

Christian Wagner

List of Publications by Year in descending order

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120
papers

4,014
citations

109264

35
h-index

138417

58
g-index

125
all docs

125
docs citations

125
times ranked

3786
citing authors

#	ARTICLE	IF	CITATIONS
1	Red blood cell shape transitions and dynamics in time-dependent capillary flows. <i>Biophysical Journal</i> , 2022, 121, 23-36.	0.2	20
2	Erythrocyte Sedimentation: Collapse of a High-Volume-Fraction Soft-Particle Gel. <i>Physical Review Letters</i> , 2022, 128, 088101.	2.9	12
3	Erythrocyte sedimentation: Effect of aggregation energy on gel structure during collapse. <i>Physical Review E</i> , 2022, 105, 024610.	0.8	11
4	Transient receptor potential channel vanilloid type 2 in red cells of cannabis consumer. <i>American Journal of Hematology</i> , 2022, 97, .	2.0	4
5	In Vitro Erythropoiesis at Different pO ₂ Induces Adaptations That Are Independent of Prior Systemic Exposure to Hypoxia. <i>Cells</i> , 2022, 11, 1082.	1.8	3
6	Continuous Percoll Gradient Centrifugation of Erythrocytes – Explanation of Cellular Bands and Compromised Age Separation. <i>Cells</i> , 2022, 11, 1296.	1.8	6
7	Erysense, a Lab-on-a-Chip-Based Point-of-Care Device to Evaluate Red Blood Cell Flow Properties With Multiple Clinical Applications. <i>Frontiers in Physiology</i> , 2022, 13, 884690.	1.3	14
8	A precise nanoparticle quantification approach using microfluidics and single-particle tracking. <i>Journal of Drug Delivery Science and Technology</i> , 2022, 75, 103579.	1.4	0
9	Optimizing pressure-driven pulsatile flows in microfluidic devices. <i>Lab on A Chip</i> , 2021, 21, 2605-2613.	3.1	14
10	The TRPV2 channel mediates Ca ²⁺ influx and the δ^9 -THC-dependent decrease in osmotic fragility in red blood cells. <i>Haematologica</i> , 2021, 106, 2246-2250.	1.7	19
11	Lingering Dynamics in Microvascular Blood Flow. <i>Biophysical Journal</i> , 2021, 120, 432-439.	0.2	12
12	A deep learning-based concept for high throughput image flow cytometry. <i>Applied Physics Letters</i> , 2021, 118, 123701.	1.5	3
13	Vortical flow structures induced by red blood cells in capillaries. <i>Microcirculation</i> , 2021, 28, e12693.	1.0	6
14	Acanthocyte Sedimentation Rate as a Diagnostic Biomarker for Neuroacanthocytosis Syndromes: Experimental Evidence and Physical Justification. <i>Cells</i> , 2021, 10, 788.	1.8	18
15	Red blood cell phenotyping from 3D confocal images using artificial neural networks. <i>PLoS Computational Biology</i> , 2021, 17, e1008934.	1.5	26
16	The Erythrocyte Sedimentation Rate and Its Relation to Cell Shape and Rigidity of Red Blood Cells from Chorea-Acanthocytosis Patients in an Off-Label Treatment with Dasatinib. <i>Biomolecules</i> , 2021, 11, 727.	1.8	21
17	Rare Anemias: Are Their Names Just Smoke and Mirrors?. <i>Frontiers in Physiology</i> , 2021, 12, 690604.	1.3	1
18	Imaging Erythrocyte Sedimentation in Whole Blood. <i>Frontiers in Physiology</i> , 2021, 12, 729191.	1.3	7

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19	In Vitro Red Blood Cell Segregation in Sickle Cell Anemia. <i>Frontiers in Physics</i> , 2021, 9, .	1.0	2
20	Hybrid Erythrocyte Liposomes: Functionalized Red Blood Cell Membranes for Molecule Encapsulation. <i>Advanced Biology</i> , 2020, 4, e1900185.	3.0	17
21	Cross-sectional focusing of red blood cells in a constricted microfluidic channel. <i>Soft Matter</i> , 2020, 16, 534-543.	1.2	18
22	Assessment of Fibrinogen Macromolecules Interaction with Red Blood Cells Membrane by Means of Laser Aggregometry, Flow Cytometry, and Optical Tweezers Combined with Microfluidics. <i>Biomolecules</i> , 2020, 10, 1448.	1.8	15
23	Effect of Red Blood Cell Aging In Vivo on Their Aggregation Properties In Vitro: Measurements with Laser Tweezers. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 7581.	1.3	15
24	The Evolution of Erythrocytes Becoming Red in Respect to Fluorescence. <i>Frontiers in Physiology</i> , 2019, 10, 753.	1.3	8
25	Macro- and Microrheological Properties of Mucus Surrogates in Comparison to Native Intestinal and Pulmonary Mucus. <i>Biomacromolecules</i> , 2019, 20, 3504-3512.	2.6	45
26	Glutaraldehyde – A Subtle Tool in the Investigation of Healthy and Pathologic Red Blood Cells. <i>Frontiers in Physiology</i> , 2019, 10, 514.	1.3	57
27	Statistics of Colloidal Suspensions Stirred by Microswimmers. <i>Physical Review Letters</i> , 2019, 122, 148101.	2.9	19
28	Swimming of bacterium <i>Bacillus subtilis</i> with multiple bundles of flagella. <i>Soft Matter</i> , 2019, 15, 10029-10034.	1.2	4
29	Numerical – experimental observation of shape bistability of red blood cells flowing in a microchannel. <i>Soft Matter</i> , 2018, 14, 2032-2043.	1.2	59
30	How viscoelastic is human blood plasma?. <i>Soft Matter</i> , 2018, 14, 4238-4251.	1.2	83
31	Joint Symposium Rheology – 360 th of the Belgian Group of Rheology, German Rheological Society, and ProcessNet-Subject Division Rheology. <i>Applied Rheology</i> , 2018, 28, 53-53.	3.5	0
32	Determination of the rheological properties of Matrigel for optimum seeding conditions in microfluidic cell cultures. <i>AIP Advances</i> , 2018, 8, .	0.6	28
33	Flagellar number governs bacterial spreading and transport efficiency. <i>Science Advances</i> , 2018, 4, eaar6425.	4.7	31
34	Vesicle dynamics in confined steady and harmonically modulated Poiseuille flows. <i>Physical Review E</i> , 2018, 98, .	0.8	5
35	Dextran adsorption onto red blood cells revisited: single cell quantification by laser tweezers combined with microfluidics. <i>Biomedical Optics Express</i> , 2018, 9, 2755.	1.5	18
36	Effect of spectrin network elasticity on the shapes of erythrocyte doublets. <i>Soft Matter</i> , 2018, 14, 6278-6289.	1.2	26

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37	Antimargination of Microparticles and Platelets in the Vicinity of Branching Vessels. Biophysical Journal, 2018, 115, 411-425.	0.2	28
38	Geometric scaling of elastic instabilities in the Taylor-Couette geometry: A theoretical, experimental and numerical study. Journal of Non-Newtonian Fluid Mechanics, 2018, 259, 78-90.	1.0	11
39	Classification of red blood cell shapes in flow using outlier tolerant machine learning. PLoS Computational Biology, 2018, 14, e1006278.	1.5	62
40	A Model for the Transient Subdiffusive Behavior of Particles in Mucus. Biophysical Journal, 2017, 112, 172-179.	0.2	25
41	Gamma globulins-induced interaction between two red blood cells: forces measurement with optical tweezers. , 2017, , .		0
42	Assessment of the "cross-bridge" induced interaction of red blood cells by optical trapping combined with microfluidics. Journal of Biomedical Optics, 2017, 22, 091516.	1.4	19
43	A foam model highlights the differences of the macro- and microrheology of respiratory horse mucus. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 71, 216-222.	1.5	13
44	Optical tweezers for measuring the interaction of the two single red blood cells in flow condition. , 2017, , .		1
45	The Molecular Structure of Human Red Blood Cell Membranes from Highly Oriented, Solid Supported Multi-Lamellar Membranes. Scientific Reports, 2017, 7, 39661.	1.6	53
46	The buckling instability of aggregating red blood cells. Scientific Reports, 2017, 7, 7928.	1.6	36
47	In-phase and anti-phase flagellar synchronization by waveform compliance and basal coupling. New Journal of Physics, 2017, 19, 113052.	1.2	25
48	3D tomography of cells in micro-channels. Applied Physics Letters, 2017, 111, .	1.5	38
49	Hydrodynamic pairing of soft particles in a confined flow. Physical Review Fluids, 2017, 2, .	1.0	16
50	Deconvolution of time series in the laboratory. American Journal of Physics, 2016, 84, 752-763.	0.3	3
51	Load Response of the Flagellar Beat. Physical Review Letters, 2016, 117, 258101.	2.9	40
52	Reorientation of a single red blood cell during sedimentation. Journal of Fluid Mechanics, 2016, 806, 102-128.	1.4	15
53	Comparing the impact of an acute exercise bout on plasma amino acid composition, intraerythrocytic Ca ²⁺ handling, and red cell function in athletes and untrained subjects. Cell Calcium, 2016, 60, 235-244.	1.1	25
54	The ring phenomenon of diluted blood droplets. International Journal of Legal Medicine, 2016, 130, 731-736.	1.2	20

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55	Different macro- and micro-rheological properties of native porcine respiratory and intestinal mucus. <i>International Journal of Pharmaceutics</i> , 2016, 510, 164-167.	2.6	13
56	Clusters of red blood cells in microcapillary flow: hydrodynamic versus macromolecule induced interaction. <i>Soft Matter</i> , 2016, 12, 8235-8245.	1.2	24
57	Ru/Al Multilayers Integrate Maximum Energy Density and Ductility for Reactive Materials. <i>Scientific Reports</i> , 2016, 6, 19535.	1.6	18
58	Size-Limited Penetration of Nanoparticles into Porcine Respiratory Mucus after Aerosol Deposition. <i>Biomacromolecules</i> , 2016, 17, 1536-1542.	2.6	114
59	On the rheology of red blood cell suspensions with different amounts of dextran: separating the effect of aggregation and increase in viscosity of the suspending phase. <i>Rheologica Acta</i> , 2016, 55, 477-483.	1.1	16
60	Is there a role of C-reactive protein in red blood cell aggregation?. <i>International Journal of Laboratory Hematology</i> , 2015, 37, 474-482.	0.7	20
61	Impact height and wall distance in bloodstain pattern analysis—what patterns of round bloodstains can tell us. <i>International Journal of Legal Medicine</i> , 2015, 129, 133-140.	1.2	7
62	Single particles accelerate final stages of capillary break-up. <i>Europhysics Letters</i> , 2015, 110, 64002.	0.7	16
63	PS3-2 Orientation angle of a single red blood cell during sedimentation(PS3: Poster Short) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 Emerging Science and Technology in Biomechanics, 2015, 2015.8, 263.	0.0	0
64	Vesicle dynamics in a confined Poiseuille flow: From steady state to chaos. <i>Physical Review E</i> , 2014, 90, 033011.	0.8	33
65	Sliding Friction on Wet and Dry Sand. <i>Physical Review Letters</i> , 2014, 112, 175502.	2.9	88
66	Serpentine channels: micro-rheometers for fluid relaxation times. <i>Lab on A Chip</i> , 2014, 14, 351-358.	3.1	67
67	Spontaneous Formation of Nanopatterns in Velocity-Dependent Dip-Coated Organic Films: From Dragonflies to Stripes. <i>ACS Nano</i> , 2014, 8, 9954-9963.	7.3	30
68	The plasma protein fibrinogen stabilizes clusters of red blood cells in microcapillary flows. <i>Scientific Reports</i> , 2014, 4, 4348.	1.6	107
69	Wide band Fresnel super-resolution applied to capillary breakup of viscoelastic fluids. <i>Experiments in Fluids</i> , 2013, 54, 1.	1.1	2
70	Elasto-inertial turbulence. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 10557-10562.	3.3	174
71	Drop Formation in Non-Newtonian Fluids. <i>Physical Review Letters</i> , 2013, 110, 034501.	2.9	62
72	Rheology of Human Blood Plasma: Viscoelastic Versus Newtonian Behavior. <i>Physical Review Letters</i> , 2013, 110, 078305.	2.9	221

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73	Living fluids. Comptes Rendus Physique, 2013, 14, 447-450.	0.3	4
74	Red cell investigations: Art and artefacts. Blood Reviews, 2013, 27, 91-101.	2.8	74
75	Faraday Waves under Time-Reversed Excitation. Physical Review Letters, 2013, 110, 094503.	2.9	3
76	Quantification of Depletion-Induced Adhesion of Red Blood Cells. Physical Review Letters, 2013, 110, 018102.	2.9	61
77	Nonlinear Elastic Instability in Channel Flows at Low Reynolds Numbers. Physical Review Letters, 2013, 110, 174502.	2.9	147
78	Aggregation of red blood cells: From rouleaux to clot formation. Comptes Rendus Physique, 2013, 14, 459-469.	0.3	69
79	Effective viscosity of non-gravitactic Chlamydomonas Reinhardtii microswimmer suspensions. Europhysics Letters, 2013, 101, 54004.	0.7	50
80	Applicability of Different Hydraulic Parameters to Describe Soil Detachment in Eroding Rills. PLoS ONE, 2013, 8, e64861.	1.1	20
81	Bouncing of polymeric droplets on liquid interfaces. Physical Review E, 2012, 86, 066314.	0.8	4
82	The final stages of capillary break-up of polymer solutions. Physics of Fluids, 2012, 24, .	1.6	96
83	Visualization of the flow profile inside a thinning filament during capillary breakup of a polymer solution via particle image velocimetry and particle tracking velocimetry. Physics of Fluids, 2012, 24, .	1.6	18
84	Dissipation in quasistatically sheared wet and dry sand under confinement. Physical Review E, 2012, 86, 020103.	0.8	10
85	Optical tweezers reveal relationship between microstructure and nanoparticle penetration of pulmonary mucus. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18355-18360.	3.3	160
86	Lysophosphatidic acid induced red blood cell aggregation in vitro. Bioelectrochemistry, 2012, 87, 89-95.	2.4	47
87	Polymer solutions in co-rotating Taylor-Couette flow without vorticity. Physica A: Statistical Mechanics and Its Applications, 2012, 391, 464-473.	1.2	1
88	Joint Focus Session Rheology of the German Rheological Society (DRG) together with the German Physical Society (DPG). Applied Rheology, 2012, 22, 213-213.	3.5	0
89	Calcium Signalling in Red Blood Cells. Biophysical Journal, 2011, 100, 518a.	0.2	0
90	Stimulation of human red blood cells leads to Ca ²⁺ -mediated intercellular adhesion. Cell Calcium, 2011, 50, 54-61.	1.1	66

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91	Regulation of Phosphatidylserine Exposure in Red Blood Cells. Cellular Physiology and Biochemistry, 2011, 28, 847-856.	1.1	111
92	Is there a relation between the relaxation time measured in CaBER experiments and the first normal stress coefficient?. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1265-1274.	1.0	50
93	Dynamics of polymers in elongational flow studied by the neutron spin-echo technique. Physica B: Condensed Matter, 2010, 405, 3690-3693.	1.3	2
94	Rheologentagung 2009 Berlin. Applied Rheology, 2009, 19, 179-179.	3.5	0
95	Viscoelastic surface instabilities. Comptes Rendus Physique, 2009, 10, 712-727.	0.3	18
96	Direct Measurement of Shear-Induced Cross-Correlations of Brownian Motion. Physical Review Letters, 2009, 103, 230602.	2.9	41
97	Blistering Pattern and Formation of Nanofibers in Capillary Thinning of Polymer Solutions. Physical Review Letters, 2008, 100, 164502.	2.9	105
98	Measuring the anomalous dispersion branch of surface waves on ferrofluids. Europhysics Letters, 2007, 78, 44003.	0.7	9
99	Molecular configurations in the droplet detachment process of a complex liquid. Physical Review E, 2007, 75, 051805.	0.8	6
100	Microrheology and Rheological Phenomena in Microfluidics 2006 Workshop of the German Rheological Society (DRG). Applied Rheology, 2007, 17, 42-43.	3.5	0
101	Delay of disorder by diluted polymers. Europhysics Letters, 2006, 75, 441-447.	0.7	7
102	Measuring the transverse magnetization of rotating ferrofluids. Physical Review E, 2006, 73, 036302.	0.8	37
103	Turbulent drag reduction by polymers. Journal of Physics Condensed Matter, 2005, 17, S1195-S1202.	0.7	35
104	Spatiotemporal characterization of interfacial Faraday waves by means of a light absorption technique. Physical Review E, 2005, 72, 036209.	0.8	35
105	Droplet Detachment and Satellite Bead Formation in Viscoelastic Fluids. Physical Review Letters, 2005, 95, 164504.	2.9	121
106	Faraday Instability in a Surface-Frozen Liquid. Physical Review Letters, 2005, 94, 184504.	2.9	16
107	Spatio-temporal Fourier analysis of Faraday surface wave patterns on a two-liquid interface. Europhysics Letters, 2004, 65, 857-863.	0.7	10
108	Pattern formation at the bicritical point of the Faraday instability. Physical Review E, 2003, 68, 066204.	0.8	33

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109	Intrinsic Route to Melt Fracture in Polymer Extrusion: A Weakly Nonlinear Subcritical Instability of Viscoelastic Poiseuille Flow. <i>Physical Review Letters</i> , 2003, 90, 024502.	2.9	57
110	Experimental Evidence for an Intrinsic Route to Polymer Melt Fracture Phenomena: A Nonlinear Instability of Viscoelastic Poiseuille Flow. <i>Physical Review Letters</i> , 2003, 90, 114502.	2.9	52
111	Turbulent-drag reduction of polyelectrolyte solutions: Relation with the elongational viscosity. <i>Europhysics Letters</i> , 2003, 64, 823-829.	0.7	36
112	Phase relaxation of Faraday surface waves. <i>Physical Review E</i> , 2002, 65, 066304.	0.8	2
113	Stick-slip instability for viscous fingering in a gel. <i>Europhysics Letters</i> , 2002, 58, 524-529.	0.7	5
114	Amplitude measurements of Faraday waves. <i>Physical Review E</i> , 2001, 63, 036305.	0.8	20
115	Comment on "Superlattice, Rhombus, Square, and Hexagonal Standing Waves in Magnetically Driven Ferrofluid Surface". <i>Physical Review Letters</i> , 2001, 87, .	2.9	1
116	Measuring the rotational viscosity of ferrofluids without shear flow. <i>Physical Review E</i> , 2000, 61, R2196-R2199.	0.8	49
117	Crossover from a square to a hexagonal pattern in Faraday surface waves. <i>Physical Review E</i> , 2000, 62, R33-R36.	0.8	23
118	Faraday Waves on a Viscoelastic Liquid. <i>Physical Review Letters</i> , 1999, 83, 308-311.	2.9	83
119	Analytic Stability Theory for Faraday Waves and the Observation of the Harmonic Surface Response. <i>Physical Review Letters</i> , 1997, 78, 2357-2360.	2.9	124
120	Do fluorocarbons substantially increase transdermal oxygen delivery? A proof-of-principle study in mice. <i>Open Research Europe</i> , 0, 1, 39.	2.0	0