracer Transit-Time Tail in Multipole Reservoir Flows. Transport in Porous Media, 2001, 42, 199-209.	1.2	4
53	Molecular dynamics of flows in the Knudsen regime. Physica A: Statistical Mechanics and Its Applications, 2000, 287, 153-160.	1.2	46
54	Molecular Simulations of Dewetting. Physical Review Letters, 2000, 84, 4401-4404.	2.9	69

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55	Permeability of self-affine rough fractures. Physical Review E, 2000, 62, 8076-8085.	0.8	41
56	Koplik and Banavar Reply:. Physical Review Letters, 1999, 82, 1334-1334.	2.9	3
57	Depletion forces in hard-sphere colloids. Physical Review E, 1999, 59, R1339-R1342.	0.8	14
58	Applications of statistical mechanics in subcontinuum fluid dynamics. Physica A: Statistical Mechanics and Its Applications, 1999, 274, 281-293.	1.2	42
59	Absence of many-body effects in interactions between charged colloidal particles. Physical Review E, 1999, 59, R1335-R1338.	0.8	25
60	Microscopic motion of particles flowing through a porous medium. Physics of Fluids, 1999, 11, 76-87.	1.6	13
61	Thermal walls in computer simulations. Physical Review E, 1998, 57, R17-R20.	0.8	88
62	Numerical study of geometrical dispersion in self-affine rough fractures. Physical Review E, 1998, 58, 3334-3346.	0.8	24
63	Nonlinear flow in porous media. Physical Review E, 1998, 58, 4776-4782.	0.8	111
64	No-Slip Condition for a Mixture of Two Liquids. Physical Review Letters, 1998, 80, 5125-5128.	2.9	42
65	Impurity solvation in a liquid. Journal of Chemical Physics, 1998, 108, 2104-2110.	1.2	0
66	Physics of Fluids at Low Reynolds Numbersâ€“A molecular Approach. Computers in Physics, 1998, 12, 424.	0.6	18
67	Tracer dispersion in three-dimensional multipole flows. Physical Review E, 1997, 56, 4244-4258.	0.8	6
68	Molecular Simulation of Reentrant Corner Flow. Physical Review Letters, 1997, 78, 2116-2119.	2.9	7
69	Wetting Hysteresis at the Molecular Scale. Physical Review Letters, 1997, 78, 1520-1523.	2.9	34
70	Adhesion of solids. Physical Review E, 1997, 56, 2626-2634.	0.8	31
71	Simple model for deep bed filtration. Physical Review E, 1996, 54, 4011-4020.	0.8	15
72	Suppression of coalescence by shear and temperature gradients. Physics of Fluids, 1996, 8, 15-28.	1.6	96

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73	Stokes drag and lubrication flows: A molecular dynamics study. Physical Review E, 1996, 53, 4852-4864.	0.8	40
74	Interfacial Roughening Induced by Phase Separation. Physical Review Letters, 1996, 76, 1106-1109.	2.9	35
75	Terraced spreading mechanisms for chain molecules. Physical Review E, 1996, 53, 562-569.	0.8	55
76	Scattering of Superfluid Vortex Rings. Physical Review Letters, 1996, 76, 4745-4748.	2.9	48
77	First passage time in a two-layer system. Journal of Statistical Physics, 1995, 79, 895-922.	0.5	2
78	Variational bounds for first-passage-time problems in stratified porous media. Physical Review E, 1995, 52, 2718-2726.	0.8	2
79	Stokes Drag at the Molecular Level. Physical Review Letters, 1995, 75, 232-235.	2.9	31
80	Terraced Spreading of Chain Molecules via Molecular Dynamics. Physical Review Letters, 1995, 74, 928-931.	2.9	101
81	Molecular-dynamics studies of systems of confined dumbbell molecules. Physical Review E, 1995, 51, 441-453.	0.8	13
82	Path-integral variational methods for flow through porous media. Physical Review E, 1994, 49, 1353-1366.	0.8	6
83	Dynamics of rough surfaces with an arbitrary topology. Physical Review E, 1994, 49, R937-R940.	0.8	5
84	Molecular dynamics of interface rupture. Physics of Fluids A, Fluid Dynamics, 1993, 5, 521-536.	1.6	51
85	Vortex reconnection in superfluid helium. Physical Review Letters, 1993, 71, 1375-1378.	2.9	256
86	Molecular dynamics of phase separation in narrow channels. Physical Review E, 1993, 47, R2265-R2268.	0.8	25
87	Dynamical relaxation of the surface tension of miscible phases. Physical Review Letters, 1993, 71, 3465-3468.	2.9	19
88	Composition waves in confined geometries. Physical Review E, 1993, 48, R2362-R2365.	0.8	13
89	Freezing in confined geometries. Applied Physics Letters, 1992, 61, 777-779.	1.5	82
90	Dynamics of phase separation of binary fluids. Physical Review A, 1992, 45, R5347-R5350.	1.0	70

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91	A molecular dynamics study of freezing in a confined geometry. Journal of Chemical Physics, 1992, 97, 485-493.	1.2	59
92	Terraced spreading of simple liquids on solid surfaces. Physical Review A, 1992, 46, 7738-7749.	1.0	74
93	Dynamics of growing interfaces. Physical Review Letters, 1992, 69, 3193-3195.	2.9	37
94	Superdiffusion transport in stratified porous media. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1469-1469.	1.6	0
95	Molecular dynamics of drop spreading on a solid surface. Physical Review Letters, 1991, 67, 3539-3542.	2.9	102
96	Molecular dynamics of fluid flow at solid surfaces. Physics of Fluids A, Fluid Dynamics, 1989, 1, 781-794.	1.6	388
97	Pattern selection in fingered growth phenomena. Advances in Physics, 1988, 37, 255-339.	35.9	932
98	Molecular dynamics of Poiseuille flow and moving contact lines. Physical Review Letters, 1988, 60, 1282-1285.	2.9	327
99	Theory of dynamic permeability and tortuosity in fluid-saturated porous media. Journal of Fluid Mechanics, 1987, 176, 379.	1.4	1,778
100	New Pore-Size Parameter Characterizing Transport in Porous Media. Physical Review Letters, 1986, 57, 2564-2567.	2.9	404
101	Steady-state dendritic crystal growth. Physical Review A, 1986, 33, 3352-3357.	1.0	117
102	Dendritic growth in a channel. Physical Review A, 1986, 34, 4980-4987.	1.0	81
103	Hydrodynamic Dispersion in Network Models of Porous Media. Physical Review Letters, 1986, 57, 996-999.	2.9	100
104	Immiscible fluid displacement in small networks. Journal of Colloid and Interface Science, 1985, 108, 304-330.	5.0	51
105	Geometrical models of interface evolution. III. Theory of dendritic growth. Physical Review A, 1985, 31, 1712-1717.	1.0	111
106	Interface moving through a random background. Physical Review B, 1985, 32, 280-292.	1.1	110
107	Geometrical models of interface evolution. II. Numerical simulation. Physical Review A, 1984, 30, 3161-3174.	1.0	129
108	Numerical simulation of two-dimensional snowflake growth. Physical Review A, 1984, 30, 2820-2823.	1.0	78

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109	Simple models of interface growth. Physica D: Nonlinear Phenomena, 1984, 12, 241-244.	1.3	3
110	Geometrical models of interface evolution. Physical Review A, 1984, 29, 1335-1342.	1.0	238
111	Conductivity and permeability of rocks. Physical Review B, 1984, 30, 6606-6614.	1.1	299
112	Steady-state dendritic growth at non-zero capillarity. Scripta Metallurgica, 1984, 18, 463-466.	1.2	5
113	Geometrical Approach to Moving-Interface Dynamics. Physical Review Letters, 1983, 51, 1111-1114.	2.9	191
114	Resistance of Random Walks. Physical Review Letters, 1983, 51, 1115-1118.	2.9	26
115	Viscosity renormalization in the Brinkman equation. Physics of Fluids, 1983, 26, 2864.	1.4	165
116	Creeping flow in two-dimensional networks. Journal of Fluid Mechanics, 1982, 119, 219-247.	1.4	153
117	Capillary displacement and percolation in porous media. Journal of Fluid Mechanics, 1982, 119, 249-267.	1.4	438
118	Energy scales and diffraction scattering. Physical Review D, 1975, 12, 785-791.	1.6	9
119	Multiperipheral model of direct muon production. Physical Review D, 1975, 11, 3134-3144.	1.6	4
120	Comment on Positive Regge-Cut Discontinuities. Physical Review D, 1973, 7, 558-560.	1.6	3
121	Multiperipheral Model of Meson and Baryon Multiplicities. Physical Review D, 1973, 7, 3317-3323.	1.6	2