Arezoo Ardekani

List of Publications by Year
in descending order

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132 papers	3,361 citations	172457 29 h-index	189892 50 g-index
137 all docs	137 docs citations	137 times ranked	2719 citing authors

#	Article	IF	Citations
1	Transport and lymphatic uptake of monoclonal antibodies after subcutaneous injection. Microvascular Research, 2022, 139, 104228.	2.5	18
2	Transport and Lymphatic Uptake of Biotherapeutics Through Subcutaneous Injection. Journal of Pharmaceutical Sciences, 2022, 111, 752-768.	3.3	12
3	A consistent and conservative Phase-Field model for thermo-gas-liquid-solid flows including liquid-solid phase change. Journal of Computational Physics, 2022, 449, 110795.	3.8	17
4	Sheared Thickâ€Film Electrode Materials Containing Silver Powders with Nanoscale Surface Asperities Improve Solar Cell Performance. Advanced Energy and Sustainability Research, 2022, 3, 2100145.	5.8	1
5	A model for bubble dynamics in a protein solution. Journal of Fluid Mechanics, 2022, 935, .	3.4	3
6	Sheared Thickâ€Film Electrode Materials Containing Silver Powders with Nanoscale Surface Asperities Improve Solar Cell Performance. Advanced Energy and Sustainability Research, 2022, 3, .	5.8	0
7	A consistent and conservative Phase-Field method for multiphase incompressible flows. Journal of Computational and Applied Mathematics, 2022, 408, 114116.	2.0	7
8	Transport of complex and active fluids in porous media. Journal of Rheology, 2022, 66, 375-397.	2.6	20
9	The biomechanics of autoinjector-skin interactions during dynamic needle insertion. Journal of Biomechanics, 2022, 134, 110995.	2.1	13
10	A framework to optimize spring-driven autoinjectors. International Journal of Pharmaceutics, 2022, 617, 121588.	5.2	3
11	Uncertainty estimation for ensemble particle image velocimetry. Measurement Science and Technology, 2022, 33, 085302.	2.6	5
12	Multi-fidelity modeling to predict the rheological properties of a suspension of fibers using neural networks and Gaussian processes. Physics of Fluids, 2022, 34, .	4.0	7
13	Motile microorganisms in complex fluids. , 2022, 3, 100048.		0
14	Isogeometric analysis of subcutaneous injection of monoclonal antibodies. Computer Methods in Applied Mechanics and Engineering, 2021, 373, 113550.	6.6	15
15	An experimentally validated dynamic model for spring-driven autoinjectors. International Journal of Pharmaceutics, 2021, 594, 120008.	5.2	14
16	Hydrodynamic interactions between swimming microorganisms in a linearly density stratified fluid. Physical Review E, 2021, 103, 013109.	2.1	14
17	Monoclonal Antibody Aggregation near Silicone Oilâ€“Water Interfaces. Langmuir, 2021, 37, 1386-1398.	3.5	8
18	The Interface Motion and Hydrodynamic Shear of the Liquid Slosh in Syringes. Pharmaceutical Research, 2021, 38, 257-275.	3.5	8

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19	Numerical investigation of multistability in the unstable flow of a polymer solution through porous media. Physical Review Fluids, 2021, 6, .	2.5	27
20	Data assimilation for modeling cavitation bubble dynamics. Experiments in Fluids, 2021, 62, 1.	2.4	4
21	Unifying disparate rate-dependent rheological regimes in non-Brownian suspensions. Physical Review E, 2021, 103, 062610.	2.1	16
22	A consistent and conservative model and its scheme for N-phase-M-component incompressible flows. Journal of Computational Physics, 2021, 434, 110229.	3.8	15
23	Elastic instabilities between two cylinders confined in a channel. Physics of Fluids, 2021, 33, .	4.0	21
24	10.1063/5.0057497.1. , 2021, , .		0
25	Nearly touching spheres in a viscoelastic fluid. Physics of Fluids, 2021, 33, .	4.0	4
26	Monitoring heterogeneity in therapeutic samples using Schlieren. International Journal of Pharmaceutics, 2021, 609, 121096.	5.2	2
27	A consistent and conservative volume distribution algorithm and its applications to multiphase flows using Phase-Field models. International Journal of Multiphase Flow, 2021, 142, 103727.	3.4	12
28	Modeling cavitation bubble dynamics in an autoinjector and its implications on drug molecules. International Journal of Pharmaceutics, 2021, 608, 121062.	5.2	8
29	A poro-viscoelastic model for the subcutaneous injection of monoclonal antibodies. Journal of the Mechanics and Physics of Solids, 2021, 155, 104537.	4.8	10
30	Microswimming in viscoelastic fluids. Journal of Non-Newtonian Fluid Mechanics, 2021, 297, 104655.	2.4	47
31	New Model to Predict the Concentration-Dependent Viscosity of Monoclonal Antibody Solutions. Molecular Pharmaceutics, 2021, 18, 4385-4392.	4.6	8
32	Squirming in density-stratified fluids. Physics of Fluids, 2021, 33, .	4.0	5
33	A Bayesian approach to estimate the diffusion coefficient of Rhodamine 6G in breast cancer spheroids. Journal of Controlled Release, 2021, 340, 60-71.	9.9	1
34	Orientation instability of settling spheroids in a linearly density-stratified fluid. Journal of Fluid Mechanics, 2021, 929, .	3.4	7
35	Consistent, essentially conservative and balanced-force Phase-Field method to model incompressible two-phase flows. Journal of Computational Physics, 2020, 406, 109192.	3.8	31
36	Settling disks in a linearly stratified fluid. Journal of Fluid Mechanics, 2020, 885, .	3.4	21

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37	Effect of roughness on the rheology of concentrated non-Brownian suspensions: A numerical study. Journal of Rheology, 2020, 64, 67-80.	2.6	23
38	Process Analytical Technologies and Data Analytics for the Manufacture of Monoclonal Antibodies. Trends in Biotechnology, 2020, 38, 1169-1186.	9.3	52
39	Motion of an inertial squirmer in a density stratified fluid. Journal of Fluid Mechanics, 2020, 905, .	3.4	15
40	Towards an analytical description of active microswimmers in clean and in surfactant-covered drops. European Physical Journal E, 2020, 43, 58.	1.6	17
41	A model for a laser-induced cavitation bubble. International Journal of Multiphase Flow, 2020, 132, 103433.	3.4	47
42	Consistent and conservative scheme for incompressible two-phase flows using the conservative Allen-Cahn model. Journal of Computational Physics, 2020, 420, 109718.	3.8	29
43	A constitutive model for sheared dense suspensions of rough particles. Journal of Rheology, 2020, 64, 1107-1120.	2.6	13
44	Raman spectraâ€based deep learning: A tool to identify microbial contamination. MicrobiologyOpen, 2020, 9, e1122.	3.0	49
45	Effect of interfacial viscosities on droplet migration at low surfactant concentrations. Journal of Fluid Mechanics, 2020, 902, .	3.4	6
46	Estimation of the probability density function of random displacements from images. Physical Review E, 2020, 102, 033305.	2.1	9
47	Swimming sheet in a viscosity-stratified fluid. Journal of Fluid Mechanics, 2020, 895, .	3.4	13
48	Performance characterization of spring actuated autoinjector devices for Emgality and Aimovig. Current Medical Research and Opinion, 2020, 36, 1343-1354.	1.9	21
49	Roughness induced shear thickening in frictional non-Brownian suspensions: A numerical study. Journal of Rheology, 2020, 64, 283-297.	2.6	13
50	Isolation and mutational assessment of pancreatic cancer extracellular vesicles using a microfluidic platform. Biomedical Microdevices, 2020, 22, 23.	2.8	28
51	Motion of an arbitrarily shaped particle in a density stratified fluid. Journal of Fluid Mechanics, 2020, 890, .	3.4	8
52	Biofilms at interfaces: microbial distribution in floating films. Soft Matter, 2020, 16, 1731-1750.	2.7	16
53	Far-field flow and drift due to particles and organisms in density-stratified fluids. Physical Review E, 2020, 102, 063106.	2.1	5
54	Drag, deformation, and drift volume associated with a drop rising in a density stratified fluid. Physical Review Fluids, 2020, 5, .	2.5	10

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55	Velocity scaling and breakup criteria for jets formed due to acceleration and deceleration process. Physical Review Fluids, 2020, 5, .	2.5	5
56	Bayesian model calibration and optimization of surfactant-polymer flooding. Computational Geosciences, 2019, 23, 981-996.	2.4	12
57	Swimming sheet in a density-stratified fluid. Journal of Fluid Mechanics, 2019, 874, 210-234.	3.4	9
58	Numerical investigation of elasto-inertial particle focusing patterns in viscoelastic microfluidic devices. Journal of Non-Newtonian Fluid Mechanics, 2019, 272, 104166.	2.4	19
59	Microscale, scanning defocusing volumetric particle-tracking velocimetry. Experiments in Fluids, 2019, 60, 1.	2.4	14
60	Effect of external shear flow on sperm motility. Soft Matter, 2019, 15, 6269-6277.	2.7	13
61	Nanoparticle dispersion in porous media in viscoelastic polymer solutions. Journal of Non-Newtonian Fluid Mechanics, 2019, 268, 75-80.	2.4	18
62	Swimming sheet near a plane surfactant-laden interface. Physical Review E, 2019, 99, 033101.	2.1	8
63	A mixed upwind/central WENO scheme for incompressible two-phase flows. Journal of Computational Physics, 2019, 387, 455-480.	3.8	17
64	Hydrodynamic Interaction Enhances Colonization of Sinking Nutrient Sources by Motile Microorganisms. Frontiers in Microbiology, 2019, 10, 289.	3.5	13
65	History matching of surfactant-polymer flooding using polynomial chaos expansion. Journal of Petroleum Science and Engineering, 2019, 173, 1438-1452.	4.2	12
66	Hydrodynamic attraction of bacteria to gas and liquid interfaces. Physical Review E, 2019, 100, 062605.	2.1	23
67	Flow-induced buckling dynamics of sperm flagella. Physical Review E, 2019, 100, 063107.	2.1	12
68	Suspension of deformable particles in Newtonian and viscoelastic fluids in a microchannel. Microfluidics and Nanofluidics, 2019, 23, 1.	2.2	16
69	Unstable Displacement of Non-aqueous Phase Liquids with Surfactant and Polymer. Transport in Porous Media, 2019, 126, 455-474.	2.6	11
70	Hydrodynamics-mediated trapping of micro-swimmers near drops. Soft Matter, 2018, 14, 264-278.	2.7	28
71	Towards smart self-clearing glaucoma drainage device. Microsystems and Nanoengineering, 2018, 4, 35.	7.0	19
72	Multi-objective history matching of surfactant-polymer flooding. Fuel, 2018, 228, 418-428.	6.4	20

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73	Nutrient uptake by chemotactic bacteria in presence of rising oil drops. International Journal of Multiphase Flow, 2018, 108, 156-168.	3.4	4
74	Pore-scale statistics of flow and transport through porous media. Physical Review E, 2018, 98, 013104.	2.1	31
75	Locomotion inside a surfactant-laden drop at low surface PÃ©clet numbers. Journal of Fluid Mechanics, 2018, 851, 187-230.	3.4	15
76	Combined influence of hydrodynamics and chemotaxis in the distribution of microorganisms around spherical nutrient sources. Physical Review E, 2018, 98, 012419.	2.1	9
77	Reduced viscosity for flagella moving in a solution of long polymer chains. Physical Review Fluids, 2018, 3, .	2.5	16
78	Unsteady particle motion in an acoustic standing wave field. European Journal of Computational Mechanics, 2017, 26, 115-130.	0.6	8
79	Near wall motion of undulatory swimmers in non-Newtonian fluids. European Journal of Computational Mechanics, 2017, 26, 44-60.	0.6	11
80	Assessing the Utility of High-level CO2 Storage and Utilization Resource Estimates for CCS System Modelling. Energy Procedia, 2017, 114, 4658-4665.	1.8	7
81	Modeling of active swimmer suspensions and their interactions with the environment. Soft Matter, 2017, 13, 6033-6050.	2.7	20
82	Deformation and buckling of microcapsules in a viscoelastic matrix. Physical Review E, 2017, 96, 032603.	2.1	10
83	Motion of a model swimmer near a weakly deforming interface. Journal of Fluid Mechanics, 2017, 824, 42-73.	3.4	32
84	Fluid flows with interactive boundaries. European Journal of Computational Mechanics, 2017, 26, 1-3.	0.6	5
85	Elasto-inertial migration of deformable capsules in a microchannel. Biomicrofluidics, 2017, 11, 064113.	2.4	25
86	Effect of surfactant on bubble collisions on a free surface. Physical Review Fluids, 2017, 2, .	2.5	9
87	Transport of particles, drops, and small organisms in density stratified fluids. Physical Review Fluids, 2017, 2, .	2.5	27
88	Point force singularities outside a drop covered with an incompressible surfactant: Image systems and their applications. Physical Review Fluids, 2017, 2, .	2.5	14
89	Collective Motion of Microorganisms in a Viscoelastic Fluid. Physical Review Letters, 2016, 117, 118001.	7.8	56
90	Interaction between two drops ascending in a linearly stratified fluid. European Journal of Mechanics, B/Fluids, 2016, 60, 127-136.	2.5	18

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91	Hydrodynamic interaction of swimming organisms in an inertial regime. Physical Review E, 2016, 94, 053104.	2.1	46
92	Undulatory swimming in non-Newtonian fluids. Journal of Fluid Mechanics, 2015, 784, .	3.4	51
93	Dynamics of particle migration in channel flow of viscoelastic fluids. Journal of Fluid Mechanics, 2015, 785, 486-505.	3.4	96
94	Biogenic mixing induced by intermediate Reynolds number swimming in stratified fluids. Scientific Reports, 2015, 5, 17448.	3.3	26
95	Microfluidic fabrication of shape-tunable alginate microgels: Effect of size and impact velocity. Carbohydrate Polymers, 2015, 120, 38-45.	10.2	50
96	Fabrication of Shape Controllable Janus Alginate/pNIPAAm Microgels via Microfluidics Technique and Off-Chip Ionic Cross-Linking. Langmuir, 2015, 31, 1885-1891.	3.5	38
97	Suspension of solid particles in a density stratified fluid. Physics of Fluids, 2015, 27, .	4.0	17
98	Swimming Dynamics Near a Wall in a Weakly Elastic Fluid. Journal of Nonlinear Science, 2015, 25, 1153-1167.	2.1	33
99	Interplay of physical mechanisms and biofilm processes: review of microfluidic methods. Lab on A Chip, 2015, 15, 23-42.	6.0	133
100	Rising motion of a swarm of drops in a linearly stratified fluid. International Journal of Multiphase Flow, 2015, 69, 8-17.	3.4	19
101	Hydrodynamic interaction of microswimmers near a wall. Physical Review E, 2014, 90, 013010.	2.1	134
102	Reorientation of elongated particles at density interfaces. Physical Review E, 2014, 90, 033013.	2.1	13
103	A numerical study of the dynamics of a particle settling at moderate Reynolds numbers in a linearly stratified fluid. Journal of Fluid Mechanics, 2014, 750, 5-32.	3.4	57
104	Self-Propulsion of Immersed Objects via Natural Convection. Physical Review Letters, 2014, 112, .	7.8	18
105	Effect of solid boundaries on swimming dynamics of microorganisms in a viscoelastic fluid. Rheologica Acta, 2014, 53, 911-926.	2.4	59
106	Locomotion of microorganisms near a no-slip boundary in a viscoelastic fluid. Physical Review E, 2014, 90, 043002.	2.1	29
107	Interaction between a pair of particles settling in a stratified fluid. Physical Review E, 2013, 88, 023029.	2.1	28
108	Gyrotactic bioconvection at pycnoclines. Journal of Fluid Mechanics, 2013, 733, 245-267.	3.4	16

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109	Hydrodynamic mechanisms of cell and particle trapping in microfluidics. Biomicrofluidics, 2013, 7, 21501.	2.4	332
110	On the rising motion of a drop in stratified fluids. Physics of Fluids, 2013, 25, .	4.0	29
111	Swimming of a model ciliate near an air-liquid interface. Physical Review E, 2013, 87, 063010.	2.1	15
112	Interaction Between a Pair of Drops Ascending in a Linearly Stratified Fluid. , 2013, , .		0
113	Low-Reynolds-number swimming at pycnoclines. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3856-3861.	7.1	77
114	Bacterial aggregation and biofilm formation in a vortical flow. Biomicrofluidics, 2012, 6, 44114.	2.4	79
115	Inertial squirmer. Physics of Fluids, 2012, 24, .	4.0	73
116	Vertical Migration of the Small Organisms in a Stratified Fluid. , 2012, , .		0
117	Unsteady swimming of small organisms. Journal of Fluid Mechanics, 2012, 702, 286-297.	3.4	62
118	Emergence of a limit cycle for swimming microorganisms in a vortical flow of a viscoelastic fluid. Physical Review E, 2012, 85, 056309.	2.1	27
119	10.1063/1.4771407.1. , 2012, , .		1
120	Dynamics of bead formation, filament thinning and breakup in weakly viscoelastic jets. Journal of Fluid Mechanics, 2010, 665, 46-56.	3.4	90
121	Stratlets: Low Reynolds Number Point-Force Solutions in a Stratified Fluid. Physical Review Letters, 2010, 105, 084502.	7.8	60
122	Particle-wall collision in a viscoelastic fluid. Journal of Fluid Mechanics, 2009, 633, 475-483.	3.4	30
123	Instability of stationary liquid sheets. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4992-4996.	7.1	7
124	Deformation of a droplet in a particulate shear flow. Physics of Fluids, 2009, 21, .	4.0	12
125	Collision of multi-particle and general shape objects in a viscous fluid. Journal of Computational Physics, 2008, 227, 10094-10107.	3.8	53
126	Numerical investigation of particleâ€“particle and particleâ€“wall collisions in a viscous fluid. Journal of Fluid Mechanics, 2008, 596, 437-466.	3.4	91

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127	Two spheres in a free stream of a second-order fluid. Physics of Fluids, 2008, 20, .	4.0	30
128	Particle-Wall Interaction in a Viscoelastic Fluid. AIP Conference Proceedings, 2008, , .	0.4	0
129	Modified DLM Method for Finite-Volume Simulation of Particle Flow. , 2007, , .		0
130	Motion of a sphere normal to a wall in a second-order fluid. Journal of Fluid Mechanics, 2007, 587, 163-172.	3.4	18
131	Unsteady motion of two solid spheres in Stokes flow. Physics of Fluids, 2006, 18, 103306.	4.0	46
132	Spatiotemporal Measurement of Concentration-Dependent Diffusion Coefficient . Physics of Fluids, 0, , .	4.0	2