Sangho Kim

List of Publications by Year
in descending order

92 papers	1,759 citations	331538 21 h-index	302012 39 g-index
92 all docs	92 docs citations	92 times ranked	1864 citing authors

#	Article	IF	Citations
1	Mfsd2b is essential for the sphingosine-1-phosphate export in erythrocytes and platelets. Nature, 2017, 550, 524-528.	13.7	189
2	Temporal and spatial variations of cell-free layer width in arterioles. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H1526-H1535.	1.5	139
3	The cell-free layer in microvascular blood flow. Biorheology, 2009, 46, 181-189.	1.2	138
4	A new method for blood viscosity measurement. Journal of Non-Newtonian Fluid Mechanics, 2000, 94, 47-56.	1.0	66
5	A Computer-Based Method for Determination of the Cell-Free Layer Width in Microcirculation. Microcirculation, 2006, 13, 199-207.	1.0	66
6	A method of isolating surface tension and yield stress effects in a U-shaped scanning capillary-tube viscometer using a Casson model. Journal of Non-Newtonian Fluid Mechanics, 2002, 103, 205-219.	1.0	63
7	Microfluidic device for sheathless particle focusing and separation using a viscoelastic fluid. Journal of Chromatography A, 2015, 1406, 244-250.	1.8	60
8	Effect of erythrocyte aggregation and flow rate on cell-free layer formation in arterioles. American Journal of Physiology - Heart and Circulatory Physiology, 2010, 298, H1870-H1878.	1.5	59
9	Numerical simulation of patient-specific left ventricular model with both mitral and aortic valves by FSI approach. Computer Methods and Programs in Biomedicine, 2014, 113, 474-482.	2.6	59
10	Aggregate formation of erythrocytes in postcapillary venules. American Journal of Physiology - Heart and Circulatory Physiology, 2005, 288, H584-H590.	1.5	58
11	A review of numerical methods for red blood cell flow simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 130-140.	0.9	48
12	High-throughput malaria parasite separation using a viscoelastic fluid for ultrasensitive PCR detection. Lab on A Chip, 2016, 16, 2086-2092.	3.1	48
13	Effect of erythrocyte aggregation at normal human levels on functional capillary density in rat spinotrapezius muscle. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 290, H941-H947.	1.5	46
14	Hybrid capillary-inserted microfluidic device for sheathless particle focusing and separation in viscoelastic flow. Biomicrofluidics, 2015, 9, 064117.	1.2	41
15	Effect of Cell-Free Layer Variation on Arteriolar Wall Shear Stress. Annals of Biomedical Engineering, 2011, 39, 359-366.	1.3	32
16	Spatio-temporal variations in cell-free layer formation near bifurcations of small arterioles. Microvascular Research, 2012, 83, 118-125.	1.1	29
17	Determination of rheological properties of whole blood with a scanning capillary-tube rheometer using constitutive models. Journal of Mechanical Science and Technology, 2009, 23, 1718-1726.	0.7	24
18	A scanning dual-capillary-tube viscometer. Review of Scientific Instruments, 2000, 71, 3188-3192.	0.6	23

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19	Two-stage sample-to-answer system based on nucleic acid amplification approach for detection of malaria parasites. Biosensors and Bioelectronics, 2016, 82, 1-8.	5.3	23
20	Numerical investigation of blood flow in three-dimensional porcine left anterior descending artery with various stenoses. Computers in Biology and Medicine, 2014, 47, 130-138.	3.9	22
21	Cellâ€Free Layer Formation in Small Arterioles at Pathological Levels of Erythrocyte Aggregation. Microcirculation, 2011, 18, 541-551.	1.0	21
22	Continuous Separation of White Blood Cells From Whole Blood Using Viscoelastic Effects. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 1431-1437.	2.7	21
23	Plasma Separation from Blood: The 'Lab-on-a-Chip' Approach. Critical Reviews in Biomedical Engineering, 2009, 37, 517-529.	0.5	20
24	Red blood cells in retinal vascular disorders. Blood Cells, Molecules, and Diseases, 2016, 56, 53-61.	0.6	19
25	Lipid-Oriented Live-Cell Distinction of B and T Lymphocytes. Journal of the American Chemical Society, 2021, 143, 5836-5844.	6.6	19
26	Temporal variations of the cell-free layer width may enhance NO bioavailability in small arterioles: Effects of erythrocyte aggregation. Microvascular Research, 2011, 81, 303-312.	1.1	18
27	Effect of deformability difference between two erythrocytes on their aggregation. Physical Biology, 2013, 10, 036001.	0.8	18
28	Monolithic polymeric porous superhydrophobic material with pneumatic plastron stabilization for functionally durable drag reduction in blood-contacting biomedical applications. NPG Asia Materials, 2021, 13, .	3.8	18
29	Numerical Modeling of Intraventricular Flow during Diastole after Implantation of BMHV. PLoS ONE, 2015, 10, e0126315.	1.1	17
30	Near-Wall Migration Dynamics of Erythrocytes in Vivo: Effects of Cell Deformability and Arteriolar Bifurcation. Frontiers in Physiology, 2017, 8, 963.	1.3	16
31	A comparative study of histogram-based thresholding methods for the determination of cell-free layer width in small blood vessels. Physiological Measurement, 2010, 31, N61-N70.	1.2	15
32	Effect of Erythrocyte Aggregation on Spatiotemporal Variations in Cellâ€Free Layer Formation Near on Arteriolar Bifurcation. Microcirculation, 2013, 20, 440-453.	1.0	15
33	Vibration motor-integrated low-cost, miniaturized system for rapid quantification of red blood cell aggregation. Lab on A Chip, 2020, 20, 3930-3937.	3.1	14
34	Modulation of NO Bioavailability by Temporal Variation of the Cell-Free Layer Width in Small Arterioles. Annals of Biomedical Engineering, 2011, 39, 1012-1023.	1.3	13
35	An automated method for cell-free layer width determination in small arterioles. Physiological Measurement, 2011, 32, N1-N12.	1.2	13
36	The effect of the entry and re-entry size in the aortic dissection: a two-way fluidâ€"structure interaction simulation. Biomechanics and Modeling in Mechanobiology, 2020, 19, 2643-2656.	1.4	13

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37	The effect of dye concentration on the viscosity of water in a scanning capillary-tube viscometer. Journal of Non-Newtonian Fluid Mechanics, 2003, 111, 63-68.	1.0	12
38	Contributions of collision rate and collision efficiency to erythrocyte aggregation in postcapillary venules at low flow rates. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H1947-H1954.	1.5	12
39	Alteration patterns of trabecular bone microarchitectural characteristics induced by osteoarthritis over time. Clinical Interventions in Aging, 2012, 7, 303.	1.3	12
40	Two-dimensional strain-hardening membrane model for large deformation behavior of multiple red blood cells in high shear conditions. Theoretical Biology and Medical Modelling, 2014, 11, 19.	2.1	12
41	Alteration of Blood Flow in a Venular Network by Infusion of Dextran 500: Evaluation with a Laser Speckle Contrast Imaging System. PLoS ONE, 2015, 10, e0140038.	1.1	12
42	Effect of dextran on rheological properties of rat blood. Journal of Mechanical Science and Technology, 2009, 23, 868-873.	0.7	11
43	Vortex dynamics of veno-arterial extracorporeal circulation: A computational fluid dynamics study. Physics of Fluids, 2021, 33, .	1.6	11
44	In Vitro Investigation of the Hemodynamics of Transcatheter Heterotopic Valves Implantation in the Cavo-Atrial Junction. Artificial Organs, 2015, 39, 803-814.	1.0	10
45	Recovery of cell-free layer and wall shear stress profile symmetry downstream of an arteriolar bifurcation. Microvascular Research, 2016, 106, 14-23.	1.1	10
46	Assessment of transient changes in oxygen diffusion of single red blood cells using a microfluidic analytical platform. Communications Biology, 2021, 4, 271.	2.0	10
47	Red blood cell velocity profiles in skeletal muscle venules at low flow rates are described by the Casson model. Clinical Hemorheology and Microcirculation, 2007, 36, 217-33.	0.9	10
48	Effect of uneven red cell influx on formation of cell-free layer in small venules. Microvascular Research, 2014, 92, 19-24.	1.1	9
49	Two-dimensional transient model for prediction of arteriolar NO/O2 modulation by spatiotemporal variations in cell-free layer width. Microvascular Research, 2015, 97, 88-97.	1.1	9
50	A D-Shaped Bileaflet Bioprosthesis which Replicates Physiological Left Ventricular Flow Patterns. PLoS ONE, 2016, 11, e0156580.	1.1	8
51	Two-phase model for prediction of cell-free layer width in blood flow. Microvascular Research, 2013, 85, 68-76.	1.1	7
52	Effect of erythrocyte aggregation at pathological levels on NO/O2 transport in small arterioles. Clinical Hemorheology and Microcirculation, 2015, 59, 163-175.	0.9	7
53	Effects of cell-free layer formation on NO/O2 bioavailability in small arterioles. Microvascular Research, 2012, 83, 168-177.	1.1	6
54	Erythrocyte aggregation may promote uneven spatial distribution of NO/O in the downstream vessel of arteriolar bifurcations. Journal of Biomechanics, 2016, 49, 2241-2248.	0.9	6

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55	Sequential venous anastomosis design to enhance patency of arterio-venous grafts for hemodialysis. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 85-93.	0.9	6
56	Altered red blood cell deformabilityâ€"A novel hypothesis for retinal microangiopathy in diabetic retinopathy. Microcirculation, 2020, 27, e12649.	1.0	6
57	Physiological Significance of Cell-Free Layer and Experimental Determination of its Width in Microcirculatory Vessels. Lecture Notes in Computational Vision and Biomechanics, 2014, , 75-87.	0.5	6
58	Computational fluid dynamics of aggregating red blood cells in postcapillary venules. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 385-397.	0.9	5
59	Influence of erythrocyte aggregation at pathological levels on cell-free marginal layer in a narrow circular tube. Clinical Hemorheology and Microcirculation, 2016, 61, 445-457.	0.9	5
60	Symmetry recovery of cell-free layer after bifurcations of small arterioles in reduced flow conditions: effect of RBC aggregation. American Journal of Physiology - Heart and Circulatory Physiology, 2016, 311, H487-H497.	1.5	5
61	Numerical investigation on red blood cell dynamics in microflow: Effect of cell deformability. Clinical Hemorheology and Microcirculation, 2017, 65, 105-117.	0.9	5
62	Using a reducedâ€order model to investigate the effect of the heart rate on the aortic dissection. International Journal for Numerical Methods in Biomedical Engineering, 2022, 38, e3596.	1.0	5
63	Computational fluid modeling and performance analysis of a bidirectional rotating perfusion culture system. Biotechnology Progress, 2013, 29, 1002-1012.	1.3	4
64	Numerical Simulations of Deformation and Aggregation of Red Blood Cells in Shear Flow. Critical Reviews in Biomedical Engineering, 2013, 41, 425-434.	0.5	4
65	Nanowire Electrodes Integrated on Tip of Microwire for Peripheral Nerve Stimulation. Journal of Microelectromechanical Systems, 2017, 26, 921-925.	1.7	4
66	Hemodynamic assessment of extra-cardiac tricuspid valves using particle image velocimetry. Medical Engineering and Physics, 2017, 50, 1-11.	0.8	4
67	A microfluidic sensor for human hydration level monitoring. , 2011, , .		3
68	Study of time-dependent characteristics of a syllectogram in the presence of aggregation inhibition. International Journal of Precision Engineering and Manufacturing, 2012, 13, 421-428.	1.1	3
69	Biomimetic Precapillary Flow Patterns for Enhancing Blood Plasma Separation: A Preliminary Study. Sensors, 2016, 16, 1543.	2.1	3
70	A biomimetic bi-leaflet mitral prosthesis with enhanced physiological left ventricular swirl restorative capability. Experiments in Fluids, 2016, 57, 1.	1.1	3
71	Multiscale modeling of a modified <scp>Blalockâ€Taussig</scp> surgery in a <scp>patientâ€specific</scp> tetralogy of Fallot. International Journal for Numerical Methods in Biomedical Engineering, 2021, 37, e3436.	1.0	2
72	Application of refutas model to estimate erythrocyte viscosity in a dextran solution. Macromolecular Research, 2012, 20, 887-890.	1.0	1

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73	Changes in microarchitectural characteristics at the tibial epiphysis induced by collagen-induced rheumatoid arthritis over time. Clinical Interventions in Aging, 2012, 7, 373.	1.3	1
74	Effect of low molecular weight dextrans on erythrocyte aggregation. Macromolecular Research, 2013, 21, 1042-1044.	1.0	1
75	The application of biomimicry to a mechanical valve design for the abatement of flow instabilities. European Journal of Mechanics, B/Fluids, 2019, 74, 19-33.	1.2	1
76	An in vitro investigation into the hemodynamic effects of orifice geometry and position on left ventricular vortex formation and turbulence intensity. Artificial Organs, 2020, 44, e520-e531.	1.0	1
77	Rapid one-step in situ synthesis of carbon nanoparticles with cellulosic paper for biosensing. Sensors and Actuators B: Chemical, 2021, 339, 129849.	4.0	1
78	Computational Simulation of NO/O2 Transport in Arterioles: Role of Cell-Free Layer. Lecture Notes in Computational Vision and Biomechanics, 2014, , 89-100.	0.5	1
79	Optically Left-Handed Nanopearl Beads with Inductance-Capacitance Circuits at Visibleâ€"Near-Infrared Frequencies Based on Scalable Methods. ACS Applied Materials & Interfaces, 2022, 14, 7121-7129.	4.0	1
80	Effect of dextran 500 on radial migration of erythrocytes in postcapillary venules at low flow rates. MCB Molecular and Cellular Biomechanics, 2009, 6, 83-91.	0.3	1
81	Special Issue on Research in Biomedical Engineering at National University of Singapore: At the forefront of research in 21st Century. Critical Reviews in Biomedical Engineering, 2013, 41, vii.	0.5	0
82	Visualization and Quantification of the Cell-free Layer in Arterioles of the Rat Cremaster Muscle. Journal of Visualized Experiments, 2016, , .	0.2	0
83	CONTRIBUTIONS OF COLLISION RATE AND COLLISION EFFICIENCY TO ERYTHROCYTE AGGREGATION IN POSTCAPILLARY VENULES AT LOW FLOW RATES(3D2 Biorheology & Microcirculation I). The Proceedings of the Asian Pacific Conference on Biomechanics Emerging Science and Technology in Biomechanics, 2007, 2007.3, S229.	0.0	0
84	Effect of Dextran 500 on radial migration of erythrocytes in postcapillary venules at low flow rates. FASEB Journal, 2008, 22, 39-39.	0.2	0
85	Effect of erythrocyte aggregation and flow rate on temporal variation of cellâ€free layer width in arterioles. FASEB Journal, 2009, 23, 948.7.	0.2	0
86	Effects of cellâ€free layer width and its variability on wall shear stress in arterioles. FASEB Journal, 2009, 23, .	0.2	0
87	Study of timeâ€dependent characteristics of a syllectrogram in the presence of aggregation inhibition. FASEB Journal, 2010, 24, 1065.2.	0.2	0
88	Numerical simulation of timeâ€dependent NO/O2 transport in arterioles. FASEB Journal, 2012, 26, 860.7.	0.2	0
89	Numerical simulation of blood flow with different red blood cell deformability. FASEB Journal, 2012, 26, 859.12.	0.2	0
90	Red Blood Cell Deformability Distribution as a Risk Marker for Diabetic Microangiopathy. FASEB Journal, 2018, 32, 818.21.	0.2	0

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91	Singleâ€cell Measurement of Red Blood Cell Oxygen Delivery Rate. FASEB Journal, 2018, 32, 704.10.	0.2	0
92	Singleâ€cell Measurement of Red Blood Cell Oxygen Delivery Rate. FASEB Journal, 2019, 33, 684.14.	0.2	0