Jeffrey F Morris

List of Publications by Year
in descending order

136 papers	8,652 citations	41344 49 h-index	46799 89 g-index
140 all docs	140 docs citations	140 times ranked	5090 citing authors

#	Article	IF	Citations
1	Discontinuous Shear Thickening of Frictional Hard-Sphere Suspensions. Physical Review Letters, 2013, 111, 218301.	7.8	522
2	Shear thickening, frictionless and frictional rheologies in non-Brownian suspensions. Journal of Rheology, 2014, 58, 1693-1724.	2.6	454
3	Inertial migration of rigid spherical particles in Poiseuille flow. Journal of Fluid Mechanics, 2004, 515, 171-195.	3.4	406
4	Curvilinear flows of noncolloidal suspensions: The role of normal stresses. Journal of Rheology, 1999, 43, 1213-1237.	2.6	400
5	Microstructure of strongly sheared suspensions and its impact on rheology and diffusion. Journal of Fluid Mechanics, 1997, 348, 103-139.	3.4	381
6	An experimental study of drop-on-demand drop formation. Physics of Fluids, 2006, 18, 072102.	4.0	303
7	Mechanism for clogging of microchannels. Physical Review E, 2006, 74, 061402.	2.1	215
8	A review of microstructure in concentrated suspensions and its implications for rheology and bulk flow. Rheologica Acta, 2009, 48, 909-923.	2.4	208
9	Particle migration in pressure-driven flow of a Brownian suspension. Journal of Fluid Mechanics, 2003, 493, 363-378.	3.4	178
10	Rheology of Non-Brownian Suspensions. Annual Review of Chemical and Biomolecular Engineering, 2014, 5, 203-228.	6.8	166
11	Discontinuous shear thickening in Brownian suspensions by dynamic simulation. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15326-15330.	7.1	150
12	A constitutive model for simple shear of dense frictional suspensions. Journal of Rheology, 2018, 62, 457-468.	2.6	150
13	Normal stress-driven migration and axial development in pressure-driven flow of concentrated suspensions. Journal of Non-Newtonian Fluid Mechanics, 2006, 135, 149-165.	2.4	141
14	An experimental study of particle effects on drop formation. Physics of Fluids, 2004, 16, 1777-1790.	4.0	132
15	Pressure-driven flow of a suspension: Buoyancy effects. International Journal of Multiphase Flow, 1998, 24, 105-130.	3.4	129
16	Visualization of drop-on-demand inkjet: Drop formation and deposition. Review of Scientific Instruments, 2006, 77, 085101.	1.3	127
17	Axial and lateral particle ordering in finite Reynolds number channel flows. Physics of Fluids, 2010, 22, .	4.0	121
18	Shear Thickening of Concentrated Suspensions: Recent Developments and Relation to Other Phenomena. Annual Review of Fluid Mechanics, 2020, 52, 121-144.	25.0	113

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19	Stationary shear flow around fixed and free bodies at finite Reynolds number. Journal of Fluid Mechanics, 2004, 520, 215-242.	3.4	111
20	Suspension properties at finite Reynolds number from simulated shear flow. Physics of Fluids, 2008, 20, .	4.0	103
21	Lateral force on a rigid sphere in large-inertia laminar pipe flow. Journal of Fluid Mechanics, 2009, 621, 59-67.	3.4	103
22	Experimental results and modeling of energy storage and recovery in a packed bed of alumina particles. Applied Energy, 2014, 119, 521-529.	10.1	102
23	Single drop impaction on a solid surface. AIChE Journal, 2003, 49, 2461-2471.	3.6	100
24	Thermal analysis and exergy evaluation of packed bed thermal storage systems. Applied Thermal Engineering, 2013, 52, 255-263.	6.0	96
25	Trains of particles in finite-Reynolds-number pipe flow. Physics of Fluids, 2004, 16, 4192-4195.	4.0	95
26	Particle Pressure in a Sheared Suspension: A Bridge from Osmosis to Granular Dilatancy. Physical Review Letters, 2009, 102, 108301.	7.8	91
27	Packed bed thermal energy storage: A simplified experimentally validated model. Journal of Energy Storage, 2015, 4, 14-23.	8.1	90
28	Microstructure from simulated Brownian suspension flows at large shear rate. Physics of Fluids, 2002, 14, 1920-1937.	4.0	89
29	Surfactant Effects on Hydrate Crystallization at the Waterâ€"Oil Interface: Hollow-Conical Crystals. Crystal Growth and Design, 2012, 12, 3817-3824.	3.0	88
30	Development of particle migration in pressure-driven flow of a Brownian suspension. Journal of Fluid Mechanics, 2007, 581, 437-451.	3.4	85
31	Temporallyâ€resolved inkjet drop impaction on surfaces. AIChE Journal, 2007, 53, 2606-2617.	3.6	85
32	Coalescence-induced jumping of droplet: Inertia and viscosity effects. Physics of Fluids, 2015, 27, .	4.0	80
33	Shear thickening in concentrated suspensions of smooth spheres in Newtonian suspending fluids. Soft Matter, 2018, 14, 170-184.	2.7	77
34	Salt effects on thermodynamic and rheological properties of hydrate forming emulsions. Chemical Engineering Science, 2013, 95, 148-160.	3.8	74
35	Nonmonotonic flow curves of shear thickening suspensions. Physical Review E, 2015, 91, 052302.	2.1	72
36	Self-diffusion in sheared suspensions. Journal of Fluid Mechanics, 1996, 312, 223-252.	3.4	65

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37	Bidisperse and polydisperse suspension rheology at large solid fraction. Journal of Rheology, 2018, 62, 513-526.	2.6	65
38	Particle pressure in sheared Brownian suspensions. Journal of Rheology, 2008, 52, 141-164.	2.6	64
39	Yield stress measurements of cyclopentane hydrate slurry. Journal of Non-Newtonian Fluid Mechanics, 2015, 220, 116-125.	2.4	64
40	From Yielding to Shear Jamming in a Cohesive Frictional Suspension. Physical Review Letters, 2019, 122, 098004.	7.8	62
41	The pressure moments for two rigid spheres in lowâ€Reynoldsâ€number flow. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2317-2325.	1.6	61
42	Rheology of Hydrate Forming Emulsions. Langmuir, 2010, 26, 11699-11704.	3.5	60
43	Pair-sphere trajectories in finite-Reynolds-number shear flow. Journal of Fluid Mechanics, 2008, 596, 413-435.	3.4	58
44	Colloidal Adsorption at Fluid Interfaces: Regime Crossover from Fast Relaxation to Physical Aging. Physical Review Letters, 2013, 111, 028302.	7.8	58
45	Hydrodynamically Driven Colloidal Assembly in Dip Coating. Physical Review Letters, 2013, 110, 188302.	7.8	56
46	Suspension flow modeling for general geometries. Chemical Engineering Science, 2009, 64, 4597-4610.	3.8	53
47	Simulation of shear thickening in attractive colloidal suspensions. Soft Matter, 2017, 13, 1773-1779.	2.7	53
48	Calorimetric investigation of cyclopentane hydrate formation in an emulsion. Chemical Engineering Science, 2012, 68, 481-491.	3.8	52
49	Structure evolution in electrorheological and magnetorheological suspensions from a continuum perspective. Journal of Applied Physics, 2003, 93, 5769-5779.	2.5	51
50	Shear and normal stress measurements in non-Brownian monodisperse and bidisperse suspensions. Journal of Rheology, 2016, 60, 289-296.	2.6	50
51	Pendant drop thread dynamics of particle-laden liquids. International Journal of Multiphase Flow, 2007, 33, 448-468.	3.4	49
52	Rheology of cyclopentane hydrate slurry in a model oil-continuous emulsion. Rheologica Acta, 2016, 55, 235-243.	2.4	49
53	Hydrodynamic interaction of two particles in confined linear shear flow at finite Reynolds number. Physics of Fluids, 2007, 19, .	4.0	48
54	Shear jamming and fragility in dense suspensions. Granular Matter, 2019, 21, 1.	2.2	48

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55	Microstructure and rheology of finite inertia neutrally buoyant suspensions. Journal of Fluid Mechanics, 2014, 749, 431-459.	3.4	47
56	Nucleation of cyclopentane hydrate by ice studied by morphology and rheology. Chemical Engineering Science, 2014, 116, 497-507.	3.8	46
57	Lubricated-to-frictional shear thickening scenario in dense suspensions. Physical Review Fluids, 2018, 3, .	2.5	45
58	Microstructural theory and the rheology of concentrated colloidal suspensions. Journal of Fluid Mechanics, 2012, 713, 420-452.	3.4	44
59	Simulations of a sphere sedimenting in a viscoelastic fluid with cross shear flow. Journal of Non-Newtonian Fluid Mechanics, 2013, 197, 48-60.	2.4	44
60	Interaction of fluid interfaces with immersed solid particles using the lattice Boltzmann method for liquidâ€"gasâ€"particle systems. Journal of Computational Physics, 2015, 283, 453-477.	3.8	44
61	Pattern Formation in Flowing Electrorheological Fluids. Physical Review Letters, 2002, 88, 188301.	7.8	43
62	Hydrodynamic and interparticle potential effects on aggregation of colloidal particles. Journal of Colloid and Interface Science, 2012, 368, 86-96.	9.4	43
63	Inertial flow transitions of a suspension in Taylorâ€"Couette geometry. Journal of Fluid Mechanics, 2018, 835, 936-969.	3.4	43
64	Ordering transition and structural evolution under shear in Brownian suspensions. Journal of Rheology, 2009, 53, 417-439.	2.6	42
65	Structural and rheological evolution of silica nanoparticle gels. Soft Matter, 2010, 6, 5425.	2.7	40
66	Inertial migration of particles in Taylor-Couette flows. Physics of Fluids, 2018, 30, .	4.0	40
67	Sliding flow method for exergetically efficient packed bed thermal storage. Applied Thermal Engineering, 2014, 64, 201-208.	6.0	39
68	Particle migration and free-surface topography in inclined plane flow of a suspension. Journal of Fluid Mechanics, 2005, 538, 309.	3.4	36
69	Drop-on-demand drop formation of colloidal suspensions. International Journal of Multiphase Flow, 2012, 38, 17-26.	3.4	34
70	Microscopic Origin of Frictional Rheology in Dense Suspensions: Correlations in Force Space. Physical Review Letters, 2018, 121, 128002.	7.8	33
71	Suspension flow past a cylinder: particle interactions with recirculating wakes. Journal of Fluid Mechanics, 2014, 760, .	3.4	32
72	Interaction network analysis in shear thickening suspensions. Physical Review Fluids, 2020, 5, .	2.5	32

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73	Toward a fluid mechanics of suspensions. Physical Review Fluids, 2020, 5, .	2.5	32
74	Effect of repulsive interactions on structure and rheology of sheared colloidal dispersions. Soft Matter, 2012, 8, 4223.	2.7	28
75	Hydrophobic Particle Effects on Hydrate Crystal Growth at the Waterâ€"Oil Interface. Chemistry - an Asian Journal, 2014, 9, 261-267.	3.3	28
76	Modeling Oilfield Emulsions: Comparison of Cyclopentane Hydrate and Ice. Energy & Fuels, 2015, 29, 6286-6295.	5.1	28
77	Concentration band dynamics in free-surface Couette flow of a suspension. Physics of Fluids, 2002, 14, 1580-1589.	4.0	27
78	Particle-pressure-induced self-filtration in concentrated suspensions. Physical Review E, 2010, 82, 010402.	2.1	27
79	Rheology of Hydrate-Forming Emulsions Stabilized by Surfactant and Hydrophobic Silica Nanoparticles. Energy & Fuels, 2018, 32, 5877-5884.	5.1	27
80	High-shear-rate capillary viscometer for inkjet inks. Review of Scientific Instruments, 2010, 81, 065106.	1.3	26
81	Rotary spray congealing of a suspension: Effect of disk speed and dispersed particle properties. Journal of Microencapsulation, 2006, 23, 793-809.	2.8	25
82	Calorimetric and Rheological Studies on Cyclopentane Hydrate-Forming Water-in-Kerosene Emulsions. Journal of Chemical & Engineering Data, 2015, 60, 362-368.	1.9	25
83	Fluctuations at the onset of discontinuous shear thickening in a suspension. Journal of Rheology, 2020, 64, 309-319.	2.6	25
84	The effect of shear thinning and walls on the sedimentation of a sphere in an elastic fluid under orthogonal shear. Journal of Non-Newtonian Fluid Mechanics, 2013, 201, 120-129.	2.4	24
85	Effects of Inertia and Viscosity on Single Droplet Deformation in Confined Shear Flow. Communications in Computational Physics, 2013, 13, 706-724.	1.7	24
86	Anomalous migration in simulated oscillatory pressure-driven flow of a concentrated suspension. Physics of Fluids, 2001, 13, 2457-2462.	4.0	22
87	Highly crosslinked poly(dimethylsiloxane) microbeads with uniformly dispersed quantum dot nanocrystals. Journal of Colloid and Interface Science, 2011, 363, 25-33.	9.4	22
88	Topology of pair-sphere trajectories in finite inertia suspension shear flow and its effects on microstructure and rheology. Physics of Fluids, 2015, 27, 043302.	4.0	22
89	Collective diffusion in sheared colloidal suspensions. Journal of Fluid Mechanics, 2008, 597, 305-341.	3.4	21
90	Pair-particle dynamics and microstructure in sheared colloidal suspensions:Simulation and Smoluchowski theory. Physics of Fluids, 2013, 25, .	4.0	20

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91	Lattice Boltzmann simulations of particle-laden liquid bridges: Effects of volume fraction and wettability. International Journal of Multiphase Flow, 2015, 76, 32-46.	3.4	20
92	Unsteady shear flows of colloidal hard-sphere suspensions by dynamic simulation. Journal of Rheology, 2017, 61, 477-501.	2.6	20
93	Active microrheology of colloidal suspensions: Simulation and microstructural theory. Journal of Rheology, 2016, 60, 733-753.	2.6	18
94	Particleâ€Laden Drop Impacting on Solid Surfaces. Journal of Dispersion Science and Technology, 2005, 25, 449-456.	2.4	16
95	Transient behavior of electrorheological fluids in shear flow. Journal of Rheology, 2008, 52, 225-241.	2.6	15
96	Particle transport in laboratory models of bifurcating fractures. Journal of Natural Gas Science and Engineering, 2016, 33, 1169-1180.	4.4	15
97	Pore cross-talk in colloidal filtration. Scientific Reports, 2018, 8, 12460.	3.3	14
98	Breakup of a Liquid Jet Containing Solid Particles: A Singularity Approach. SIAM Journal on Applied Mathematics, 2009, 70, 885-900.	1.8	13
99	Lattice-Boltzmann simulation of inertial particle-laden flow around an obstacle. Physical Review Fluids, 2016, 1, .	2.5	13
100	Dynamics of viscous coalescing droplets in a saturated vapor phase. Physics of Fluids, 2015, 27, .	4.0	11
101	High-speed trains: inÂmicrochannels?. Journal of Fluid Mechanics, 2016, 792, 1-4.	3.4	11
102	Rheology discussions: The physics of dense suspensions. Journal of Rheology, 2020, 64, 1501-1524.	2.6	11
103	Contact angle measurements on cyclopentane hydrates. Chemical Engineering Science, 2021, 229, 116022.	3.8	11
104	Effect of inertial migration of particles on flow transitions of a suspension Taylor-Couette flow. Physical Review Fluids, 2020, 5, .	2.5	11
105	Uniaxial compression of dense granular materials: Stress distribution and permeability. Journal of Petroleum Science and Engineering, 2009, 65, 193-207.	4.2	10
106	Soil granular dynamics on-a-chip: fluidization inception under scrutiny. Lab on A Chip, 2019, 19, 1226-1235.	6.0	10
107	Near-wall dynamics of a neutrally buoyant spherical particle in an axisymmetric stagnation point flow. Journal of Fluid Mechanics, 2020, 892, .	3.4	10
108	Nonlinear rheology of colloidal suspensions probed by oscillatory shear. Journal of Rheology, 2017, 61, 797-815.	2.6	9

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109	Suspension flow through an asymmetric T-junction. Journal of Fluid Mechanics, 2018, 844, 247-273.	3.4	9
110	Preface: Physics of dense suspensions. Journal of Rheology, 2020, 64, 223-225.	2.6	9
111	Shear stress dependence of force networks in 3D dense suspensions. Soft Matter, 2021, 17, 7476-7486.	2.7	9
112	Triplet correlation in sheared suspensions of Brownian particles. Journal of Chemical Physics, 2006, 124, 204908.	3.0	8
113	Global topology of contact force networks: Insight into shear thickening suspensions. Physical Review E, 2019, 99, 012607.	2.1	8
114	Particle approach to a stagnation point at a wall: Viscous damping and collision dynamics. Physical Review Fluids, 2020, 5, .	2.5	8
115	Airflows generated by an impacting drop. Soft Matter, 2016, 12, 3013-3020.	2.7	7
116	Correlation function approach for diffusion in confined geometries. Physical Review E, 2020, 102, 022129.	2.1	6
117	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> -core analysis of shear-thickening suspensions. Physical Review Fluids, 2022, 7, .	2.5	6
118	Shear-induced organization of forces in dense suspensions: signatures of discontinuous shear thickening. EPJ Web of Conferences, 2017, 140, 09045.	0.3	5
119	Microstructure of the near-wall layer of filtration-induced colloidal assembly. Soft Matter, 2020, 16, 9726-9737.	2.7	5
120	Particle motion in pressure-driven suspension flow through a symmetric T-channel. International Journal of Multiphase Flow, 2021, 134, 103447.	3.4	5
121	Shear-induced glass-to-crystal transition in anisotropic clay-like suspensions. Soft Matter, 2021, 17, 3174-3190.	2.7	5
122	Athermal sediment creep triggered by porous flow. Physical Review Fluids, 2021, 6, .	2.5	5
123	Film depth and concentration banding in freeâ€“surface Couette flow of a suspension. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2003, 361, 895-910.	3.4	5
124	A TWO-FLUID MODEL FOR ELECTRO- AND MAGNETORHEOLOGICAL SUSPENSIONS. International Journal of Modern Physics B, 2002, 16, 2669-2675.	2.0	2
125	Report of the Symposium on Interactions for Dispersed Systems in Newtonian and Viscoelastic Fluids, Guanajuato, Mexico, 2006. Physics of Fluids, 2006, 18, 121501.	4.0	2
126	Microstructural description of shear-thickening suspensions. EPJ Web of Conferences, 2017, 140, 09023.	0.3	2

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127	Injection time controls the final morphology of nanocrystals during in situ-seeding synthesis of silver nanodisks. CrystEngComm, 2020, 22, 1769-1778.	2.6	2
128	Threshold concentration and random collision determine the growth of the huntingtin inclusion from a stable core. Communications Biology, 2021, 4, 971.	4.4	2
129	A TWO-FLUID MODEL FOR ELECTRO- AND MAGNETORHEOLOGICAL SUSPENSIONS. , 2002, , .		2
130	Scaling Analysis of Shear Thickening Suspensions. Frontiers in Physics, 0, 10, .	2.1	2
131	The Essential Role of Frictional Contact in Shear Thickening. Japanese Journal of Multiphase Flow, 2014, 28, 296-303.	0.3	1
132	Discontinuous shear thickening in dense suspensions: Mechanisms, force networks, and fluctuations. , 2022, 3, 100031.		1
133	A particularly unstable film. Journal of Fluid Mechanics, 2022, 944, .	3.4	1
134	Extreme velocity fluctuations: transient jamming in concentrated suspension flow. AIP Conference Proceedings, 2008, , .	0.4	0
135	Onset of abrasive wear of boundaries in concentrated suspension flow. Tribology International, 2015, 87, 72-81.	5.9	0
136	TRANSIENT BEHAVIOR OF ELECTRORHEOLOGICAL FLUIDS IN SHEAR FLOW. , 2007, , .		0