

Wilbur A Lam

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

116
papers

3,835
citations

31
h-index

61
g-index

125
ext. papers

4,652
ext. citations

7.7
avg, IF

5.42
L-index

#	Paper	IF	Citations
116	Mobile phone based clinical microscopy for global health applications. <i>PLoS ONE</i> , 2009 , 4, e6320	3.7	513
115	Force microscopy of nonadherent cells: a comparison of leukemia cell deformability. <i>Biophysical Journal</i> , 2006 , 90, 2994-3003	2.9	370
114	Mechanics and contraction dynamics of single platelets and implications for clot stiffening. <i>Nature Materials</i> , 2011 , 10, 61-6	27	231
113	Analyzing cell mechanics in hematologic diseases with microfluidic biophysical flow cytometry. <i>Lab on A Chip</i> , 2008 , 8, 1062-70	7.2	219
112	Chemotherapy exposure increases leukemia cell stiffness. <i>Blood</i> , 2007 , 109, 3505-8	2.2	200
111	In vitro modeling of the microvascular occlusion and thrombosis that occur in hematologic diseases using microfluidic technology. <i>Journal of Clinical Investigation</i> , 2012 , 122, 408-18	15.9	195
110	Ultrasoft microgels displaying emergent platelet-like behaviours. <i>Nature Materials</i> , 2014 , 13, 1108-1114	27	151
109	Platelet mechanosensing of substrate stiffness during clot formation mediates adhesion, spreading, and activation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 14430-5	11.5	123
108	Magnetic forces enable controlled drug delivery by disrupting endothelial cell-cell junctions. <i>Nature Communications</i> , 2017 , 8, 15594	17.4	93
107	Factor XIIIa-dependent retention of red blood cells in clots is mediated by fibrin E-chain crosslinking. <i>Blood</i> , 2015 , 126, 1940-8	2.2	89
106	"Do-it-yourself in vitro vasculature that recapitulates in vivo geometries for investigating endothelial-blood cell interactions". <i>Scientific Reports</i> , 2015 , 5, 12401	4.9	84
105	Actin cytoskeletal disruption following cryopreservation alters the biodistribution of human mesenchymal stromal cells in vivo. <i>Stem Cell Reports</i> , 2014 , 3, 60-72	8	82
104	Microvasculature-on-a-chip for the long-term study of endothelial barrier dysfunction and microvascular obstruction in disease. <i>Nature Biomedical Engineering</i> , 2018 , 2, 453-463	19	79
103	Extracellular matrix rigidity modulates neuroblastoma cell differentiation and N-myc expression. <i>Molecular Cancer</i> , 2010 , 9, 35	42.1	75
102	Platelet integrins exhibit anisotropic mechanosensing and harness piconewton forces to mediate platelet aggregation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 325-330	11.5	72
101	Mapping the 3D orientation of piconewton integrin traction forces. <i>Nature Methods</i> , 2018 , 15, 115-118	21.6	65
100	Cellular softening mediates leukocyte demargination and trafficking, thereby increasing clinical blood counts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 1987-92	11.5	63

99	Single-platelet nanomechanics measured by high-throughput cytometry. <i>Nature Materials</i> , 2017 , 16, 230-235	27	61
98	Smartphone app for non-invasive detection of anemia using only patient-sourced photos. <i>Nature Communications</i> , 2018 , 9, 4924	17.4	56
97	Resolving the multifaceted mechanisms of the ferric chloride thrombosis model using an interdisciplinary microfluidic approach. <i>Blood</i> , 2015 , 126, 817-24	2.2	53
96	A microengineered vascularized bleeding model that integrates the principal components of hemostasis. <i>Nature Communications</i> , 2018 , 9, 509	17.4	47
95	3D microvascular model recapitulates the diffuse large B-cell lymphoma tumor microenvironment in vitro. <i>Lab on A Chip</i> , 2017 , 17, 407-414	7.2	46
94	Microfluidic Sorting of Cells by Viability Based on Differences in Cell Stiffness. <i>Scientific Reports</i> , 2017 , 7, 1997	4.9	43
93	Platelets and physics: How platelets "feel" and respond to their mechanical microenvironment. <i>Blood Reviews</i> , 2015 , 29, 377-86	11.1	42
92	Microenvironmental geometry guides platelet adhesion and spreading: a quantitative analysis at the single cell level. <i>PLoS ONE</i> , 2011 , 6, e26437	3.7	38
91	Disposable platform provides visual and color-based point-of-care anemia self-testing. <i>Journal of Clinical Investigation</i> , 2014 , 124, 4387-94	15.9	38
90	Platelet geometry sensing spatially regulates Egranule secretion to enable matrix self-deposition. <i>Blood</i> , 2015 , 126, 531-8	2.2	35
89	Endothelialized microfluidics for studying microvascular interactions in hematologic diseases. <i>Journal of Visualized Experiments</i> , 2012 ,	1.6	34
88	Microfluidic platform for studying osteocyte mechanoregulation of breast cancer bone metastasis. <i>Integrative Biology (United Kingdom)</i> , 2019 , 11, 119-129	3.7	33
87	The biophysics and mechanics of blood from a materials perspective. <i>Nature Reviews Materials</i> , 2019 , 4, 294-311	73.3	33
86	Microfluidic cell sorting by stiffness to examine heterogenic responses of cancer cells to chemotherapy. <i>Cell Death and Disease</i> , 2018 , 9, 239	9.8	33
85	Platelet Mechanotransduction. <i>Annual Review of Biomedical Engineering</i> , 2018 , 20, 253-275	12	31
84	Extracellular fluid tonicity impacts sickle red blood cell deformability and adhesion. <i>Blood</i> , 2017 , 130, 2654-2663	2.2	30
83	Protein Corona in Response to Flow: Effect on Protein Concentration and Structure. <i>Biophysical Journal</i> , 2018 , 115, 209-216	2.9	28
82	Biomechanics of haemostasis and thrombosis in health and disease: from the macro- to molecular scale. <i>Journal of Cellular and Molecular Medicine</i> , 2013 , 17, 579-96	5.6	26

81	Ptpn21 Controls Hematopoietic Stem Cell Homeostasis and Biomechanics. <i>Cell Stem Cell</i> , 2019 , 24, 608-620.e6	2.4	24
80	Mitochondrially mediated integrin α IIb β protein inactivation limits thrombus growth. <i>Journal of Biological Chemistry</i> , 2013 , 288, 30672-30681	5.4	24
79	Platelet mechanosensing of collagen matrices. <i>PLoS ONE</i> , 2015 , 10, e0126624	3.7	23
78	Assessment of a Smartphone Otoscope Device for the Diagnosis and Management of Otitis Media. <i>Clinical Pediatrics</i> , 2016 , 55, 800-10	1.2	22
77	Simultaneous point-of-care detection of anemia and sickle cell disease in Tanzania: the RAPID study. <i>Annals of Hematology</i> , 2018 , 97, 239-246	3	21
76	MASP-1 of the complement system enhances clot formation in a microvascular whole blood flow model. <i>PLoS ONE</i> , 2018 , 13, e0191292	3.7	20
75	Multidisciplinary assessment of the Abbott BinaxNOW SARS-CoV-2 point-of-care antigen test in the context of emerging viral variants and self-administration. <i>Scientific Reports</i> , 2021 , 11, 14604	4.9	19
74	A blueprint for academic laboratories to produce SARS-CoV-2 quantitative RT-PCR test kits. <i>Journal of Biological Chemistry</i> , 2020 , 295, 15438-15453	5.4	16
73	Microfluidic Transduction Harnesses Mass Transport Principles to Enhance Gene Transfer Efficiency. <i>Molecular Therapy</i> , 2017 , 25, 2372-2382	11.7	15
72	Ultraviolet Hyperspectral Interferometric Microscopy. <i>Scientific Reports</i> , 2018 , 8, 9913	4.9	15
71	Endothelial cell culture in microfluidic devices for investigating microvascular processes. <i>Biomicrofluidics</i> , 2018 , 12, 042203	3.2	15
70	Vascularized Microfluidics and the Blood-Endothelium Interface. <i>Micromachines</i> , 2019 , 11,	3.3	14
69	Normal saline is associated with increased sickle red cell stiffness and prolonged transit times in a microfluidic model of the capillary system. <i>Microcirculation</i> , 2017 , 24, e12353	2.9	13
68	Label-free hematology analysis using deep-ultraviolet microscopy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14779-14789	11.5	11
67	Enhancing size based size separation through vertical focus microfluidics using secondary flow in a ridged microchannel. <i>Scientific Reports</i> , 2017 , 7, 17375	4.9	10
66	Towards remote assessment and screening of acute abdominal pain using only a smartphone with native accelerometers. <i>Scientific Reports</i> , 2017 , 7, 12750	4.9	9
65	The platelet and the biophysical microenvironment: lessons from cellular mechanics. <i>Thrombosis Research</i> , 2014 , 133, 532-7	8.2	8
64	Simplified prototyping of perfusable polystyrene microfluidics. <i>Biomicrofluidics</i> , 2014 , 8, 046501	3.2	8

63	Integrated automated particle tracking microfluidic enables high-throughput cell deformability cytometry for red cell disorders. <i>American Journal of Hematology</i> , 2019 , 94, 189-199	7.1	8
62	Feeling the Force: Measurements of Platelet Contraction and Their Diagnostic Implications. <i>Seminars in Thrombosis and Hemostasis</i> , 2019 , 45, 285-296	5.3	8
61	Diabetes affects endothelial cell function and alters fibrin clot formation in a microvascular flow model: A pilot study. <i>Diabetes and Vascular Disease Research</i> , 2020 , 17, 1479164120903044	3.3	7
60	Clinical Implications of Single-Cell Microfluidic Devices for Hematological Disorders. <i>Analytical Chemistry</i> , 2017 , 89, 11881-11892	7.8	7
59	Dynamics of deformable straight and curved prolate capsules in simple shear flow. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	6
58	Platelet heterogeneity enhances blood clot volumetric contraction: An example of asynchrono-mechanical amplification. <i>Biomaterials</i> , 2021 , 274, 120828	15.6	6
57	Variations in pediatric emergency medicine physician practices for intravenous fluid management in children with sickle cell disease and vaso-occlusive pain: A single institution experience. <i>Pediatric Blood and Cancer</i> , 2018 , 65, e26742	3	6
56	Pathologically stiff erythrocytes impede contraction of blood clots. <i>Journal of Thrombosis and Haemostasis</i> , 2021 , 19, 1990-2001	15.4	6
55	Noninvasive optical assessment of resting-state cerebral blood flow in children with sickle cell disease. <i>Neurophotonics</i> , 2019 , 6, 035006	3.9	5
54	A blueprint for academic labs to produce SARS-CoV-2 RT-qPCR test kits 2020 ,		5
53	Physical forces regulating hemostasis and thrombosis: Vessels, cells, and molecules in illustrated review. <i>Research and Practice in Thrombosis and Haemostasis</i> , 2021 , 5, e12548	5.1	5
52	In vitro flow-based assay: From simple toward more sophisticated models for mimicking hemostasis and thrombosis. <i>Journal of Thrombosis and Haemostasis</i> , 2021 , 19, 582-587	15.4	5
51	Clot Contraction-Mediated Erythrocyte Packing Is Significantly Altered in Sickle Cell Disease. <i>Blood</i> , 2015 , 126, 215-215	2.2	4
50	Correlation of SARS-CoV-2 Subgenomic RNA with Antigen Detection in Nasal Midturbinate Swab Specimens. <i>Emerging Infectious Diseases</i> , 2021 , 27, 2887-2891	10.2	4
49	The RADx Tech Test Verification Core and the ACME POCT in the Evaluation of COVID-19 Testing Devices: A Model for Progress and Change. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2021 , 2, 142-151	5.9	4
48	Diagnosis of acute serious illness: the role of point-of-care technologies. <i>Current Opinion in Biomedical Engineering</i> , 2019 , 11, 22-34	4.4	3
47	Characterizing Cellular Interactions Contributing to Vaso-Occlusion in Patients with Sickle Cell Disease Utilizing a Novel Endothelialized Microfluidic Device. <i>Blood</i> , 2015 , 126, 3381-3381	2.2	3
46	Hematocrit significantly confounds diffuse correlation spectroscopy measurements of blood flow. <i>Biomedical Optics Express</i> , 2020 , 11, 4786-4799	3.5	3

45	Using microfluidics to investigate hematopoietic stem cell and microniche interactions at the single cell level. <i>Methods in Molecular Biology</i> , 2014 , 1185, 223-33	1.4	3
44	Stiffness based enrichment of leukemia cells using microfluidics. <i>APL Bioengineering</i> , 2020 , 4, 036101	6.6	3
43	Decreased cell stiffness enhances leukemia development and progression. <i>Leukemia</i> , 2020 , 34, 2493-2497	6.7	2
42	3D in vitro microvascular model-based lymphoma model. <i>Methods in Cell Biology</i> , 2018 , 146, 149-158	1.8	2
41	Novel in vivo and in vitro techniques to image and model the cerebral vasculature in sickle cell disease. <i>Blood Cells, Molecules, and Diseases</i> , 2017 , 67, 114-119	2.1	2
40	Flow-induced segregation and dynamics of red blood cells in sickle cell disease. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	2
39	Vessel Geometry Interacts with Red Blood Cell Stiffness to Promote Endothelial Dysfunction in Sickle Cell Disease. <i>Blood</i> , 2015 , 126, 965-965	2.2	2
38	Vascularized Microfluidics and Their Untapped Potential for Discovery in Diseases of the Microvasculature. <i>Annual Review of Biomedical Engineering</i> , 2021 , 23, 407-432	12	2
37	Point-of-Care Diagnostic Assays and Novel Preclinical Technologies for Hemostasis and Thrombosis. <i>Seminars in Thrombosis and Hemostasis</i> , 2021 , 47, 120-128	5.3	2
36	Label-free automated neutropenia detection and grading using deep-ultraviolet microscopy. <i>Biomedical Optics Express</i> , 2021 , 12, 6115-6128	3.5	2
35	Significant differences in single-platelet biophysics exist across species but attenuate during clot formation. <i>Blood Advances</i> , 2021 , 5, 432-437	7.8	2
34	Microfluidic Approach for Highly Efficient Viral Transduction. <i>Methods in Molecular Biology</i> , 2020 , 2097, 55-65	1.4	2
33	Enabling mesenchymal stromal cell immunomodulatory analysis using scalable platforms. <i>Integrative Biology (United Kingdom)</i> , 2019 , 11, 154-162	3.7	1
32	Platelet-rich plasma as endothelial rocket fuel for engineered in vitro microvasculature. <i>Journal of Thrombosis and Haemostasis</i> , 2020 , 18, 1239-1241	15.4	1
31	STEM Education for Children with Sickle Cell Disease: Unique Educational Outreach Program Taught By Near-Peer Undergraduate Students. <i>Blood</i> , 2020 , 136, 12-13	2.2	1
30	Stiff Erythrocyte Subpopulations Biomechanically Induce Endothelial Inflammation in Sickle Cell Disease. <i>Blood</i> , 2019 , 134, 3560-3560	2.2	1
29	High-Throughput On-Chip Human Mesenchymal Stromal Cell Potency Prediction. <i>Advanced Healthcare Materials</i> , 2021 , e2101995	10.1	1
28	Vascular Geometry and Flow Profile Mediate Pathological Cell-Cell Interactions in Sickle Cell Disease As Measured with "Do-It-Yourself" "Endothelial-ized" Microfluidics. <i>Blood</i> , 2014 , 124, 454-454	2.2	1

27	Towards High-Throughput Cell Mechanics Assays for Research and Clinical Applications	255-292		1
26	Impact of repeated nasal sampling on detection and quantification of SARS-CoV-2. <i>Scientific Reports</i> , 2021 , 11, 14903		4.9	1
25	The need for new test verification and regulatory support for innovative diagnostics. <i>Nature Biotechnology</i> , 2021 , 39, 1060-1062		44.5	1
24	Miniaturized Vascularized Bleeding Model of Hemostasis. <i>Methods in Molecular Biology</i> , 2022 , 2373, 159-175		17.5	1
23	RADx Variant Task Force Program for Assessing the Impact of Variants on SARS-CoV-2 Molecular and Antigen Tests.. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2021 , 2, 286-290		5.9	1
22	Don't Forget About Human Factors: Lessons Learned from COVID-19 Point-of-Care Testing.. <i>Cell Reports Methods</i> , 2022 , 100222			1
21	Assessment of Cerebral Blood Flow and Oxygen Extraction in Pediatric Sickle Cell Disease with Non-Invasive Diffuse Optical Spectroscopies. <i>Blood</i> , 2020 , 136, 7-8		2.2	0
20	Resolving the missing link between single platelet force and clot contractile force.. <i>IScience</i> , 2022 , 25, 103690		6.1	0
19	Chemotherapy Exposure Decreases Leukemia Cell Deformability as Determined by Atomic Force Microscopy: Implications for Leukostasis in Acute Leukemia.. <i>Blood</i> , 2006 , 108, 2359-2359		2.2	0
18	Introducing a Novel Biophysical Platelet Function Panel to Investigate Disorders of Primary Hemostasis and Bleeding of Unknown Cause. <i>Blood</i> , 2021 , 138, 2072-2072		2.2	0
17	Assessment of the Abbott BinaxNOW SARS-CoV-2 rapid antigen test against viral variants of concern.. <i>IScience</i> , 2022 , 103968		6.1	0
16	Getting a good view: imaging of platelets under flow. <i>Platelets</i> , 2020 , 31, 570-579		3.6	
15	Modeling Microvascular Disease	2016 , 105-126		
14	A combined magnetophoresis/dielectrophoresis based microbead array as high-throughput biomolecular tweezers	2014 , 02, 23-27		
13	Incorporating Hemoglobin Levels to Map Leukostasis Risk in Acute Leukemia Using Microvasculature-on-Chip Technologies. <i>Blood</i> , 2020 , 136, 9-10		2.2	
12	Building the foundation of health-related knowledge via near-peer education for children with sickle cell disease.. <i>Pediatric Blood and Cancer</i> , 2022 , e29566		3	
11	Visualizing Sickle Cell Disease Whole Blood Flow and Viscosity through Modifications to Hemoglobin Levels from a Simple Blood Transfusion. <i>Blood</i> , 2021 , 138, 3244-3244		2.2	
10	Use of Red Blood Cell Phenotypes for Second Line Therapy Selection in Sickle Cell Disease. <i>Blood</i> , 2021 , 138, 2053-2053		2.2	

9	Pathologically stiff erythrocytes impede contraction of blood clots: Reply to comment. <i>Journal of Thrombosis and Haemostasis</i> , 2021 , 19, 2894-2895	15.4
8	Real-Time Visualization of Shear-Dependent Erythrocyte Deformation into Schistocytes Using Single Micron Microfluidics. <i>Blood</i> , 2018 , 132, 1030-1030	2.2
7	A Simple, Rapid, and Inexpensive Color-Based Hemoglobin Assay As a Robust Screening Test for Severe Anemia in Limited Resource Settings. <i>Blood</i> , 2018 , 132, 4724-4724	2.2
6	Self-Deposition of Matrix Proteins from Platelet Granules Enable Extended Adhesion and Spreading on Micron/Submicron-Scale Fibrinogen and Collagen Substrates.. <i>Blood</i> , 2014 , 124, 2764-2764 ^{2,2}	
5	Engineering a "Self-Healing" Hydrogel-Based Microvasculature-on-a-Chip for Investigating the Effects of Cellular and Biomolecular Interactions on Endothelial Permeability in Sickle Cell Disease. <i>Blood</i> , 2015 , 126, 240-240	2.2
4	Leveraging the Contractile Force of Platelets for Targeted Factor VIII Delivery in Hemophilia with Inhibitors. <i>Blood</i> , 2016 , 128, 81-81	2.2
3	White Blood Cell Mechanics Mediate Glucocorticoid- and Catecholamine-Induced Demargination. <i>Blood</i> , 2013 , 122, 3459-3459	2.2
2	Creating Social Value via Undergraduate Design Thinking Course with K-12 STEM Education Outreach in Various Community Settings. <i>Biomedical Engineering Education</i> , 1	
1	148. Single-amplicon, Multiplex Real-time RT-PCR with Tiled Probes to Detect SARS-CoV-2 spike Mutations Associated with Variants of Concern. <i>Open Forum Infectious Diseases</i> , 2021 , 8, S89-S89	1