

David A Alsteens

List of Publications by Year in Descending Order

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Version: 2024-04-26

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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.

107
papers

5,621
citations

41
h-index

74
g-index

126
ext. papers

6,806
ext. citations

12.1
avg, IF

5.85
L-index

#	Paper	IF	Citations
107	Stepwise Enzymatic-Dependent Mechanism of Ebola Virus Binding to Cell Surface Receptors Monitored by AFM.. <i>Nano Letters</i> , 2022 ,	11.5	1
106	Multivalent 9-O-Acetylated-sialic acid glycoclusters as potent inhibitors for SARS-CoV-2 infection.. <i>Nature Communications</i> , 2022 , 13, 2564	17.4	3
105	Molecular insights into receptor binding energetics and neutralization of SARS-CoV-2 variants. <i>Nature Communications</i> , 2021 , 12, 6977	17.4	6
104	Altered Glycan Expression on Breast Cancer Cells Facilitates Infection by T3 Serotype Oncolytic Reovirus. <i>Nano Letters</i> , 2021 , 21, 9720-9728	11.5	0
103	Single-Virus Force Spectroscopy Discriminates the Intrinsic Role of Two Viral Glycoproteins upon Cell Surface Attachment. <i>Nano Letters</i> , 2021 , 21, 847-853	11.5	4
102	Atomic Force Microscopy-Based Force Spectroscopy and Multiparametric Imaging of Biomolecular and Cellular Systems. <i>Chemical Reviews</i> , 2021 , 121, 11701-11725	68.1	24
101	Liquid-Liquid Phase Separation Enhances TDP-43 LCD Aggregation but Delays Seeded Aggregation. <i>Biomolecules</i> , 2021 , 11,	5.9	9
100	Reovirus directly engages integrin to recruit clathrin for entry into host cells. <i>Nature Communications</i> , 2021 , 12, 2149	17.4	6
99	Probing PIEZO1 Localization upon Activation Using High-Resolution Atomic Force and Confocal Microscopy. <i>Nano Letters</i> , 2021 , 21, 4950-4958	11.5	3
98	Stress-Induced Catch-Bonds to Enhance Bacterial Adhesion. <i>Trends in Microbiology</i> , 2021 , 29, 286-288	12.4	0
97	Impaired Cytoskeletal and Membrane Biophysical Properties of Acanthocytes in Hypobetalipoproteinemia - A Case Study. <i>Frontiers in Physiology</i> , 2021 , 12, 638027	4.6	1
96	Force spectroscopy of single cells using atomic force microscopy. <i>Nature Reviews Methods Primers</i> , 2021 , 1,		11
95	Rotavirus Binding to Cell Surface Receptors Directly Recruiting β Integrin. <i>Advanced NanoBiomed Research</i> , 2021 , 1, 2170123	0	
94	Initial Step of Virus Entry: Virion Binding to Cell-Surface Glycans. <i>Annual Review of Virology</i> , 2020 , 7, 143-165	16.5	38
93	Mechanical Forces between Mycobacterial Antigen 85 Complex and Fibronectin. <i>Cells</i> , 2020 , 9,	7.9	2
92	Endophilin-A3 and Galectin-8 control the clathrin-independent endocytosis of CD166. <i>Nature Communications</i> , 2020 , 11, 1457	17.4	29
91	Mechanochemical Activation of Class-B G-Protein-Coupled Receptor upon Peptide-Ligand Binding. <i>Nano Letters</i> , 2020 , 20, 5575-5582	11.5	2

90	Control of Ligand-Binding Specificity Using Photocleavable Linkers in AFM Force Spectroscopy. <i>Nano Letters</i> , 2020 , 20, 4038-4042	11.5	9
89	Multiparametric Atomic Force Microscopy Identifies Multiple Structural and Physical Heterogeneities on the Surface of. <i>ACS Omega</i> , 2020 , 5, 20953-20959	3.9	2
88	The Trypanosoma Brucei KIFC1 Kinesin Ensures the Fast Antibody Clearance Required for Parasite Infectivity. <i>IScience</i> , 2020 , 23, 101476	6.1	3
87	Label-Free Imaging of Cholesterol Assemblies Reveals Hidden Nanomechanics of Breast Cancer Cells. <i>Advanced Science</i> , 2020 , 7, 2002643	13.6	6
86	Force-clamp spectroscopy identifies a catch bond mechanism in a Gram-positive pathogen. <i>Nature Communications</i> , 2020 , 11, 5431	17.4	9
85	Reovirus σ Conformational Flexibility Modulates the Efficiency of Host Cell Attachment. <i>Journal of Virology</i> , 2020 , 94,	6.6	1
84	Molecular interaction and inhibition of SARS-CoV-2 binding to the ACE2 receptor. <i>Nature Communications</i> , 2020 , 11, 4541	17.4	246
83	Submolecular probing of the complement C5a receptor-ligand binding reveals a cooperative two-site binding mechanism. <i>Communications Biology</i> , 2020 , 3, 786	6.7	3
82	Glycan-mediated enhancement of reovirus receptor binding. <i>Nature Communications</i> , 2019 , 10, 4460	17.4	26
81	Regulatory Mechanisms of the Mucin-Like Region on Herpes Simplex Virus during Cellular Attachment. <i>ACS Chemical Biology</i> , 2019 , 14, 534-542	4.9	10
80	Probing ligand-receptor bonds in physiologically relevant conditions using AFM. <i>Analytical and Bioanalytical Chemistry</i> , 2019 , 411, 6549-6559	4.4	13
79	Seeing and sensing single G protein-coupled receptors by atomic force microscopy. <i>Current Opinion in Cell Biology</i> , 2019 , 57, 25-32	9	12
78	Atomic force microscopy-based mechanobiology. <i>Nature Reviews Physics</i> , 2019 , 1, 41-57	23.6	274
77	Nanoscale membrane architecture of healthy and pathological red blood cells. <i>Nanoscale Horizons</i> , 2018 , 3, 293-304	10.8	28
76	Topography imaging of herpesvirus in native condition using atomic force microscopy. <i>Clinical Microbiology and Infection</i> , 2018 , 24, 610-611	9.5	
75	Mechanical Forces Guiding Staphylococcus aureus Cellular Invasion. <i>ACS Nano</i> , 2018 , 12, 3609-3622	16.7	42
74	Specific Interactions Measured by AFM on Living Cells between Peroxiredoxin-5 and TLR4: Relevance for Mechanisms of Innate Immunity. <i>Cell Chemical Biology</i> , 2018 , 25, 550-559.e3	8.2	25
73	Probing Single Virus Binding Sites on Living Mammalian Cells Using AFM. <i>Methods in Molecular Biology</i> , 2018 , 1814, 483-514	1.4	1

72	A molecular mechanism for Wnt ligand-specific signaling. <i>Science</i> , 2018 , 361,	33.3	99
71	Multivalent binding of herpesvirus to living cells is tightly regulated during infection. <i>Science Advances</i> , 2018 , 4, eaat1273	14.3	29
70	High-resolution mapping and recognition of lipid domains using AFM with toxin-derivatized probes. <i>Chemical Communications</i> , 2018 , 54, 6903-6906	5.8	13
69	Imaging modes of atomic force microscopy for application in molecular and cell biology. <i>Nature Nanotechnology</i> , 2017 , 12, 295-307	28.7	494
68	Multiparametric Atomic Force Microscopy Imaging of Biomolecular and Cellular Systems. <i>Accounts of Chemical Research</i> , 2017 , 50, 924-931	24.3	50
67	Atomic force microscopy-based characterization and design of biointerfaces. <i>Nature Reviews Materials</i> , 2017 , 2,	73.3	95
66	Combining confocal and atomic force microscopy to quantify single-virus binding to mammalian cell surfaces. <i>Nature Protocols</i> , 2017 , 12, 2275-2292	18.8	39
65	Force-Induced Strengthening of the Interaction between Clumping Factor B and Loricrin. <i>MBio</i> , 2017 , 8,	7.8	44
64	Nanomechanical mapping of first binding steps of a virus to animal cells. <i>Nature Nanotechnology</i> , 2017 , 12, 177-183	28.7	127
63	Lipid Domains and Membrane (Re)Shaping: From Biophysics to Biology. <i>Springer Series in Biophysics</i> , 2017 , 121-175		5
62	Mechanical Strength and Inhibition of the Staphylococcus aureus Collagen-Binding Protein Cna. <i>MBio</i> , 2016 , 7,	7.8	50
61	The biomechanical properties of an epithelial tissue determine the location of its vasculature. <i>Nature Communications</i> , 2016 , 7, 13560	17.4	16
60	Imaging G protein-coupled receptors while quantifying their ligand-binding free-energy landscape. <i>Nature Methods</i> , 2015 , 12, 845-851	21.6	84
59	Single-molecule force spectroscopy of membrane proteins from membranes freely spanning across nanoscopic pores. <i>Nano Letters</i> , 2015 , 15, 3624-33	11.5	24
58	Identifying and quantifying two ligand-binding sites while imaging native human membrane receptors by AFM. <i>Nature Communications</i> , 2015 , 6, 8857	17.4	53
57	Force nanoscopy of hydrophobic interactions in the fungal pathogen <i>Candida glabrata</i> . <i>ACS Nano</i> , 2015 , 9, 1648-55	16.7	42
56	Quantifying the forces guiding microbial cell adhesion using single-cell force spectroscopy. <i>Nature Protocols</i> , 2014 , 9, 1049-55	18.8	139
55	Localizing chemical groups while imaging single native proteins by high-resolution atomic force microscopy. <i>Nano Letters</i> , 2014 , 14, 2957-64	11.5	39

54	Atomic force and electron microscopic-based study of sarcolemmal surface of living cardiomyocytes unveils unexpected mitochondrial shift in heart failure. <i>Journal of Molecular and Cellular Cardiology</i> , 2014 , 74, 162-72	5.8	22
53	Atomic Force Microscopy of Living Cells. <i>Neuromethods</i> , 2014 , 225-255	0.4	1
52	Single-cell force spectroscopy of probiotic bacteria. <i>Biophysical Journal</i> , 2013 , 104, 1886-92	2.9	125
51	Multiparametric imaging of biological systems by force-distance curve-based AFM. <i>Nature Methods</i> , 2013 , 10, 847-54	21.6	317
50	Unraveling the nanoscale surface properties of chitin synthase mutants of <i>Aspergillus fumigatus</i> and their biological implications. <i>Biophysical Journal</i> , 2013 , 105, 320-7	2.9	17
49	Multiparametric atomic force microscopy imaging of single bacteriophages extruding from living bacteria. <i>Nature Communications</i> , 2013 , 4, 2926	17.4	99
48	Quantifying the forces driving cell-cell adhesion in a fungal pathogen. <i>Langmuir</i> , 2013 , 29, 13473-80	4	41
47	Single-molecule analysis of the major glycopolymers of pathogenic and non-pathogenic yeast cells. <i>Nanoscale</i> , 2013 , 5, 4855-63	7.7	17
46	Single-Cell Force Spectroscopy of Als-Mediated Fungal Adhesion. <i>Analytical Methods</i> , 2013 , 5, 3657-3662	3.2	37
45	Nanoscale analysis of caspofungin-induced cell surface remodelling in <i>Candida albicans</i> . <i>Nanoscale</i> , 2013 , 5, 1105-15	7.7	41
44	Adhesion and nanomechanics of pili from the probiotic <i>Lactobacillus rhamnosus</i> GG. <i>ACS Nano</i> , 2013 , 7, 3685-97	16.7	125
43	Atomic force microscopy: a new look at pathogens. <i>PLoS Pathogens</i> , 2013 , 9, e1003516	7.6	33
42	Sequential unfolding of beta helical protein by single-molecule atomic force microscopy. <i>PLoS ONE</i> , 2013 , 8, e73572	3.7	17
41	Microbial cells analysis by atomic force microscopy. <i>Methods in Enzymology</i> , 2012 , 506, 3-17	1.7	6
40	Nanomechanics of Yeast Surfaces Revealed by AFM. <i>Nanoscience and Technology</i> , 2012 , 171-193	0.6	
39	Unzipping a functional microbial amyloid. <i>ACS Nano</i> , 2012 , 6, 7703-11	16.7	43
38	Strengthening relationships: amyloids create adhesion nanodomains in yeasts. <i>Trends in Microbiology</i> , 2012 , 20, 59-65	12.4	86
37	High-resolution imaging of chemical and biological sites on living cells using peak force tapping atomic force microscopy. <i>Langmuir</i> , 2012 , 28, 16738-44	4	114

36	Single-molecule imaging and functional analysis of Als adhesins and mannans during <i>Candida albicans</i> morphogenesis. <i>ACS Nano</i> , 2012 , 6, 10950-64	16.7	76
35	Atomic force microscopy - looking at mechanosensors on the cell surface. <i>Journal of Cell Science</i> , 2012 , 125, 4189-95	5.3	35
34	Chitin synthases with a myosin motor-like domain control the resistance of <i>Aspergillus fumigatus</i> to echinocandins. <i>Antimicrobial Agents and Chemotherapy</i> , 2012 , 56, 6121-31	5.9	48
33	Stretching and Imaging Individual Proteins on Live Cells Using Atomic Force Microscopy 2012 , 211-233		
32	The <i>Pseudomonas aeruginosa</i> membranes: a target for a new amphiphilic aminoglycoside derivative?. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2011 , 1808, 1716-27	3.8	71
31	A role for amyloid in cell aggregation and biofilm formation. <i>PLoS ONE</i> , 2011 , 6, e17632	3.7	82
30	Frontiers in microbial nanoscopy. <i>Nanomedicine</i> , 2011 , 6, 395-403	5.6	11
29	Single-Molecule Force Spectroscopy of Microbial Cell Envelope Proteins 2011 , 317-334		2
28	Measurement of the mechanical behavior of yeast membrane sensors using single-molecule atomic force microscopy. <i>Nature Protocols</i> , 2010 , 5, 670-7	18.8	39
27	Force-induced formation and propagation of adhesion nanodomains in living fungal cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 20744-9	11.5	161
26	Microbial nanoscopy: a closer look at microbial cell surfaces. <i>Trends in Microbiology</i> , 2010 , 18, 397-405	12.4	60
25	Towards a Nanoscale View of Microbial Surfaces Using the Atomic Force Microscope 2010 , 583-598		
24	Imaging Chemical Groups and Molecular Recognition Sites on Live Cells Using AFM 2010 , 463-478		
23	Fishing single molecules on live cells. <i>Nano Today</i> , 2009 , 4, 262-268	17.9	25
22	Nanoscale imaging of microbial pathogens using atomic force microscopy. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2009 , 1, 168-80	9.2	18
21	Force probing surfaces of living cells to molecular resolution. <i>Nature Chemical Biology</i> , 2009 , 5, 383-90	11.7	371
20	The yeast Wsc1 cell surface sensor behaves like a nanospring in vivo. <i>Nature Chemical Biology</i> , 2009 , 5, 857-62	11.7	121
19	Stretching polysaccharides on live cells using single molecule force spectroscopy. <i>Nature Protocols</i> , 2009 , 4, 939-46	18.8	87

18	New frontiers in atomic force microscopy: analyzing interactions from single-molecules to cells. <i>Current Opinion in Biotechnology</i> , 2009 , 20, 4-13	11.4	61
17	Molecular mapping of lipoarabinomannans on mycobacteria. <i>Langmuir</i> , 2009 , 25, 4324-7	4	12
16	Unfolding individual als5p adhesion proteins on live cells. <i>ACS Nano</i> , 2009 , 3, 1677-82	16.7	81
15	In vivo imaging of S-layer nanoarrays on <i>Corynebacterium glutamicum</i> . <i>Langmuir</i> , 2009 , 25, 9653-5	4	49
14	Controlled manipulation of bacteriophages using single-virus force spectroscopy. <i>ACS Nano</i> , 2009 , 3, 3063-8	16.7	17
13	Imaging Chemical Groups and Molecular Recognition Sites on Live Cells Using AFM. <i>Nanoscience and Technology</i> , 2009 , 33-48	0.6	
12	Recognition Imaging Using Atomic Force Microscopy 2009 , 525		1
11	High-resolution cell surface dynamics of germinating <i>Aspergillus fumigatus</i> conidia. <i>Biophysical Journal</i> , 2008 , 94, 656-60	2.9	136
10	Organization of the mycobacterial cell wall: a nanoscale view. <i>Pflugers Archiv European Journal of Physiology</i> , 2008 , 456, 117-25	4.6	89
9	Structure, cell wall elasticity and polysaccharide properties of living yeast cells, as probed by AFM. <i>Nanotechnology</i> , 2008 , 19, 384005	3.4	67
8	Detection, localization, and conformational analysis of single polysaccharide molecules on live bacteria. <i>ACS Nano</i> , 2008 , 2, 1921-9	16.7	151
7	Towards a Nanoscale View of Microbial Surfaces Using the Atomic Force Microscope 2008 , 111-126		
6	Direct measurement of hydrophobic forces on cell surfaces using AFM. <i>Langmuir</i> , 2007 , 23, 11977-9	4	141
5	Chemical force microscopy of single live cells. <i>Nano Letters</i> , 2007 , 7, 3026-30	11.5	129
4	Towards a nanoscale view of fungal surfaces. <i>Yeast</i> , 2007 , 24, 229-37	3.4	25
3	Nanomicrobiology. <i>Nanoscale Research Letters</i> , 2007 , 2, 365-372	5	4
2	Molecular interaction and inhibition of SARS-CoV-2 binding to the ACE2 receptor		2
1	Rotavirus Binding to Cell Surface Receptors Directly Recruiting α Integrin. <i>Advanced NanoBiomed Research</i> , 2100077	0	1

