Nanoscale Adhesion Forces of <i>Pseudomonas aerugin

ACS Nano 8, 10723-10733 DOI: 10.1021/nn5044383

Citation Report

#	Article	IF	CITATIONS
1	Alumina surfaces with nanoscale topography reduce attachment and biofilm formation by <i>Escherichia coli</i> and <i>Listeria</i> spp Biofouling, 2014, 30, 1253-1268.	2.2	85
2	C-di-GMP Regulates Motile to Sessile Transition by Modulating MshA Pili Biogenesis and Near-Surface Motility Behavior in Vibrio cholerae. PLoS Pathogens, 2015, 11, e1005068.	4.7	108
3	Type IV pili mechanochemically regulate virulence factors in <i>Pseudomonas aeruginosa</i> . Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7563-7568.	7.1	320
4	Binding Forces of <i>Streptococcus mutans</i> P1 Adhesin. ACS Nano, 2015, 9, 1448-1460.	14.6	60
5	Bacterial adhesion force quantification by fluidic force microscopy. Nanoscale, 2015, 7, 4070-4079.	5.6	72
6	Sticky microbes: forces in microbial cell adhesion. Trends in Microbiology, 2015, 23, 376-382.	7.7	149
7	Cerebral ischemia-induced mitochondrial changes in a global ischemic rat model by AFM. Biomedicine and Pharmacotherapy, 2015, 71, 15-20.	5.6	8
8	Nanoscale Pulling of Type IV Pili Reveals Their Flexibility and Adhesion to Surfaces over Extended Lengths of the Pili. Biophysical Journal, 2015, 108, 2865-2875.	0.5	32
9	Recent advances in micromechanical characterization of polymer, biomaterial, and cell surfaces with atomic force microscopy. Japanese Journal of Applied Physics, 2015, 54, 08LA02.	1.5	41
10	A Double-Edged Sword: The Role of VEGF in Wound Repair and Chemoattraction of Opportunist Pathogens. International Journal of Molecular Sciences, 2015, 16, 7159-7172.	4.1	18
11	Force-induced remodelling of proteins and their complexes. Current Opinion in Structural Biology, 2015, 30, 89-99.	5.7	42
12	Biogenesis of <scp><i>P</i></scp> <i>seudomonas aeruginosa</i> type <scp>IV</scp> pili and regulation of their function. Environmental Microbiology, 2015, 17, 4148-4163.	3.8	88
13	Cross-regulation of Pseudomonas motility systems: the intimate relationship between flagella, pili and virulence. Current Opinion in Microbiology, 2015, 28, 78-82.	5.1	82
14	Understanding the role of clay minerals in the chromium(VI) bioremoval by Pseudomonas aeruginosa CCTCC AB93066 under growth condition: microscopic, spectroscopic and kinetic analysis. World Journal of Microbiology and Biotechnology, 2015, 31, 1765-1779.	3.6	21
15	How Bacteria Use Type IV Pili Machinery on Surfaces. Trends in Microbiology, 2015, 23, 775-788.	7.7	165
16	Understanding forces in biofilms. Nanomedicine, 2015, 10, 1219-1221.	3.3	5
17	Perspective: Adhesion Mediated Signal Transduction in Bacterial Pathogens. Pathogens, 2016, 5, 23.	2.8	12
18	Vaginal epithelial cells regulate membrane adhesiveness to co-ordinate bacterial adhesion. Cellular Microbiology, 2016, 18, 605-614.	2.1	7

#	Article	IF	CITATIONS
19	A scaffold protein connects type IV pili with the Chp chemosensory system to mediate activation of virulence signaling in <i>Pseudomonas aeruginosa</i> . Molecular Microbiology, 2016, 101, 590-605.	2.5	69
20	Principles and Applications of Force Spectroscopy Using Atomic Force Microscopy. Bulletin of the Korean Chemical Society, 2016, 37, 1895-1907.	1.9	12
21	Pili of Lactobacillus rhamnosus GG mediate interaction with β-lactoglobulin. Food Hydrocolloids, 2016, 58, 35-41.	10.7	26
22	Biomechanics of Borrelia burgdorferi Vascular Interactions. Cell Reports, 2016, 16, 2593-2604.	6.4	48
23	Oligomerized backbone pilin helps piliated <i>Lactococcus lactis</i> to withstand shear flow. Biofouling, 2016, 32, 911-923.	2.2	5
24	Formation of bacterial pilus-like nanofibres by designed minimalistic self-assembling peptides. Nature Communications, 2016, 7, 13482.	12.8	27
25	Optical and force nanoscopy in microbiology. Nature Microbiology, 2016, 1, 16186.	13.3	84
26	Curli mediate bacterial adhesion to fibronectin via tensile multiple bonds. Scientific Reports, 2016, 6, 33909.	3.3	50
27	Probing the adhesion interactions of graphene on silicon oxide by nanoindentation. Carbon, 2016, 103, 63-72.	10.3	50
28	Nanoscale characteristics of antibacterial cationic polymeric brushes and single bacterium interactions probed by force microscopy. RSC Advances, 2016, 6, 17092-17099.	3.6	13
29	Bacterial mechanotransduction. Current Opinion in Microbiology, 2017, 36, 1-6.	5.1	55
30	Role of Cyclic Di-GMP and Exopolysaccharide in Type IV Pilus Dynamics. Journal of Bacteriology, 2017, 199, .	2.2	32
31	Plasma fibronectin stabilizes <i>Borrelia burgdorferi</i> –endothelial interactions under vascular shear stress by a catch-bond mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E3490-E3498.	7.1	35
32	Measurement of the unwinding force of a DNA double helix. Journal of Structural Chemistry, 2017, 58, 315-339.	1.0	2
33	Cryoelectron Microscopy Reconstructions of the Pseudomonas aeruginosa and Neisseria gonorrhoeae Type IV Pili at Sub-nanometer Resolution. Structure, 2017, 25, 1423-1435.e4.	3.3	87
34	Defining the Mechanical Determinants of Kingella kingae Adherence to Host Cells. Journal of Bacteriology, 2017, 199, .	2.2	10
35	Recent advances in studying single bacteria and biofilm mechanics. Advances in Colloid and Interface Science, 2017, 247, 573-588.	14.7	42
36	Microfluidic bacterial traps for simultaneous fluorescence and atomic force microscopy. Nano Research, 2017, 10, 3896-3908.	10.4	16

#	Article	IF	CITATIONS
37	Bactericidal activity of the Ti–13Nb–13Zr alloy against different species of bacteria related with implant infection. Biomedical Materials (Bristol), 2017, 12, 045022.	3.3	8
38	Applications of MEMS to Cell Biology. Springer Handbooks, 2017, , 587-616.	0.6	2
39	Determination of the nano-scaled contact area of staphylococcal cells. Nanoscale, 2017, 9, 10084-10093.	5.6	29
40	Adhesion control of fungal spores on solid surfaces using hydrophilic nanoparticles. Advanced Powder Technology, 2018, 29, 909-914.	4.1	8
41	Single Molecule Force Spectroscopy Reveals Two-Domain Binding Mode of Pilus-1 Tip Protein RrgA of <i>Streptococcus pneumoniae</i> to Fibronectin. ACS Nano, 2018, 12, 549-558.	14.6	25
42	Physico-chemistry from initial bacterial adhesion to surface-programmed biofilm growth. Advances in Colloid and Interface Science, 2018, 261, 1-14.	14.7	245
43	Adhesion to nanofibers drives cell membrane remodeling through one-dimensional wetting. Nature Communications, 2018, 9, 4450.	12.8	24
44	Direct measurements of colloidal behavior of polystyrene nanoparticles into budding yeast cells using atomic force microscopy and confocal microscopy. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 555, 653-659.	4.7	5
45	Assessment of extracellular matrix modulation of cell traction force by using silicon nanowire array. Nano Energy, 2018, 50, 504-512.	16.0	9
46	Atomic Force Microscopy (AFM) for Topography and Recognition Imaging at Single-Molecule Level. , 2018, , 1-14.		0
47	Control of colloidal behavior of polystyrene latex nanoparticles and their cytotoxicity toward yeast cells using water-soluble polymers. Advanced Powder Technology, 2018, 29, 2204-2210.	4.1	7
48	The Role of Glycans in Bacterial Adhesion to Mucosal Surfaces: How Can Single-Molecule Techniques Advance Our Understanding?. Microorganisms, 2018, 6, 39.	3.6	34
49	<i>Xanthomonas vesicatoria</i> virulence factors involved in early stages of bacterial spot development in tomato. Plant Pathology, 2018, 67, 1936-1943.	2.4	13
50	Substrate-rigidity dependent migration of an idealized twitching bacterium. Soft Matter, 2019, 15, 6224-6236.	2.7	8
51	Bacterial spinning top. Journal of Fluid Mechanics, 2019, 880, 620-652.	3.4	15
52	Single-molecule atomic force microscopy studies of microbial pathogens. Current Opinion in Biomedical Engineering, 2019, 12, 1-7.	3.4	18
53	Microbial adhesion and ultrastructure from the single-molecule to the single-cell levels by Atomic Force Microscopy. Cell Surface, 2019, 5, 100031.	3.0	21
54	Direct measurement of interaction forces between a yeast cell and a microbubble using atomic force microscopy. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 583, 123963.	4.7	6

#	Article	IF	CITATIONS
55	Pilus-1 Backbone Protein RrgB of <i>Streptococcus pneumoniae</i> Binds Collagen I in a Force-Dependent Way. ACS Nano, 2019, 13, 7155-7165.	14.6	21
56	Type IV pili: dynamics, biophysics and functional consequences. Nature Reviews Microbiology, 2019, 17, 429-440.	28.6	297
57	A modular atomic force microscopy approach reveals a large range of hydrophobic adhesion forces among bacterial members of the leaf microbiota. ISME Journal, 2019, 13, 1878-1882.	9.8	32
58	The Dynamic Structures of the Type IV Pilus. Microbiology Spectrum, 2019, 7, .	3.0	34
59	Nanopillared Surfaces Disrupt <i>Pseudomonas aeruginosa</i> Mechanoresponsive Upstream Motility. ACS Applied Materials & Interfaces, 2019, 11, 10532-10539.	8.0	17
60	Pseudomonas aeruginosa orchestrates twitching motility by sequential control of type IV pili movements. Nature Microbiology, 2019, 4, 774-780.	13.3	109
61	The Dynamic Structures of the Type IV Pilus. , 2019, , 113-128.		2
62	Deep mutational scanning of the <i>Neisseria meningitidis</i> major pilin reveals the importance of pilus tipâ€mediated adhesion. EMBO Journal, 2019, 38, e102145.	7.8	12
63	Thioredoxin Modulates Cell Surface Hydrophobicity in Acinetobacter baumannii. Frontiers in Microbiology, 2019, 10, 2849.	3.5	14
64	Atomic Force Microscopy. Methods in Molecular Biology, 2019, , .	0.9	7
65	Investigation of Bacterial Curli Production and Adhesion Using AFM. Methods in Molecular Biology, 2019, 1886, 221-231.	0.9	2
66	What makes bacterial pathogens so sticky?. Molecular Microbiology, 2020, 113, 683-690.	2.5	18
67	Mussel inspired bacterial denitrification of water using fractal patterns of polydopamine. Journal of Water Process Engineering, 2020, 33, 101105.	5.6	6
68	Using Atomic Force Microscopy To Illuminate the Biophysical Properties of Microbes. ACS Applied Bio Materials, 2020, 3, 143-155.	4.6	11
69	Glycan–glycan interactions determine Leishmania attachment to the midgut of permissive sand fly vectors. Chemical Science, 2020, 11, 10973-10983.	7.4	4
70	Surface Sensing and Adaptation in Bacteria. Annual Review of Microbiology, 2020, 74, 735-760.	7.3	49
71	The microbial adhesive arsenal deciphered by atomic force microscopy. Nanoscale, 2020, 12, 23885-23896.	5.6	11
72	A QCM-based rupture event scanning technique as a simple and reliable approach to study the kinetics of DNA duplex dissociation. Analytical Methods, 2020, 12, 3771-3777.	2.7	1

#	Article	IF	CITATIONS
73	Overcoming the challenge of establishing biofilms in vivo: a roadmap for Enterococci. Current Opinion in Microbiology, 2020, 53, 9-18.	5.1	13
74	The importance of force in microbial cell adhesion. Current Opinion in Colloid and Interface Science, 2020, 47, 111-117.	7.4	11
75	Mechanomicrobiology: how bacteria sense and respond to forces. Nature Reviews Microbiology, 2020, 18, 227-240.	28.6	171
76	How Microbes Use Force To Control Adhesion. Journal of Bacteriology, 2020, 202, .	2.2	19
77	More than a Feeling: Microscopy Approaches to Understanding Surface-Sensing Mechanisms. Journal of Bacteriology, 2021, 203, .	2.2	5
78	Does protein unfolding play a functional role <i>in vivo</i> ?. FEBS Journal, 2021, 288, 1742-1758.	4.7	14
79	Quantification of nanoscale forces in lectin-mediated bacterial attachment and uptake into giant liposomes. Nanoscale, 2021, 13, 4016-4028.	5.6	10
80	Roadmap on emerging concepts in the physical biology of bacterial biofilms: from surface sensing to community formation. Physical Biology, 2021, 18, 051501.	1.8	46
81	Competitive binding of independent extension and retraction motors explains the quantitative dynamics of type IV pili. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	35
82	<scp>AFM</scp> in cellular and molecular microbiology. Cellular Microbiology, 2021, 23, e13324.	2.1	36
83	High-Throughput Screen for Inhibitors of the Type IV Pilus Assembly ATPase PilB. MSphere, 2021, 6, .	2.9	9
84	AFM Unravels the Unique Adhesion Properties of the <i>Caulobacter</i> Type IVc Pilus Nanomachine. Nano Letters, 2021, 21, 3075-3082.	9.1	13
85	Exploration of Ligandâ€receptor Binding and Mechanisms for Alginate Reduction and Phenotype Reversion by Mucoid Pseudomonas aeruginosa. ChemMedChem, 2021, 16, 1975-1985.	3.2	1
86	Measuring bacterial attachment forces. , 2021, , .		0
89	Force spectroscopy of single cells using atomic force microscopy. Nature Reviews Methods Primers, 2021, 1, .	21.2	61
90	Bacterial motility: machinery and mechanisms. Nature Reviews Microbiology, 2022, 20, 161-173.	28.6	167
91	Quantifying molecular- to cellular-level forces in living cells. Journal Physics D: Applied Physics, 2021, 54, 483001.	2.8	5
92	The biophysics of bacterial infections: Adhesion events in the light of force spectroscopy. Cell Surface, 2021, 7, 100048.	3.0	6

#	Article	IF	Citations
93	Bacterial anti-adhesion surface design: Surface patterning, roughness and wettability: A review. Journal of Materials Science and Technology, 2022, 99, 82-100.	10.7	119
94	Pathogenesis and Drug Resistance of Pseudomonas aeruginosa. , 2020, , 227-256.		1
98	Response of Bacteria to Mechanical Stimuli. Microbiology, 2021, 90, 558-568.	1.2	1
101	Atomic Force Microscopy: A New Look at Microbes. Synthesis Lectures on Materials and Optics, 2020, 1, 1-111.	0.2	0
102	Type IV Pili: dynamic bacterial nanomachines. FEMS Microbiology Reviews, 2022, 46, .	8.6	26
103	Force-Induced Changes of PilY1 Drive Surface Sensing by Pseudomonas aeruginosa. MBio, 2022, 13, e0375421.	4.1	15
105	Chemical control over Asialo-GM1: A dual ligand for pili and Lectin A that activates swarming motility and facilitates adherence of Pseudomonas aeruginosa. Colloids and Surfaces B: Biointerfaces, 2022, 215, 112478.	5.0	1
107	Effect of pH on the Electrochemical Behavior of Hydrogen Peroxide in the Presence of Pseudomonas aeruginosa. Frontiers in Bioengineering and Biotechnology, 2021, 9, 749057.	4.1	2
108	A review on pilus assembly mechanisms in Gram-positive and Gram-negative bacteria. Cell Surface, 2022, 8, 100077.	3.0	15
109	The differential expression of PilY1 proteins by the HsfBA phosphorelay allows twitching motility in the absence of exopolysaccharides. PLoS Genetics, 2022, 18, e1010188.	3.5	3
110	<i>Pseudomonas aeruginosa</i> distinguishes surfaces by stiffness using retraction of type IV pili. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119434119.	7.1	16
111	The Power of Touch: Type 4 Pili, the von Willebrand A Domain, and Surface Sensing by Pseudomonas aeruginosa. Journal of Bacteriology, 2022, 204, .	2.2	19
114	AFM Force Spectroscopy of Living Bacteria. Synthesis Lectures on Materials and Optics, 2020, , 53-73.	0.2	0
115	Physiochemically Distinct Surface Properties of SU-8 Polymer Modulate Bacterial Cell-Surface Holdfast and Colonization. ACS Applied Bio Materials, 2022, 5, 4903-4912.	4.6	0
116	Self-organized canals enable long-range directed material transport in bacterial communities. ELife, 0, 11, .	6.0	1
117	Biofilms and Benign Colonic Diseases. International Journal of Molecular Sciences, 2022, 23, 14259.	4.1	3
118	Nanomechanical probing of bacterial adhesion to biodegradable Zn alloys. , 2023, 145, 213243.		2
119	Pseudomonas aeruginosa and Staphylococcus aureus Display Differential Proteomic Responses to the Silver(I) Compound, SBC3. Antibiotics, 2023, 12, 348.	3.7	3

#	Article	IF	CITATIONS
120	Nanoscale imaging and force probing of single microbial cells by atomic force microscopy. , 2023, , 187-217.		1
121	The F-pilus biomechanical adaptability accelerates conjugative dissemination of antimicrobial resistance and biofilm formation. Nature Communications, 2023, 14, .	12.8	8
122	AFM Force Mapping Elucidates Pilus Deployment and Key Lifestyle-Dependent Surface Properties in <i>Bdellovibrio bacteriovorus</i> . Langmuir, 2023, 39, 4233-4244.	3.5	2
123	Bacteria in Fluid Flow. Journal of Bacteriology, 2023, 205, .	2.2	6
125	Substrate stiffness impacts early biofilm formation by modulating Pseudomonas aeruginosa twitching motility. ELife, 0, 12, .	6.0	6
126	Evidence for the Type IV Pilus Retraction Motor PilT as a Component of the Surface Sensing System in Pseudomonas aeruginosa. Journal of Bacteriology, 2023, 205, .	2.2	1
128	Quantification of bacterial adhesion to tissue in high-throughput kinetics. Biology Methods and Protocols, 0, , .	2.2	0
129	Shear force enhances adhesion of <i>Pseudomonas aeruginosa</i> by counteracting pilus-driven surface departure. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	7.1	0
130	Measuring attachment rate of predatory bacteria to prey using optical tweezers. , 2023, , .		0
131	Surface Nanomechanics of Bacteria under UV Radiation. Macromolecular Chemistry and Physics, 2023, 224, .	2.2	0
132	Molecular Adhesion of a Pilusâ€Đerived Peptide Involved in <i>Pseudomonas aeruginosa</i> Biofilm Formation on Nonâ€Polar ZnOâ€Surfaces. Chemistry - A European Journal, 0, , .	3.3	0
133	ææ–™èj¨é¢ã®AFMç´æ–镕解枕 Bunseki Kagaku, 2023, 72, 455-461.	0.2	0
134	Interaction of Pseudomonas aeruginosa with surface-modified silica studied by ultra-high frequency acoustic wave biosensor. , 0, , 5-13.		0
135	Outer membrane vesicles and the outer membrane protein OmpU govern <i>Vibrio cholerae</i> biofilm matrix assembly. MBio, 2024, 15, .	4.1	0
136	Micro-biophysical interactions at bacterium-mineral interfaces determine potassium dissolution. Environmental Technology and Innovation, 2024, 33, 103524.	6.1	0
137	Factors influencing initial bacterial adhesion to antifouling surfaces studied by single-cell force spectroscopy. IScience, 2024, 27, 108803.	4.1	0
138	Potential of Synechococcus elongatus UTEX 2973 as a feedstock for sugar production during mixed aquaculture and swine wastewater bioremediation. Heliyon, 2024, 10, e24646.	3.2	0
139	Tailoring AA6063 for improving antibacterial properties. Applied Surface Science Advances, 2024, 19, 100574.	6.8	0

#	Article	IF	CITATIONS
140	Spectroscopic and Microscopic Characterization of Microbial Biofouling on Aircraft Fuel Tanks. Langmuir, 0, , .	3.5	0
141	Regulating bacterial biofilms in food and biomedicine: unraveling mechanisms and Innovating strategies. Critical Reviews in Food Science and Nutrition, 0, , 1-17.	10.3	0