

Patrick Ilg

List of Publications by Year in descending order

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77
papers

1,676
citations

270111

25
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371746

37
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79
all docs

79
docs citations

79
times ranked

1858
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiparticle Collision Dynamics for Ferrofluids. <i>Journal of Chemical Physics</i> , 2022, 156, 144905.	1.2	2
2	Dynamics of interacting magnetic nanoparticles: effective behavior from competition between Brownian and Néel relaxation. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 22244-22259.	1.3	41
3	Surface Rheology and Structure of Model Triblock Copolymers at a Liquid-Vapor Interface: A Molecular Dynamics Study. <i>Macromolecules</i> , 2020, 53, 1245-1257.	2.2	5
4	Diffusion-jump model for the combined Brownian and Néel relaxation dynamics of ferrofluids in the presence of external fields and flow. <i>Physical Review E</i> , 2019, 100, 022608.	0.8	17
5	Gas-liquid phase equilibrium of a model Langmuir monolayer captured by a multiscale approach. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 2295-2306.	1.3	11
6	Entanglement dynamics at flat surfaces: Investigations using multi-chain molecular dynamics and a single-chain slip-spring model. <i>Journal of Chemical Physics</i> , 2019, 150, 094906.	1.2	6
7	Self-assembly of ellipsoidal particles at fluid-fluid interfaces with an empirical pair potential. <i>Journal of Colloid and Interface Science</i> , 2019, 534, 205-214.	5.0	16
8	Magnetic susceptibility, nanorheology, and magnetoviscosity of magnetic nanoparticles in viscoelastic environments. <i>Physical Review E</i> , 2018, 97, 032610.	0.8	17
9	Combined Experimental and Simulation Studies of Cross-Linked Polymer Brushes under Shear. <i>Macromolecules</i> , 2018, 51, 10174-10183.	2.2	19
10	Surface Disentanglement and Slip in a Polymer Melt: A Molecular Dynamics Study. <i>Macromolecules</i> , 2018, 51, 8996-9010.	2.2	10
11	Effective interaction potentials for model amphiphilic surfactants adsorbed at fluid-fluid interfaces. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 16238-16246.	1.3	9
12	Transient inhomogeneous flow patterns in supercooled liquids under shear. <i>Soft Matter</i> , 2017, 13, 2192-2200.	1.2	6
13	Chain Dynamics in Polymer Melts at Flat Surfaces. <i>Macromolecules</i> , 2017, 50, 3703-3718.	2.2	15
14	Time correlation functions in the Lebwohl-Lasher model of liquid crystals. <i>Physical Review E</i> , 2017, 96, 032705.	0.8	1
15	Equilibrium magnetization and magnetization relaxation of multicore magnetic nanoparticles. <i>Physical Review B</i> , 2017, 95, .	1.1	41
16	Influence of Chain Stiffness, Grafting Density and Normal Load on the Tribological and Structural Behavior of Polymer Brushes: A Nonequilibrium-Molecular-Dynamics Study. <i>Polymers</i> , 2016, 8, 254.	2.0	24
17	Effect of Crosslinking on the Microtribological Behavior of Model Polymer Brushes. <i>Tribology Letters</i> , 2016, 63, 1.	1.2	22
18	Hydrodynamics with Spin Angular Momentum from Systematic Coarse Graining: A Tutorial Example. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2016, 41, .	2.4	0

#	ARTICLE	IF	CITATIONS
19	Reply to "Comment on "Temperature-dependent orientational ordering on a spherical surface modeled with a lattice spin model" Physical Review E, 2015, 91, 046502.	0.8	0
20	Anisotropy of magnetoviscous effect in structure-forming ferrofluids. Physical Review E, 2015, 92, 012306.	0.8	19
21	Influence of inherent structure shear stress of supercooled liquids on their shear moduli. Journal of Chemical Physics, 2015, 142, 144505.	1.2	12
22	Modelling the rheology of anisotropic particles adsorbed on a two-dimensional fluid interface. Soft Matter, 2015, 11, 4383-4395.	1.2	12
23	Polymer Brushes under Shear: Molecular Dynamics Simulations Compared to Experiments. Langmuir, 2015, 31, 4798-4805.	1.6	53
24	Soft Modes and Nonaffine Rearrangements in the Inherent Structures of Supercooled Liquids. Physical Review Letters, 2014, 112, 105503.	2.9	46
25	Adsorption Energies of Poly(ethylene oxide)-Based Surfactants and Nanoparticles on an Air-Water Surface. Langmuir, 2014, 30, 110-119.	1.6	26
26	The Landau free energy of hard ellipses obtained from microscopic simulations. Journal of Chemical Physics, 2014, 140, 124901.	1.2	13
27	Temperature-dependent orientational ordering on a spherical surface modeled with a lattice spin model. Physical Review E, 2014, 90, 022502.	0.8	3
28	Slow relaxation in structure-forming ferrofluids. Physical Review E, 2013, 88, 042315.	0.8	30
29	Stimuli-responsive hydrogels cross-linked by magnetic nanoparticles. Soft Matter, 2013, 9, 3465.	1.2	141
30	Nonequilibrium thermodynamics of the soft glassy rheology model. Physical Review E, 2013, 88, 042134.	0.8	9
31	Energetic and Entropic Contributions to the Landau-de Gennes Potential for Gay-Berne Models of Liquid Crystals. Polymers, 2013, 5, 328-343.	2.0	8
32	Deformation of inherent structures to detect long-range correlations in supercooled liquids. Journal of Chemical Physics, 2012, 137, 024504.	1.2	17
33	Enhanced Landau-de Gennes potential for nematic liquid crystals from a systematic coarse-graining procedure. Physical Review E, 2012, 85, 061709.	0.8	10
34	Viscoelastic behavior of rubbery materials (C. M. Roland). Applied Rheology, 2012, 22, 295-295.	3.5	0
35	Non-linear response of dipolar colloidal gels to external fields. Soft Matter, 2011, 7, 163-171.	1.2	27
36	Adsorption of core-shell nanoparticles at liquid-liquid interfaces. Soft Matter, 2011, 7, 7663.	1.2	78

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37	Molecularly derived constitutive equation for low-molecular polymer melts from thermodynamically guided simulation. <i>Journal of Rheology</i> , 2011, 55, 69-93.	1.3	30
38	Systematic Coarse Graining Flowing Polymer Melts: Thermodynamically Guided Simulations and Resulting Constitutive Model. <i>Chimia</i> , 2011, 65, 223-227.	0.3	0
39	Ideal contribution to the macroscopic quasiequilibrium entropy of anisotropic fluids. <i>Physical Review E</i> , 2011, 83, 061713.	0.8	8
40	Stochastic semi-Lagrangian micro-macro calculations of liquid crystalline solutions in complex flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 185-195.	1.0	4
41	Thermodynamically consistent coarse graining the non-equilibrium dynamics of unentangled polymer melts. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 973-979.	1.0	10
42	Bridging length and time scales in sheared demixing systems: From the Cahn-Hilliard to the Doi-Ohta model. <i>Physical Review E</i> , 2010, 81, 011131.	0.8	9
43	Probing a Critical Length Scale at the Glass Transition. <i>Physical Review Letters</i> , 2010, 104, 205704.	2.9	62
44	Multiscale modelling of soft matter. <i>Applied Rheology</i> , 2010, 20, 133-133.	3.5	0
45	Flow Properties Inferred from Generalized Maxwell Models. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2009, 64, 81-95.	0.7	2
46	Systematic time-scale-bridging molecular dynamics applied to flowing polymer melts. <i>Physical Review E</i> , 2009, 79, 011802.	0.8	48
47	A Stochastic Semi-Lagrangian Micro-Macro Model for Liquid Crystalline Solutions. , 2009, , .		1
48	Macroscopic thermodynamics of flowing polymers derived from systematic coarse-graining procedure. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2008, 387, 6484-6496.	1.2	10
49	Hydrodynamic theory of polydisperse chain-forming ferrofluids. <i>Physical Review E</i> , 2008, 77, 016305.	0.8	28
50	Nonaffine Deformation of Inherent Structure as a Static Signature of Cooperativity in Supercooled Liquids. <i>Physical Review Letters</i> , 2008, 101, 095501.	2.9	25
51	Driven activation vs. thermal activation. <i>Europhysics Letters</i> , 2007, 79, 26001.	0.7	41
52	Dynamic electric polarization of nematic liquid crystals subjected to a shear flow. <i>Physical Review E</i> , 2007, 75, 040701.	0.8	8
53	Derivation of Frank-Ericksen elastic coefficients for polydomain nematics from mean-field molecular theory for anisotropic particles. <i>Journal of Chemical Physics</i> , 2007, 127, 034903.	1.2	21
54	Boundary conditions for fluids with internal orientational degrees of freedom: Apparent velocity slip associated with the molecular alignment. <i>Physical Review E</i> , 2007, 75, 066302.	0.8	22

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55	Structure and rheology of ferrofluids: simulation results and kinetic models. <i>Journal of Physics Condensed Matter</i> , 2006, 18, S2757-S2770.	0.7	30
56	Effective temperatures in a simple model of non-equilibrium, non-Markovian dynamics. <i>Journal of Physics: Conference Series</i> , 2006, 40, 76-85.	0.3	6
57	Two-alignment tensor theory for the dynamics of side chain liquid-crystalline polymers in planar shear flow. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2006, 134, 2-7.	1.0	7
58	Robustness of the periodic and chaotic orientational behavior of tumbling nematic liquid crystals. <i>Physical Review E</i> , 2006, 73, 061710.	0.8	18
59	Structure and rheology of model-ferrofluids under shear flow. <i>Journal of Magnetism and Magnetic Materials</i> , 2005, 289, 325-327.	1.0	25
60	On the theory of the shear-induced isotropic-to-nematic phase transition of side chain liquid-crystalline polymers. <i>Rheologica Acta</i> , 2005, 44, 465-477.	1.1	13
61	Magnetoviscosity of semidilute ferrofluids and the role of dipolar interactions: Comparison of molecular simulations and dynamical mean-field theory. <i>Physical Review E</i> , 2005, 71, 031205.	0.8	48
62	Anisotropy of the magnetoviscous effect in ferrofluids. <i>Physical Review E</i> , 2005, 71, 051201.	0.8	27
63	Anisotropic self-diffusion in ferrofluids studied via Brownian dynamics simulations. <i>Physical Review E</i> , 2005, 72, 031504.	0.8	22
64	Anisotropic diffusion in nematic liquid crystals and in ferrofluids. <i>Physical Review E</i> , 2005, 71, 051407.	0.8	18
65	Combined micro–macro integration scheme from an invariance principle: application to ferrofluid dynamics. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2004, 120, 33-40.	1.0	5
66	Canonical distribution functions in polymer dynamics. (II). Liquid-crystalline polymers. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2003, 319, 134-150.	1.2	34
67	Dynamics of colloidal suspensions of ferromagnetic particles in plane Couette flow: Comparison of approximate solutions with Brownian dynamics simulations. <i>Physical Review E</i> , 2003, 67, 061401.	0.8	22
68	Magnetoviscous model fluids. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S1403-S1423.	0.7	34
69	Nonequilibrium Dynamics and Magnetoviscosity of Moderately Concentrated Magnetic Liquids: A dynamic Mean-field Study. <i>Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences</i> , 2003, 58, 589-600.	0.7	37
70	Invariance Principle to Decide Between Micro and Macro Computations. , 2003, , 45-52.		3
71	Magnetization dynamics, rheology, and an effective description of ferromagnetic units in dilute suspension. <i>Physical Review E</i> , 2002, 66, 021501.	0.8	42
72	Magnetoviscosity and orientational order parameters of dilute ferrofluids. <i>Journal of Chemical Physics</i> , 2002, 116, 9078-9088.	1.2	34

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73	Polymer dynamics in wall turbulent flow. Europhysics Letters, 2002, 58, 616-622.	0.7	30
74	Canonical distribution functions in polymer dynamics. (I). Dilute solutions of flexible polymers. Physica A: Statistical Mechanics and Its Applications, 2002, 315, 367-385.	1.2	31
75	Corrections and enhancements of quasi-equilibrium states. Journal of Non-Newtonian Fluid Mechanics, 2001, 96, 203-219.	1.0	54
76	Validity of a macroscopic description in dilute polymeric solutions. Physical Review E, 2000, 62, 1441-1443.	0.8	16
77	Supersymmetry solution for finitely extensible dumbbell model. Europhysics Letters, 2000, 51, 355-360.	0.7	8