Ryoichi Yamamoto

List of Publications by Year
in descending order

127 papers	3,138 citations	218677 26 h-index	182427 51 g-index
130 all docs	130 docs citations	130 times ranked	1767 citing authors

#	Article	IF	Citations
1	Dynamics of highly supercooled liquids: Heterogeneity, rheology, and diffusion. Physical Review E, 1998, 58, 3515-3529.	2.1	390
2	Heterogeneous Diffusion in Highly Supercooled Liquids. Physical Review Letters, 1998, 81, 4915-4918.	7.8	244
3	Simulation method to resolve hydrodynamic interactions in colloidal dispersions. Physical Review E, 2005, 71, 036707.	2.1	212
4	Kinetic Heterogeneities in a Highly Supercooled Liquid. Journal of the Physical Society of Japan, 1997, 66, 2545-2548.	1.6	101
5	Lattice-Boltzmann method combined with smoothed-profile method for particulate suspensions. Physical Review E, 2011, 83, 026702.	2.1	96
6	Direct Numerical Simulations of Electrophoresis of Charged Colloids. Physical Review Letters, 2006, 96, 208302.	7.8	92
7	Simulating (electro)hydrodynamic effects in colloidal dispersions: Smoothed profile method. European Physical Journal E, 2008, 26, 361-368.	1.6	89
8	Supercooled liquids under shear: Theory and simulation. Physical Review E, 2004, 70, 011501.	2.1	84
9	Replica-exchange molecular dynamics simulation for supercooled liquids. Physical Review E, 2000, 61, 5473-5476.	2.1	77
10	Hydrodynamic interactions of self-propelled swimmers. Soft Matter, 2013, 9, 4923.	2.7	74
11	Simulating Particle Dispersions in Nematic Liquid-Crystal Solvents. Physical Review Letters, 2001, 87, 075502.	7.8	68
12	Apparent finite-size effects in the dynamics of supercooled liquids. Physical Review E, 2000, 61, R41-R44.	2.1	62
13	A model for hybrid simulations of molecular dynamics and computational fluid dynamics. Physics of Fluids, 2008, 20, .	4.0	51
14	Mutual information reveals multiple structural relaxation mechanisms in a model glass former. Nature Communications, 2015, 6, 6089.	12.8	50
15	Nonlinear rheology of a highly supercooled liquid. Europhysics Letters, 1997, 40, 61-66.	2.0	46
16	A Numerical Model for Brownian Particles Fluctuating in Incompressible Fluids. Journal of the Physical Society of Japan, 2008, 77, 074007.	1.6	44
17	Purely hydrodynamic origin for swarming of swimming particles. Physical Review E, 2016, 93, 043114.	2.1	42
18	Computer simulation of vapor-liquid phase separation in two- and three-dimensional fluids: Growth law of domain size. Physical Review B, 1994, 49, 14958-14966.	3.2	37

#	Article	IF	Citations
19	Dynamics and rheology of a supercooled polymer melt in shear flow. Journal of Chemical Physics, 2002, 117, 2359-2367.	3.0	37
20	Phase Separation in Polymer Solutions Induced by Shear. Journal De Physique II, 1997, 7, 295-304.	0.9	36
21	Thermal conductivity of halogenated ethanes, HFC-134a, HCFC-123, and HCFC-141b. International Journal of Thermophysics, 1993, 14, 79-90.	2.1	34
22	Multiscale modeling and simulation for polymer melt flows between parallel plates. Physical Review E, 2010, 81, 036308.	2.1	33
23	Dynamical heterogeneity in a highly supercooled liquid: Consistent calculations of correlation length, intensity, and lifetime. Physical Review E, 2011, 84, 011506.	2.1	31
24	A smooth interface method for simulating liquid crystal colloid dispersions. Journal of Physics Condensed Matter, 2004, 16, S1945-S1955.	1.8	30
25	Short-time motion of Brownian particles in a shear flow. Physical Review E, 2009, 79, 031401.	2.1	28
26	Entanglements in quiescent and sheared polymer melts. Physical Review E, 2004, 70, 041801.	2.1	27
27	On the Role of Hydrodynamic Interactions in Colloidal Gelation. Journal of the Physical Society of Japan, 2008, 77, 084804.	1.6	27
28	Sedimentation of non-Brownian spheres at high volume fractions. Soft Matter, 2013, 9, 10056.	2.7	26
29	Implementation of Leesâ€“Edwards periodic boundary conditions for direct numerical simulations of particle dispersions under shear flow. Journal of Chemical Physics, 2011, 134, 064110.	3.0	25
30	Tumbling motion of a single chain in shear flow: A crossover from Brownian to non-Brownian behavior. Physical Review E, 2010, 81, 041807.	2.1	24
31	Attachment of solid elongated particles on the surface of a stationary gas bubble. International Journal of Multiphase Flow, 2015, 71, 83-93.	3.4	24
32	Direct numerical simulations of rigid body dispersions. I. Mobility/friction tensors of assemblies of spheres. Journal of Chemical Physics, 2013, 139, 234105.	3.0	22
33	Direct numerical simulations of sedimenting spherical particles at non-zero Reynolds number. RSC Advances, 2014, 4, 53681-53693.	3.6	22
34	Collective motion of cells crawling on a substrate: roles of cell shape and contact inhibition. Scientific Reports, 2017, 7, 5163.	3.3	22
35	Control of cell colony growth by contact inhibition. Scientific Reports, 2020, 10, 6713.	3.3	22
36	General Constitutive Model for Supercooled Liquids: Anomalous Transverse Wave Propagation. Physical Review Letters, 2013, 110, 095901.	7.8	21

#	Article	IF	Citations
37	Direct numerical simulations of anisotropic diffusion of spherical particles in sedimentation. Physical Review E, 2013, 87, 022310.	2.1	21
38	Dynamics of a chiral swimmer sedimenting on a flat plate. Physical Review E, 2020, 101, 052608.	2.1	21
39	Kinetic heterogeneities and non-linear rheology of highly supercooled liquids. Journal of Non-Crystalline Solids, 1998, 235-237, 34-40.	3.1	20
40	A method to resolve hydrodynamic interactions in colloidal dispersions. Computer Physics Communications, 2005, 169, 301-304.	7.5	20
41	Rheological evaluation of colloidal dispersions using the smoothed profile method: formulation and applications. Journal of Fluid Mechanics, 2016, 792, 590-619.	3.4	20
42	Direct simulation of flowing colloidal dispersions by smoothed profile method. Advanced Powder Technology, 2010, 21, 206-211.	4.1	19
43	Effect of hydrodynamic interactions on rapid Brownian coagulation of colloidal dispersions. Physical Review E, 2012, 86, 051403.	2.1	19
44	Can thin disk-like ice clusters be more stable than compact droplet-like ice clusters?. Chemical Physics Letters, 1999, 304, 378-384.	2.6	18
45	Molecular dynamics study of a phase-separating fluid mixture under shear flow. Physical Review E, 1999, 59, 3223-3230.	2.1	18
46	Efficient Simulations of Charged Colloidal Dispersions: A Density Functional Approach. Macromolecular Theory and Simulations, 2005, 14, 278-284.	1.4	18
47	Direct numerical simulations for non-Newtonian rheology of concentrated particle dispersions. Physical Review E, 2009, 80, 061402.	2.1	18
48	Lifetime of dynamical heterogeneity in a highly supercooled liquid. Physical Review E, 2010, 82, 030501.	2.1	18
49	Direct numerical simulation of dispersed particles in a compressible fluid. Physical Review E, 2012, 85, 066704.	2.1	18
50	Dynamical heterogeneity in a highly supercooled liquid under a sheared situation. Journal of Chemical Physics, 2012, 136, 084505.	3.0	18
51	Viscosity of mixtures of fluoroalcohols and water at high pressures. International Journal of Thermophysics, 1993, 14, 835-849.	2.1	17
52	Computer simulation of vapor-liquid phase separation in two- and three-dimensional fluids. II. Domain structure. Physical Review B, 1995, 51, 2715-2722.	3.2	17
53	Multiscale Modeling for Polymeric Flow: Particle-Fluid Bridging Scale Methods. Journal of the Physical Society of Japan, 2013, 82, 012001.	1.6	17
54	Direct numerical simulation of a particle attachment to an immersed bubble. Physics of Fluids, 2016, 28, .	4.0	17

#	Article	IF	Citations
55	Smoothed profile method for direct numerical simulations of hydrodynamically interacting particles. Soft Matter, 2021, 17, 4226-4253.	2.7	17
56	Diffusion of colloidal particles in swimming suspensions. Molecular Physics, 2014, 112, 1389-1397.	1.7	16
57	Dynamic electrophoresis of charged colloids in an oscillating electric field. Physical Review E, 2014, 89, 062317.	2.1	16
58	Rheological properties of polymer melt between rapidly oscillating plates: An application of multiscale modeling. Europhysics Letters, 2009, 86, 18002.	2.0	15
59	Title is missing!. Journal of Physics Condensed Matter, 2000, 12, 6323-6334.	1.8	13
60	SMOOTHED PROFILE METHOD TO SIMULATE COLLOIDAL PARTICLES IN COMPLEX FLUIDS. International Journal of Modern Physics C, 2009, 20, 1457-1465.	1.7	13
61	Dynamic rheology of a supercooled polymer melt in nonuniform oscillating flows between rapidly oscillating plates. Physical Review E, 2011, 84, 031501.	2.1	13
62	Volumetric properties of mixtures of fluoroalcohols and water at high pressures. International Journal of Thermophysics, 1994, 15, 245-259.	2.1	12
63	Monte Carlo simulation of fluoro propane. Fluid Phase Equilibria, 1995, 104, 349-361.	2.5	12
64	Strict simulations of non-equilibrium dynamics of colloids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 311, 42-47.	4.7	12
65	Velocity Autocorrelation Function of Fluctuating Particles in Incompressible Fluids. Progress of Theoretical Physics Supplement, 2009, 178, 86-91.	0.1	12
66	Mechanical responses and stress fluctuations of a supercooled liquid in a sheared non-equilibrium state. European Physical Journal E, 2012, 35, 9707.	1.6	12
67	Anisotropic Velocity Fluctuations and Particle Diffusion in Sedimentation. Journal of the Physical Society of Japan, 2013, 82, 024004.	1.6	12
68	Mechanics of Cell Crawling by Means of Force-free Cyclic Motion. Journal of the Physical Society of Japan, 2018, 87, 044803.	1.6	12
69	Direct observation of the attachment behavior of hydrophobic colloidal particles onto a bubble surface. Soft Matter, 2020, 16, 695-702.	2.7	11
70	Can the â€˜van der Waals loopâ€™ vanish? II. Effect of domain size. Molecular Physics, 1995, 84, 757-768.	1.7	10
71	Molecular dynamics simulation of Eu3+-doped chlorofluorozirconate glasses. Journal of Physics Condensed Matter, 1995, 7, 4583-4592.	1.8	10
72	Molecular dynamics simulation of heat conduction in near-critical fluids. Physical Review E, 2005, 71, 011507.	2.1	10

#	Article	IF	Citations
73	Propagation of hydrodynamic interactions between particles in a compressible fluid. Physics of Fluids, 2013, 25, .	4.0	10
74	A numerical study of sedimentation of rod like particles using smooth profile method. International Journal of Multiphase Flow, 2020, 127, 103263.	3.4	10
75	Heterogeneity and finite size effects in the dynamics of supercooled liquids. European Physical Journal Special Topics, 2000, 10, Pr7-15-Pr7-20.	0.2	10
76	Volumetric properties of mixtures of 1,4-dioxane and water at high pressures. International Journal of Thermophysics, 1996, 17, 441-454.	2.1	9
77	Simulations of Model Microswimmers with Fully Resolved Hydrodynamics. Journal of the Physical Society of Japan, 2017, 86, 101008.	1.6	9
78	Do hydrodynamically assisted binary collisions lead to orientational ordering of microswimmers?. European Physical Journal E, 2017, 40, 95.	1.6	9
79	Field-induced dipolar attraction between like-charged colloids. Soft Matter, 2018, 14, 4520-4529.	2.7	9
80	Sedimentation at finite peclet number: Direct numerical simulation. AIP Conference Proceedings, 2013, , .	0.4	8
81	Synchronized Molecular-Dynamics Simulation via Macroscopic Heat and Momentum Transfer: An Application to Polymer Lubrication. Physical Review X, 2014, 4, .	8.9	8
82	Synchronized molecular-dynamics simulation for the thermal lubrication of a polymeric liquid between parallel plates. Computers and Fluids, 2016, 124, 185-189.	2.5	8
83	Eulerian/Lagrangian formulation for the elasto-capillary deformation of a flexible fibre. Journal of Computational Physics, 2020, 409, 109324.	3.8	8
84	Diffuse interface model to simulate the rise of a fluid droplet across a cloud of particles. Physical Review Fluids, 2018, 3, .	2.5	8
85	Intermolecular Interaction of Fluoro Propanes. Molecular Simulation, 1994, 12, 383-391.	2.0	7
86	Can the â€˜van der Waals loopâ€™ vanish?. Chemical Physics Letters, 1994, 231, 401-406.	2.6	7
87	A smoothed profile method for simulating charged colloidal dispersions. Computer Physics Communications, 2005, 169, 104-106.	7.5	7
88	Reentrant transition in the shear viscosity of dilute rigid-rod dispersions. Physical Review E, 2011, 84, 051404.	2.1	7
89	Velocity relaxation of a particle in a confined compressible fluid. Journal of Chemical Physics, 2013, 138, 184905.	3.0	7
90	Computer Simulation of Vapor-Liquid Phase Separation. Molecular Simulation, 1996, 16, 119-126.	2.0	6

#	Article	IF	Citations
91	Acoustic Wave Propagation through a Supercooled Liquid: A Normal Mode Analysis. Journal of the Physical Society of Japan, 2012, 81, 124602.	1.6	6
92	Direct numerical simulation of an arbitrarily shaped particle at a fluidic interface. Physical Review E, 2017, 95, 063107.	2.1	6
93	Direct Numerical Simulations of Correlated Settling Particles. Journal of the Physical Society of Japan, 2018, 87, 064402.	1.6	6
94	Viscoelastic effects and shear-induced phase separation in polymer solutions. Progress in Colloid and Polymer Science, 1997, 106, 150-157.	0.5	6
95	A direct numerical simulation method for complex modulus of particle dispersions. European Physical Journal E, 2010, 32, 357-363.	1.6	5
96	Dynamic polarisation of a charged colloid in an oscillating electric field. Molecular Physics, 2015, 113, 2511-2522.	1.7	5
97	Simulation studies of microstructure of colloids in sedimentation. Molecular Simulation, 2015, 41, 968-973.	2.0	5
98	Modeling the mechanosensitivity of fast-crawling cells on cyclically stretched substrates. Soft Matter, 2019, 15, 683-698.	2.7	5
99	Role of the Cell Cycle in Collective Cell Dynamics. Physical Review X, 2021, 11, .	8.9	5
100	LARGE SCALE LONG-LIVED HETEROGENEITY IN THE DYNAMICS OF SUPERCOOLED LIQUIDS. International Journal of Modern Physics C, 1999, 10, 1553-1562.	1.7	4
101	Hydrodynamic Effects in Colloidal Dispersions Studied by a New Efficient Direct Simulation. AIP Conference Proceedings, 2006, , .	0.4	4
102	Spontaneous spatiotemporal ordering of shape oscillations enhances cell migration. Soft Matter, 2019, 15, 4939-4946.	2.7	4
103	Electrostatic Potential around a Charged Colloidal Particle in an Electrolyte Solution with Ion Strong Coupling. Journal of the Physical Society of Japan, 2012, 81, 024803.	1.6	3
104	Reynolds-number-dependent dynamical transitions on hydrodynamic synchronization modes of externally driven colloids. Physical Review E, 2018, 97, 032611.	2.1	3
105	Computer simulation of ionic conduction in ZrF4-BaF2glass. Journal of Physics Condensed Matter, 1995, 7, 8557-8567.	1.8	2
106	Publisherâ€™s Note: Direct Numerical Simulations of Electrophoresis of Charged Colloids [Phys. Rev. Lett.96, 208302 (2006)]. Physical Review Letters, 2006, 96, .	7.8	2
107	Multiscale simulation for thermo-hydrodynamic lubrication of a polymeric liquid between parallel plates. Molecular Simulation, 2015, 41, 1002-1005.	2.0	2
108	Two-dimensional lattice liquid models. Physical Review E, 2012, 86, 031124.	2.1	1

#	Article	IF	Citations
109	KAPSEL: Colloidal Dispersion Simulator. , 2016, , 149-167.		1
110	Microstructure of rod like sedimenting particles: Direct numerical simulations. , 2017, , .		1
111	Modeling of Cells which Migrate and Proliferate on a Substrate. Journal of Computer Chemistry Japan, 2018, 17, 14-19.	0.1	1
112	KAPSEL: Kyoto Advanced Particle Simulator for ELectrohydrodynamics. KONA Powder and Particle Journal, 2006, 24, 167-182.	1.7	1
113	Relation between dynamic heterogeneities observed in scattering experiments and four-body correlations. Physical Review Research, 2022, 4, .	3.6	1
114	Computer simulation of ionic conduction in glass: II. Normal-mode analysis. Journal of Physics Condensed Matter, 1997, 9, 5157-5166.	1.8	0
115	Supercooled liquids under shear: A mode-coupling theory approach. AIP Conference Proceedings, 2004, , .	0.4	0
116	Simulating Electrohydrodynamics in Charged Colloidal Dispersions: A Smoothed Profile Method. AIP Conference Proceedings, 2006, , .	0.4	0
117	Direct Simulation of Flowing Colloidal Dispersions by Smoothed Profile Method. Journal of the Society of Powder Technology, Japan, 2007, 44, 191-197.	0.1	0
118	Multiscale Modeling of a Polymeric Fluid Containing a Solid Particle. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2018, 26, 166-169.	0.0	0
119	Toward Large-Scale Simulations of Dispersions of Small Particles. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2007, 15, 67-71.	0.0	0
120	2503 Direct Numerical Simulations of Colloidal Dispersions:Methods and Applications. The Proceedings of the Computational Mechanics Conference, 2007, 2007.20, 195-196.	0.0	0
121	Developments of Accurate Simulations for Particle Dispersions. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2014, 22, 82-87.	0.0	0
122	Glass Transitions. Kinetic Heterogeneities in Highly Supercooled Liquids.. Review of High Pressure Science and Technology/Koatsuryoku No Kagaku To Gijutsu, 1999, 9, 134-141.	0.0	0
123	28am2-F-4 Multiscale modeling for thermal lubrication of polymeric liquid. The Proceedings of the Symposium on Micro-Nano Science and Technology, 2015, 2015.7, _28am2-F-4-_28am2-F-4.	0.0	0
124	Gravitational Settling of Glass Fibers on an Air Bubble. , 2015, , .		0
125	Enhancing Applicability and Functionality of KAPSEL Simulator. Hosokawa Powder Technology Foundation ANNUAL REPORT, 2018, 26, 135-139.	0.0	0
126	Physical Modeling for Active Cells and Tissue. Seibutsu Butsuri, 2018, 58, 159-162.	0.1	0

#	Article	IF	Citations
127	1.â€,Particle Characteristics and Measurement1.10â€,Motion of a Single Particle1.10.3â€,Brownian Motion. Journal of the Society of Powder Technology, Japan, 2019, 56, 272-277.	0.1	0