Pingwen Zhang

List of Publications by Year
in descending order

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Version: 2024-02-01

54	1,835	236925	265206
papers	citations	25 h-index	42 g-index

54	54	54	909
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Solution landscape of the Onsager model identifies non-axisymmetric critical points. Physica D: Nonlinear Phenomena, 2022, 430, 133081.	2.8	10
2	Modelling and computation of liquid crystals. Acta Numerica, 2021, 30, 765-851.	10.7	23
3	Transition pathways connecting crystals and quasicrystals. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	14
4	Construction of a Pathway Map on a Complicated Energy Landscape. Physical Review Letters, 2020, 124, 090601.	7.8	41
5	Anisotropic Nonlocal Diffusion Operators for Normal and Anomalous Dynamics. Multiscale Modeling and Simulation, 2020, 18, 415-443.	1.6	10
6	High-Index Optimization-Based Shrinking Dimer Method for Finding High-Index Saddle Points. SIAM Journal of Scientific Computing, 2019, 41, A3576-A3595.	2.8	32
7	Boundary Problems for the Fractional and Tempered Fractional Operators. Multiscale Modeling and Simulation, 2018, 16, 125-149.	1.6	69
8	Onsager-theory-based dynamic model for nematic phases of bent-core molecules and star molecules. Journal of Non-Newtonian Fluid Mechanics, 2018, 251, 43-55.	2.4	9
9	Calculating elastic constants of bentâ€“core molecules from Onsager-theory-based tensor model. Liquid Crystals, 2018, 45, 22-31.	2.2	7
10	A Tensor Model for Nematic Phases of Bent-Core Molecules Based on Molecular Theory. Multiscale Modeling and Simulation, 2018, 16, 1581-1602.	1.6	12
11	A Fast Algorithm for the Moments of Bingham Distribution. Journal of Scientific Computing, 2018, 75, 1337-1350.	2.3	8
12	Defects Around a Spherical Particle in Cholesteric Liquid Crystals. Numerical Mathematics, 2017, 10, 205-221.	1.3	2
13	On minimizers for the isotropicâ€“nematic interface problem. Calculus of Variations and Partial Differential Equations, 2017, 56, 1.	1.7	6
14	Computing Optimal Interfacial Structure of Modulated Phases. Communications in Computational Physics, 2017, 21, 1-15.	1.7	39
15	On the Disclination Lines of Nematic Liquid Crystals. Communications in Computational Physics, 2016, 19, 354-379.	1.7	28
16	Dynamics of the Nematic-Isotropic Sharp Interface for the Liquid Crystal. SIAM Journal on Applied Mathematics, 2015, 75, 1700-1724.	1.8	10
17	Analytic Structure of the SCFT Energy Functional of Multicomponent Block Copolymers. Communications in Computational Physics, 2015, 17, 1360-1387.	1.7	6
18	Rigorous Derivation from Landau–de Gennes Theory to Ericksen–Leslie Theory. SIAM Journal on Mathematical Analysis, 2015, 47, 127-158.	1.9	39

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19	The Small Deborah Number Limit of the Doiâ€Onsager Equation to the Ericksenâ€Leslie Equation. Communications on Pure and Applied Mathematics, 2015, 68, 1326-1398.	3.1	30
20	From Microscopic Theory to Macroscopic Theory: a Systematic Study on Modeling for Liquid Crystals. Archive for Rational Mechanics and Analysis, 2015, 215, 741-809.	2.4	58
21	On a Molecular Based Q-Tensor Model for Liquid Crystals with Density Variations. Multiscale Modeling and Simulation, 2015, 13, 977-1000.	1.6	5
22	Local well-posedness and small Deborah limit of a molecule-based Q-tensor system. Discrete and Continuous Dynamical Systems - Series B, 2015, 20, 2611-2655.	0.9	14
23	Dynamic transitions and pattern formations for a Cahnâ€“Hilliard model with long-range repulsive interactions. Communications in Mathematical Sciences, 2015, 13, 1289-1315.	1.0	13
24	From microscopic theory to macroscopic theory â€” symmetries and order parameters of rigid molecules. Science China Mathematics, 2014, 57, 443-468.	1.7	13
25	Well-Posedness of the Ericksenâ€“Leslie System. Archive for Rational Mechanics and Analysis, 2013, 210, 837-855.	2.4	56
26	Nucleation Rate Calculation for the Phase Transition of Diblock Copolymers under Stochastic Cahn–Hilliard Dynamics. Multiscale Modeling and Simulation, 2013, 11, 385-409.	1.6	13
27	Discovery of New Metastable Patterns in Diblock Copolymers. Communications in Computational Physics, 2013, 14, 443-460.	1.7	19
28	Origin of epitaxies between ordered phases of block copolymers. Soft Matter, 2011, 7, 10552.	2.7	9
29	Simulation of nuclei morphologies for binary alloy. Science China Mathematics, 2010, 53, 2927-2936.	1.7	0
30	A numerical method for the study of nucleation of ordered phases. Journal of Computational Physics, 2010, 229, 1797-1809.	3.8	26
31	Nucleation of Ordered Phases in Block Copolymers. Physical Review Letters, 2010, 104, 148301.	7.8	106
32	Second-Order Accurate Godunov Scheme forÂMulticomponent Flows on Moving Triangular Meshes. Journal of Scientific Computing, 2008, 34, 64-86.	2.3	40
33	On the New Multiscale Rodlike Model of Polymeric Fluids. SIAM Journal on Mathematical Analysis, 2008, 40, 1246-1271.	1.9	11
34	High-order DGTD methods for dispersive Maxwell's equations and modelling of silver nanowire coupling. International Journal for Numerical Methods in Engineering, 2007, 69, 308-325.	2.8	38
35	Stable dynamic states at the nematic liquid crystals in weak shear flow. Physica D: Nonlinear Phenomena, 2007, 232, 156-165.	2.8	8
36	A kineticâ€“hydrodynamic simulation of microstructure of liquid crystal polymers in plane shear flow. Journal of Non-Newtonian Fluid Mechanics, 2007, 141, 116-127.	2.4	27

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37	Level Set Calculations for Incompressible Two-Phase Flows on a Dynamically Adaptive Grid. Journal of Scientific Computing, 2007, 31, 75-98.	2.3	12
38	Study of phase transition in homogeneous, rigid extended nematics and magnetic suspensions using an order-reduction method. Physics of Fluids, 2006, 18, 123103.	4.0	18
39	Convergence Analysis of BCF Method for Hookean Dumbbell Model with Finite Difference Scheme. Multiscale Modeling and Simulation, 2006, 5, 205-234.	1.6	4
40	Local Existence for the FENE-Dumbbell Model of Polymeric Fluids. Archive for Rational Mechanics and Analysis, 2006, 181, 373-400.	2.4	72
41	Moving Mesh Methods for Singular Problems on a Sphere Using Perturbed Harmonic Mappings. SIAM Journal of Scientific Computing, 2006, 28, 1490-1508.	2.8	6
42	Discontinuous galerkin time-domain method for GPR simulation in dispersive media. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 72-80.	6.3	60
43	Moving Mesh Finite Element Methods for the Incompressible Navier--Stokes Equations. SIAM Journal of Scientific Computing, 2005, 26, 1036-1056.	2.8	63
44	Discontinuous galerkin time domain (DGTD) methods for the study of 2-D waveguide-coupled microring resonators. Journal of Lightwave Technology, 2005, 23, 3864-3874.	4.6	29
45	Axial Symmetry and Classification of Stationary Solutions of Doi-Onsager Equation on the Sphere with Maier-Saupe Potential. Communications in Mathematical Sciences, 2005, 3, 201-218.	1.0	69
46	Discontinuous Galerkin methods for dispersive and lossy Maxwell's equations and PML boundary conditions. Journal of Computational Physics, 2004, 200, 549-580.	3.8	188
47	Well-Posedness for the Dumbbell Model of Polymeric Fluids. Communications in Mathematical Physics, 2004, 248, 409-427.	2.2	81
48	Local Existence for the Dumbbell Model of Polymeric Fluids. Communications in Partial Differential Equations, 2004, 29, 903-923.	2.2	25
49	An adaptive mesh redistribution method for nonlinear Hamiltonâ€“Jacobi equations in two- and three-dimensions. Journal of Computational Physics, 2003, 188, 543-572.	3.8	50
50	A Moving Mesh Finite Element Algorithm for Singular Problems in Two and Three Space Dimensions. Journal of Computational Physics, 2002, 177, 365-393.	3.8	93
51	A mathematical model of soil moisture spatial distribution on the hill slopes of the Loess Plateau. Science in China Series D: Earth Sciences, 2001, 44, 395-402.	0.9	11
52	Moving Mesh Methods in Multiple Dimensions Based on Harmonic Maps. Journal of Computational Physics, 2001, 170, 562-588.	3.8	171
53	Vanishing Curvature Viscosity for Front Propagation. Journal of Differential Equations, 2000, 161, 289-306.	2.2	0
54	Optimal L1-Rate of Convergence for The Viscosity Method and Monotone Scheme to Piecewise Constant Solutions with Shocks. SIAM Journal on Numerical Analysis, 1997, 34, 959-978.	2.3	32