

Volkmar Heinrich

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.

41
papers

2,278
citations

24
h-index

47
g-index

48
ext. papers

2,535
ext. citations

4
avg, IF

4.76
L-index

#	Paper	IF	Citations
41	Dynamic tension spectroscopy and strength of biomembranes. <i>Biophysical Journal</i> , 2003 , 85, 2342-50	2.9	341
40	Mechanical switching and coupling between two dissociation pathways in a P-selectin adhesion bond. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 11281-6	11.5	266
39	Mechanics of neutrophil phagocytosis: experiments and quantitative models. <i>Journal of Cell Science</i> , 2006 , 119, 1903-13	5.3	161
38	Mechanics of neutrophil phagocytosis: behavior of the cortical tension. <i>Journal of Cell Science</i> , 2005 , 118, 1789-97	5.3	120
37	Nano- to microscale dynamics of P-selectin detachment from leukocyte interfaces. I. Membrane separation from the cytoskeleton. <i>Biophysical Journal</i> , 2005 , 88, 2288-98	2.9	113
36	A piconewton force transducer and its application to measurement of the bending stiffness of phospholipid membranes. <i>Annals of Biomedical Engineering</i> , 1996 , 24, 595-605	4.7	110
35	Free energy of closed membrane with anisotropic inclusions. <i>European Physical Journal B</i> , 1999 , 10, 5-8	1.2	107
34	Vesicle deformation by an axial load: from elongated shapes to tethered vesicles. <i>Biophysical Journal</i> , 1999 , 76, 2056-71	2.9	93
33	Nonaxisymmetric vesicle shapes in a generalized bilayer-couple model and the transition between oblate and prolate axisymmetric shapes. <i>Physical Review E</i> , 1993 , 48, 3112-3123	2.4	85
32	Modulation of cell adhesion and motility in the immune system by Myo1f. <i>Science</i> , 2006 , 314, 136-9	33.3	79
31	Elastic thickness compressibility of the red cell membrane. <i>Biophysical Journal</i> , 2001 , 81, 1452-63	2.9	77
30	Nano- to microscale dynamics of P-selectin detachment from leukocyte interfaces. II. Tether flow terminated by P-selectin dissociation from PSGL-1. <i>Biophysical Journal</i> , 2005 , 88, 2299-308	2.9	70
29	Baseline mechanical characterization of J774 macrophages. <i>Biophysical Journal</i> , 2009 , 96, 248-54	2.9	64
28	Nonlithographic fabrication of microfluidic devices. <i>Journal of the American Chemical Society</i> , 2006 , 128, 16062-72	16.4	56
27	The Vi capsular polysaccharide enables <i>Salmonella enterica</i> serovar typhi to evade microbe-guided neutrophil chemotaxis. <i>PLoS Pathogens</i> , 2014 , 10, e1004306	7.6	52
26	Nano-to-micro scale dynamics of P-selectin detachment from leukocyte interfaces. III. Numerical simulation of tethering under flow. <i>Biophysical Journal</i> , 2005 , 88, 1676-83	2.9	51
25	Automated, high-resolution micropipet aspiration reveals new insight into the physical properties of fluid membranes. <i>Langmuir</i> , 2005 , 21, 1962-71	4	43

24	Target-specific mechanics of phagocytosis: protrusive neutrophil response to zymosan differs from the uptake of antibody-tagged pathogens. <i>Journal of Cell Science</i> , 2011 , 124, 1106-14	5.3	41
23	Coccidioides Endospores and Spherules Draw Strong Chemotactic, Adhesive, and Phagocytic Responses by Individual Human Neutrophils. <i>PLoS ONE</i> , 2015 , 10, e0129522	3.7	35
22	Imaging biomolecular interactions by fast three-dimensional tracking of laser-confined carrier particles. <i>Langmuir</i> , 2008 , 24, 1194-203	4	32
21	Protrusive push versus enveloping embrace: computational model of phagocytosis predicts key regulatory role of cytoskeletal membrane anchors. <i>PLoS Computational Biology</i> , 2011 , 7, e1001068	5	30
20	Dynamic strength of fluid membranes. <i>Comptes Rendus Physique</i> , 2003 , 4, 265-274	1.4	30
19	Controlled One-on-One Encounters between Immune Cells and Microbes Reveal Mechanisms of Phagocytosis. <i>Biophysical Journal</i> , 2015 , 109, 469-76	2.9	26
18	Blurred line between chemotactic chase and phagocytic consumption: an immunophysical single-cell perspective. <i>Journal of Cell Science</i> , 2011 , 124, 3041-51	5.3	25
17	Single-cell adhesion tests against functionalized microspheres arrayed on AFM cantilevers confirm heterophilic E- and N-cadherin binding. <i>Biophysical Journal</i> , 2010 , 99, L100-2	2.9	21
16	Force versus axial deflection of pipette-aspirated closed membranes. <i>Biophysical Journal</i> , 2007 , 93, 363-72	2.9	20
15	Shapes of nearly cylindrical, axisymmetric bilayer membranes. <i>European Physical Journal E</i> , 2001 , 6, 91-98.5	1.5	18
14	Differential effects of serum heat treatment on chemotaxis and phagocytosis by human neutrophils. <i>PLoS ONE</i> , 2013 , 8, e54735	3.7	18
13	Versatile horizontal force probe for mechanical tests on pipette-held cells, particles, and membrane capsules. <i>Biophysical Journal</i> , 2009 , 96, 1218-31	2.9	15
12	Large deviations of the average shapes of vesicles from equilibrium: Effects of thermal fluctuations in the presence of constraints. <i>Physical Review E</i> , 1997 , 55, 1809-1818	2.4	13
11	Nano-to-microscale mechanical switches and fuses mediate adhesive contacts between leukocytes and the endothelium. <i>Journal of Chemical Information and Modeling</i> , 2005 , 45, 1482-90	6.1	11
10	Atrial natriuretic peptide down-regulates neutrophil recruitment on inflamed endothelium by reducing cell deformability and resistance to detachment force. <i>Biorheology</i> , 2015 , 52, 447-63	1.7	10
9	Extension of chemotactic pseudopods by nonadherent human neutrophils does not require or cause calcium bursts. <i>Science Signaling</i> , 2018 , 11,	8.8	9
8	Force-induced recruitment of cten along keratin network in epithelial cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 19799-19801	11.5	8
7	Analytical Prediction of the Spatiotemporal Distribution of Chemoattractants around Their Source: Theory and Application to Complement-Mediated Chemotaxis. <i>Frontiers in Immunology</i> , 2017 , 8, 578	8.4	7

6	Biophysics in reverse: Using blood cells to accurately calibrate force-microscopy cantilevers. <i>Applied Physics Letters</i> , 2008 , 92, 153902	3.4	7
5	Quantifying the Sensitivity of Human Immune Cells to Chemoattractant. <i>Biophysical Journal</i> , 2017 , 112, 834-837	2.9	5
4	Mechanistic Understanding of Single-Cell Behavior is Essential for Transformative Advances in Biomedicine. <i>Yale Journal of Biology and Medicine</i> , 2018 , 91, 279-289	2.4	5
3	Spatial proximity of proteins surrounding zyxin under force-bearing conditions. <i>Molecular Biology of the Cell</i> , 2021 , 32, 1221-1228	3.5	3
2	Exploring Reaction Pathways of Single-Molecule Interactions through the Manipulation and Tracking of a Potential-Confined Microsphere in Three Dimensions. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 790, 1		
1	Atrial natriuretic peptide down-regulates neutrophil recruitment on inflamed endothelium by reducing cell deformability and resistance to detachment force. <i>Biorheology</i> , 2016 , 53, 109	1.7	