John F Brady

List of Publications by Year in Descending Order

82 papers	6,358 citations	41 h-index	79 g-index
88 ext. papers	6,989 ext. citations	4.5 avg, IF	6.25 L-index

#	Paper	IF	Citations
82	Dynamic overlap concentration scale of active colloids. *Physical Review E*, **2021**, 104, 044612	2.4	0
81	Distribution and pressure of active L�y swimmers under confinement. *Journal of Physics A: Mathematical and Theoretical*, **2021**, 54, 275002	2	0
80	Theory for the Casimir effect and the partitioning of active matter. *Soft Matter*, **2021**, 17, 523-530	3.6	3
79	Machine learning for phase behavior in active matter systems. *Soft Matter*, **2021**, 17, 6808-6816	3.6	5
78	The "isothermal" compressibility of active matter. *Journal of Chemical Physics*, **2021**, 154, 014902	3.9	1
77	Reverse osmotic effect in active matter. *Physical Review E*, **2020**, 101, 062604	2.4	3
76	A hydrodynamic model for discontinuous shear-thickening in dense suspensions. *Journal of Rheology*, **2020**, 64, 379-394	4.1	12
75	Microscopic origins of the swim pressure and the anomalous surface tension of active matter. *Physical Review E*, **2020**, 101, 012604	2.4	20
74	Upstream swimming and Taylor dispersion of active Brownian particles. *Physical Review Fluids*, **2020** , 5,	2.8	7
73	Diffusion and flow in complex liquids. *Soft Matter*, **2020**, 16, 114-124	3.6	12
72	Nonlinear microrheology of active Brownian suspensions. *Soft Matter*, **2020**, 16, 1034-1046	3.6	2
71	Alternative Frictional Model for Discontinuous Shear Thickening of Dense Suspensions: Hydrodynamics. *Physical Review Letters*, **2019**, 123, 138002	7.4	38
70	Fluctuation-dissipation in active matter. *Journal of Chemical Physics*, **2019**, 150, 184901	3.9	13
69	Swimming to Stability: Structural and Dynamical Control via Active Doping. *ACS Nano*, **2019**, 13, 560-572	16.7	15
68	Instability of expanding bacterial droplets. *Nature Communications*, **2018**, 9, 1322	17.4	14
67	Do hydrodynamic interactions affect the swim pressure?. *Soft Matter*, **2018**, 14, 3581-3589	3.6	5
66	The curved kinetic boundary layer of active matter. *Soft Matter*, **2018**, 14, 279-290	3.6	18

65	Unsteady shear flows of colloidal hard-sphere suspensions by dynamic simulation. *Journal of Rheology*, **2017**, 61, 477-501	4.1	19
64	Tracer diffusion in active suspensions. *Physical Review E*, **2017**, 95, 052605	2.4	27
63	Antiswarming: Structure and dynamics of repulsive chemically active particles. *Physical Review E*, **2017**, 96, 060601	2.4	2
62	Forces, stresses and the (thermo?) dynamics of active matter. *Current Opinion in Colloid and Interface Science*, **2016**, 21, 24-33	7.6	50
61	Acoustic trapping of active matter. *Nature Communications*, **2016**, 7, 10694	17.4	121
60	The behavior of active diffusiophoretic suspensions: An accelerated Laplacian dynamics study. *Journal of Chemical Physics*, **2016**, 145, 134902	3.9	19
59	Tuning colloidal gels by shear. *Soft Matter*, **2015**, 11, 4640-8	3.6	74
58	Short-time diffusion in concentrated bidisperse hard-sphere suspensions. *Journal of Chemical Physics*, **2015**, 142, 064905	3.9	10
57	A theory for the phase behavior of mixtures of active particles. *Soft Matter*, **2015**, 11, 7920-31	3.6	49
56	The force on a boundary in active matter. *Journal of Fluid Mechanics*, **2015**, 785,	3.7	61
55	Classical Liquids in Fractal Dimension. *Physical Review Letters*, **2015**, 115, 097801	7.4	9
54	Constant Stress and Pressure Rheology of Colloidal Suspensions. *Physical Review Letters*, **2015**, 115, 158301	7.4	30
53	Short-time transport properties of bidisperse suspensions and porous media: a Stokesian dynamics study. *Journal of Chemical Physics*, **2015**, 142, 094901	3.9	14
52	Swim stress, motion, and deformation of active matter: effect of an external field. *Soft Matter*, **2014**, 10, 9433-45	3.6	39
51	The Einstein shear viscosity correction for non no-slip hyperspheres. *Journal of Colloid and Interface Science*, **2014**, 430, 302-4	9.3	1
50	Non-spherical osmotic motor: chemical sailing. *Journal of Fluid Mechanics*, **2014**, 748, 488-520	3.7	37
49	The hydrodynamics of confined dispersions. *Journal of Fluid Mechanics*, **2011**, 687, 254-299	3.7	35
48	Colloidal diffusion and hydrodynamic screening near boundaries. *Soft Matter*, **2011**, 7, 6844	3.6	32

47	Modeling hydrodynamic self-propulsion with Stokesian Dynamics. Or teaching Stokesian Dynamics to swim. *Physics of Fluids*, **2011**, 23, 071901	4.4	53
46	Particle motion driven by solute gradients with application to autonomous motion: continuum and colloidal perspectives. *Journal of Fluid Mechanics*, **2011**, 667, 216-259	3.7	134
45	Single-particle motion in colloids: force-induced diffusion. *Journal of Fluid Mechanics*, **2010**, 658, 188-210	3.7	67
44	Particle motion between parallel walls: Hydrodynamics and simulation. *Physics of Fluids*, **2010**, 22, 103301	4.4	68
43	Osmotic propulsion: the osmotic motor. *Physical Review Letters*, **2008**, 100, 158303	7.4	141
42	Microrheology of colloidal dispersions: Shape matters. *Journal of Rheology*, **2008**, 52, 165-196	4.1	32
41	Collective diffusion in sheared colloidal suspensions. *Journal of Fluid Mechanics*, **2008**, 597, 305-341	3.7	18
40	Simulation of hydrodynamically interacting particles near a no-slip boundary. *Physics of Fluids*, **2007**, 19, 113306	4.4	130
39	A new resistance function for two rigid spheres in a uniform compressible low-Reynolds-number flow. *Physics of Fluids*, **2006**, 18, 043102	4.4	7
38	Single particle motion in colloidal dispersions: a simple model for active and nonlinear microrheology. *Journal of Fluid Mechanics*, **2006**, 557, 73	3.7	87
37	On the bulk viscosity of suspensions. *Journal of Fluid Mechanics*, **2006**, 554, 109	3.7	38
36	Dynamic structure factor study of diffusion in strongly sheared suspensions. *Journal of Fluid Mechanics*, **2005**, 527, 141-169	3.7	30
35	A simple paradigm for active and nonlinear microrheology. *Physics of Fluids*, **2005**, 17, 073101	4.4	172
34	Shear-induced self-diffusion in non-colloidal suspensions. *Journal of Fluid Mechanics*, **2004**, 506, 285-314	3.7	110
33	Accelerated Stokesian dynamics: Brownian motion. *Journal of Chemical Physics*, **2003**, 118, 10323-10332	3.9	182
32	Gravitational instability in suspension flow. *Journal of Fluid Mechanics*, **2002**, 472, 201-210	3.7	22
31	Many-body effects and matrix inversion in low-Reynolds-number hydrodynamics. *Physics of Fluids*, **2001**, 13, 350-353	4.4	18
30	Accelerated Stokesian Dynamics simulations. *Journal of Fluid Mechanics*, **2001**, 448, 115-146	3.7	361

(1993-2000)

29	Structure, diffusion and rheology of Brownian suspensions by Stokesian Dynamics simulation. *Journal of Fluid Mechanics*, **2000**, 407, 167-200	3.7	404
28	Brownian Dynamics simulation of hard-sphere colloidal dispersions. *Journal of Rheology*, **2000**, 44, 629-651	4.1	137
27	Self-diffusion in sheared suspensions by dynamic simulation. *Journal of Fluid Mechanics*, **1999**, 401, 243-274	3.7	63
26	Microstructure of strongly sheared suspensions and its impact on rheology and diffusion. *Journal of Fluid Mechanics*, **1997**, 348, 103-139	3.7	341
25	Stokesian Dynamics simulation of Brownian suspensions. *Journal of Fluid Mechanics*, **1996**, 313, 181-207	3.7	251
24	Self-diffusion in sheared suspensions. *Journal of Fluid Mechanics*, **1996**, 312, 223-252	3.7	57
23	Brownian electrorheological fluids as a model for flocculated dispersions. *Journal of Rheology*, **1996** , 40, 1027-1056	4.1	47
22	Statistical mechanics of bubbly liquids. *Physics of Fluids*, **1996**, 8, 881-895	4.4	55
21	The temporal behaviour of the hydrodynamic force on a body in response to an abrupt change in velocity at small but finite Reynolds number. *Journal of Fluid Mechanics*, **1995**, 293, 35-46	3.7	38
20	Normal stresses in colloidal dispersions. *Journal of Rheology*, **1995**, 39, 545-566	4.1	100
19	Pressure-driven flow of suspensions: simulation and theory. *Journal of Fluid Mechanics*, **1994**, 275, 157-199	3.7	557
18	The long-time self-diffusivity in concentrated colloidal dispersions. *Journal of Fluid Mechanics*, **1994**, 272, 109-134	3.7	90
17	Macroscopic Modeling of Viscous Suspension Flows. *Applied Mechanics Reviews*, **1994**, 47, S229-S235	8.6	2
16	Response to "Comment on "The rheological behavior of concentrated colloidal dispersions"" [J. Chem. Phys. 101, 1757 (1994)]. *Journal of Chemical Physics*, **1994**, 101, 1758-1758	3.9	11
15	The rheological behavior of concentrated colloidal dispersions. *Journal of Chemical Physics*, **1993**, 99, 567-581	3.9	416
14	The hydrodynamic force on a rigid particle undergoing arbitrary time-dependent motion at small Reynolds number. *Journal of Fluid Mechanics*, **1993**, 256, 561-605	3.7	163
13	The force on a sphere in a uniform flow with small-amplitude oscillations at finite Reynolds number. *Journal of Fluid Mechanics*, **1993**, 256, 607-614	3.7	42
12	Suspensions of prolate spheroids in Stokes flow. Part 1. Dynamics of a finite number of particles in an unbounded fluid. *Journal of Fluid Mechanics*, **1993**, 251, 411-442	3.7	97

11	Suspensions of prolate spheroids in Stokes flow. Part 2. Statistically homogeneous dispersions. *Journal of Fluid Mechanics*, **1993**, 251, 443-477	3.7	72
10	Suspensions of prolate spheroids in Stokes flow. Part 3. Hydrodynamic transport properties of crystalline dispersions. *Journal of Fluid Mechanics*, **1993**, 251, 479-500	3.7	22
9	Brownian motion, hydrodynamics, and the osmotic pressure. *Journal of Chemical Physics*, **1993**, 98, 3335-3341	3.9	92
8	The force on a bubble, drop, or particle in arbitrary time-dependent motion at small Reynolds number. *Physics of Fluids A, Fluid Dynamics*, **1993**, 5, 2104-2116		75
7	Dynamic simulation of bounded suspensions of hydrodynamically interacting particles. *Journal of Fluid Mechanics*, **1989**, 200, 39-67	3.7	89
6	The effect of order on dispersion in porous media. *Journal of Fluid Mechanics*, **1989**, 200, 173-188	3.7	107
5	Anomalous diffusion due to long-range velocity fluctuations in the absence of a mean flow. *Physics of Fluids A, Fluid Dynamics*, **1989**, 1, 47-51		44
4	Dynamic simulation of hydrodynamically interacting suspensions. *Journal of Fluid Mechanics*, **1988**, 195, 257	3.7	206
3	The sedimentation rate of disordered suspensions. *Physics of Fluids*, **1988**, 31, 717		85
2	A non-local description of advection-diffusion with application to dispersion in porous media. *Journal of Fluid Mechanics*, **1987**, 180, 387	3.7	142
1	On rotating disk flow. *Journal of Fluid Mechanics*, **1987**, 175, 363	3.7	86