Xiaohui Zhang

List of Publications by Citations

66 papers	2,268 citations	22 h-index	47 g-index
69 ext. papers	2,681 ext. citations	6 avg, IF	4.86 L-index

#	Paper	IF	Citations
66	Mechanoenzymatic cleavage of the ultralarge vascular protein von Willebrand factor. *Science*, **2009**, 324, 1330-4	33.3	410
65	Force spectroscopy of the leukocyte function-associated antigen-1/intercellular adhesion molecule-1 interaction. *Biophysical Journal*, **2002**, 83, 2270-9	2.9	255
64	Structural specializations of A2, a force-sensing domain in the ultralarge vascular protein von Willebrand factor. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 9226-31	11.5	153
63	The tight junction protein, occludin, regulates the directional migration of epithelial cells. *Developmental Cell*, **2010**, 18, 52-63	10.2	118
62	Molecular basis for the dynamic strength of the integrin alpha4beta1/VCAM-1 interaction. *Biophysical Journal*, **2004**, 87, 3470-8	2.9	92
61	Atomic force microscopy measurement of leukocyte-endothelial interaction. *American Journal of Physiology - Heart and Circulatory Physiology*, **2004**, 286, H359-67	5.2	92
60	Tissue-type plasminogen activator and the low-density lipoprotein receptor-related protein mediate cerebral ischemia-induced nuclear factor-kappaB pathway activation. *American Journal of Pathology*, **2007**, 171, 1281-90	5.8	79
59	TWEAK-Fn14 pathway inhibition protects the integrity of the neurovascular unit during cerebral ischemia. *Journal of Cerebral Blood Flow and Metabolism*, **2007**, 27, 534-44	7.3	77
58	Molecular basis of the dynamic strength of the sialyl Lewis X--selectin interaction. *ChemPhysChem*, **2004**, 5, 175-82	3.2	73
57	Identification of a juxtamembrane mechanosensitive domain in the platelet mechanosensor glycoprotein Ib-IX complex. *Blood*, **2015**, 125, 562-9	2.2	72
56	Endothelial cell dysfunction and glycocalyx - A vicious circle. *Matrix Biology*, **2018**, 71-72, 421-431	11.4	69
55	Lensless imaging for simultaneous microfluidic sperm monitoring and sorting. *Lab on A Chip*, **2011**, 11, 2535-40	7.2	68
54	Cooperative adhesion of ligand-receptor bonds. *Biophysical Chemistry*, **2003**, 104, 271-8	3.5	67
53	Neuropilin-2 promotes extravasation and metastasis by interacting with endothelial β1 integrin. *Cancer Research*, **2013**, 73, 4579-4590	10.1	65
52	Dynamic adhesion of T lymphocytes to endothelial cells revealed by atomic force microscopy. *Experimental Biology and Medicine*, **2006**, 231, 1306-12	3.7	62
51	Platelet clearance via shear-induced unfolding of a membrane mechanoreceptor. *Nature Communications*, **2016**, 7, 12863	17.4	61
50	Emerging technologies in medical applications of minimum volume vitrification. *Nanomedicine*, **2011**, 6, 1115-29	5.6	45

49	Mechanotransduction of the endothelial glycocalyx mediates nitric oxide production through activation of TRP channels. *American Journal of Physiology - Cell Physiology*, **2016**, 311, C846-C853	5.4	42
48	The Role of Endothelial Surface Glycocalyx in Mechanosensing and Transduction. *Advances in Experimental Medicine and Biology*, **2018**, 1097, 1-27	3.6	40
47	Fc-independent immune thrombocytopenia via mechanomolecular signaling in platelets. *Blood*, **2018**, 131, 787-796	2.2	39
46	Biomechanical characterization of SARS-CoV-2 spike RBD and human ACE2 protein-protein interaction. *Biophysical Journal*, **2021**, 120, 1011-1019	2.9	26
45	BF0801, a novel adenine derivative, inhibits platelet activation via phosphodiesterase inhibition and P2Y12 antagonism. *Thrombosis and Haemostasis*, **2010**, 104, 845-57	7	22
44	Biomechanical characterization of TIM protein-mediated Ebola virus-host cell adhesion. *Scientific Reports*, **2019**, 9, 267	4.9	21
43	Nanoliter droplet vitrification for oocyte cryopreservation. *Nanomedicine*, **2012**, 7, 553-64	5.6	21
42	Differential Interactions between Human ACE2 and Spike RBD of SARS-CoV-2 Variants of Concern. *Journal of Chemical Theory and Computation*, **2021**,	6.4	20
41	Integrin 47 switches its ligand specificity via distinct conformer-specific activation. *Journal of Cell Biology*, **2018**, 217, 2799-2812	7.3	19
40	Differential Interactions Between Human ACE2 and Spike RBD of SARS-CoV-2 Variants of Concern **2021**,		16
39	Force-Regulated Refolding of the Mechanosensory Domain in the Platelet Glycoprotein Ib-IX Complex. *Biophysical Journal*, **2019**, 116, 1960-1969	2.9	13
38	Desialylation of -glycans on glycoprotein Ib drives receptor signaling and platelet clearance. *Haematologica*, **2021**, 106, 220-229	6.6	13
37	Low-affinity binding in to P2YR mediates force-dependent integrin activation during hantavirus infection. *Molecular Biology of the Cell*, **2017**, 28, 2887-2903	3.5	10
36	MC3T3 preosteoblast differentiation on bone morphogenetic protein-2 peptide ormosils. *Journal of Materials Chemistry*, **2012**, 22, 10672		10
35	Atomic Force Microscopy of Protein Protein Interactions **2009**, 555		10
34	Shear-Induced Extensional Response Behaviors of Tethered von Willebrand Factor. *Biophysical Journal*, **2019**, 116, 2092-2102	2.9	8
33	A mechano-reactive coarse-grained model of the blood-clotting agent von Willebrand factor. *Journal of Chemical Physics*, **2019**, 151, 124905	3.9	7
32	Correlation between in vitro expansion-related cell stiffening and differentiation potential of human mesenchymal stem cells. *Differentiation*, **2015**, 90, 1-15	3.5	7

31	Long-ranged Protein-glycan Interactions Stabilize von Willebrand Factor A2 Domain from Mechanical Unfolding. *Scientific Reports*, **2018**, 8, 16017	4.9	7
30	Biomechanical Characterization of SARS-CoV-2 Spike RBD and Human ACE2 Protein-Protein Interaction **2020**,		6
29	Activation of von Willebrand factor via mechanical unfolding of its discontinuous autoinhibitory module. *Nature Communications*, **2021**, 12, 2360	17.4	6
28	Calcium-Mediated Biophysical Binding of Cryptosporidium parvum Oocysts to Surfaces Is Sensitive to Oocyst Age. *Applied and Environmental Microbiology*, **2019**, 85,	4.8	5
27	Dual Regulation of L-Selectin-Mediated Leukocyte Adhesion by Endothelial Surface Glycocalyx. *Cellular and Molecular Bioengineering*, **2017**, 10, 102-113	3.9	5
26	Predicting pathological von Willebrand factor unraveling in elongational flow. *Biophysical Journal*, **2021**, 120, 1903-1915	2.9	5
25	Recent Developments in Nanomaterial-Based Shear-Sensitive Drug Delivery Systems. *Advanced Healthcare Materials*, **2021**, 10, e2002196	10.1	5
24	Dynamics and Interactions of GPI-Linked lynx1 Protein with/without Nicotinic Acetylcholine Receptor in Membrane Bilayers. *Journal of Physical Chemistry B*, **2020**, 124, 4017-4025	3.4	4
23	Coarse-Grain Modeling of Shear-Induced Binding between von Willebrand Factor and Collagen. *Biophysical Journal*, **2018**, 114, 1816-1829	2.9	4
22	Development of fragility in relaxor ferroelectrics. *Journal of Applied Physics*, **2014**, 115, 054106	2.5	3
21	A configurational entropy-loss law for non-Arrhenius relaxation in disordered systems. *Journal of Applied Physics*, **2013**, 113, 194105	2.5	2
20	Binding of Human ACE2 and RBD of Omicron Enhanced by Unique Interaction Patterns Among SARS-CoV-2 Variants of Concern. **2022**,		2
19	Platelet mechanosensing axis revealed. *Nature Materials*, **2019**, 18, 661-662	27	1
18	Factor VIII binding affects the mechanical unraveling of the A2 domain of von Willebrand factor. *Journal of Thrombosis and Haemostasis*, **2020**, 18, 2169-2176	15.4	1
17	Characterizing Single-Molecule Conformational Changes Under Shear Flow with Fluorescence Microscopy. *Journal of Visualized Experiments*, **2020**,	1.6	1
16	Adhesive Contact Between Cylindrical (Ebola) and Spherical (SARS-CoV-2) Viral Particles and a Cell Membrane		1
15	Adhesive contact between cylindrical (Ebola) and spherical (SARS-CoV-2) viral particles and a cell membrane. *Mechanics of Soft Materials*, **2020**, 2, 11	2.1	1
14	Structure, Dynamics, and Interactions of GPI-Anchored Human Glypican-1 with Heparan Sulfates in a Membrane. *Glycobiology*, **2021**, 31, 593-602	5.8	1

13	Blocking von Willebrand factor free thiols inhibits binding to collagen under high and pathological shear stress. *Journal of Thrombosis and Haemostasis*, **2021**, 19, 358-369	15.4	1
12	Unraveling Kinetics of Collapsed Polymers in Extensional Flow. *Macromolecules*, **2021**, 54, 8259-8269	5.5	1
11	Peak force visible microscopy. *Soft Matter*, **2020**, 16, 8372-8379	3.6	0
10	Length of mucin-like domains enhances cell-Ebola virus adhesion by increasing binding probability. *Biophysical Journal*, **2021**, 120, 781-790	2.9	0
9	Biophysical characterization of lynx-nicotinic receptor interactions using atomic force microscopy.. *FASEB BioAdvances*, **2021**, 3, 1034-1042	2.8	0
8	Binding kinetics of liposome conjugated E-selectin and P-selectin glycoprotein ligand-1 measured with atomic force microscopy. *Colloids and Surfaces B: Biointerfaces*, **2021**, 207, 112002	6	0
7	Flow-regulated nucleation protrusion theory for collapsed polymers.. *Physical Review E*, **2021**, 104, 054504	2.4	0
6	Microfluidic Sorting: Exhaustion of Racing Sperm in Nature-Mimicking Microfluidic Channels During Sorting (Small 20/2013). *Small*, **2013**, 9, 3366-3366	11	
5	Intermolecular Forces of Leukocyte Adhesion Molecules159-168		
4	Probing Single Icam-1/Lfa-1 Interaction under External Force. *Scientific World Journal, The*, **2002**, 2, 41-42	2.2	
3	Binding of GpIbα to VWF A2 Domain Alters Mechanical Unraveling of the A2 Domain. *Blood*, **2020**, 136, 24-25	2.2	
2	Structure-function of MAdCAM-1 revealed by single-molecule force spectroscopy. *FASEB Journal*, **2006**, 20, LB119	0.9	
1	Binding of Factor VIII to D'D3 and A2 Domains of Von Willebrand Factor Facilitates Mechanical Unraveling of the A2 Domain. *Blood*, **2019**, 134, 95-95	2.2	