Howard C Berg

List of Publications by Year
in descending order

60 papers	9,708 citations	147566 31 h-index	143772 57 g-index
63 all docs	63 docs citations	63 times ranked	5322 citing authors

#	Article	IF	Citations
1	Chemotaxis in Escherichia coli analysed by Three-dimensional Tracking. Nature, 1972, 239, 500-504.	13.7	2,049
2	The Rotary Motor of Bacterial Flagella. Annual Review of Biochemistry, 2003, 72, 19-54.	5.0	1,305
3	Bacteria Swim by Rotating their Flagellar Filaments. Nature, 1973, 245, 380-382.	13.7	871
4	Real-Time Imaging of Fluorescent Flagellar Filaments. Journal of Bacteriology, 2000, 182, 2793-2801.	1.0	637
5	Dynamics of formation of symmetrical patterns by chemotactic bacteria. Nature, 1995, 376, 49-53.	13.7	456
6	On Torque and Tumbling in Swimming Escherichia coli. Journal of Bacteriology, 2007, 189, 1756-1764.	1.0	382
7	Movement of microorganisms in viscous environments. Nature, 1979, 278, 349-351.	13.7	321
8	The MotA protein of E. coli is a proton-conducting component of the flagellar motor. Cell, 1990, 60, 439-449.	13.5	316
9	Dynamics of mechanosensing in the bacterial flagellar motor. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 11839-11844.	3.3	266
10	Dynamics of Bacterial Swarming. Biophysical Journal, 2010, 98, 2082-2090.	0.2	247
11	Torque-generating units of the flagellar motor of Escherichia coli have a high duty ratio. Nature, 2000, 403, 444-447.	13.7	244
12	How to Track Bacteria. Review of Scientific Instruments, 1971, 42, 868-871.	0.6	196
13	Visualization of Flagella during Bacterial Swarming. Journal of Bacteriology, 2010, 192, 3259-3267.	1.0	174
14	Bacterial behaviour. Nature, 1975, 254, 389-392.	13.7	173
15	Bacterial motility: machinery and mechanisms. Nature Reviews Microbiology, 2022, 20, 161-173.	13.6	167
16	The speed of the flagellar rotary motor of Escherichia coli varies linearly with protonmotive force. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 8748-8751.	3.3	165
17	Structure and Function of Stator Units of the Bacterial Flagellar Motor. Cell, 2020, 183, 244-257.e16.	13.5	151
18	Adaptation at the output of the chemotaxis signalling pathway. Nature, 2012, 484, 233-236.	13.7	132

#	ARTICLE	IF	CITATIONS
19	Powering the flagellar motor of Escherichia coli with an external voltage source. Nature, 1995, 375, 809-812.	13.7	126
20	How spirochetes may swim. Journal of Theoretical Biology, 1976, 56, 269-273.	0.8	122
21	Mutations in the MotA protein of Escherichia coli reveal domains critical for proton conduction. Journal of Molecular Biology, 1991, 221, 1433-1442.	2.0	97
22	Asymmetry in the clockwise and counterclockwise rotation of the bacterial flagellar motor. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12846-12849.	3.3	82
23	Mechanism for adaptive remodeling of the bacterial flagellar switch. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20018-20022.	3.3	82
24	Visualizing Flagella while Tracking Bacteria. Biophysical Journal, 2016, 111, 630-639.	0.2	75
25	How Bacteria Swim. Scientific American, 1975, 233, 36-44.	1.0	71
26	A Rotary Motor Drives Flavobacterium Gliding. Current Biology, 2015, 25, 338-341.	1.8	56
27	Torque-dependent remodeling of the bacterial flagellar motor. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11764-11769.	3.3	56
28	Specification of Gradients used for Studies of Chemotaxis. Nature, 1972, 239, 517-518.	13.7	45
29	Novel ultrastructures of <i>Treponema primitia</i> and their implications for motility. Molecular Microbiology, 2008, 67, 1184-1195.	1.2	44
30	Cargo transport shapes the spatial organization of a microbial community. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8633-8638.	3.3	43
31	Bacterial flagellar motor. Current Biology, 2008, 18, R689-R691.	1.8	41
32	Mutations That Stimulate <i>flhDC</i> Expression in Escherichia coli K-12. Journal of Bacteriology, 2015, 197, 3087-3096.	1.0	36
33	Osmotic Pressure in a Bacterial Swarm. Biophysical Journal, 2014, 107, 871-878.	0.2	35
34	Structural basis of torque generation in the bi-directional bacterial flagellar motor. Trends in Biochemical Sciences, 2022, 47, 160-172.	3.7	35
35	Swarming Motility: It Better Be Wet. Current Biology, 2005, 15, R599-R600.	1.8	34
36	Adaptive Remodelling by FliN in the Bacterial Rotary Motor. Journal of Molecular Biology, 2014, 426, 3314-3324.	2.0	34

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37	Switching dynamics of the bacterial flagellar motor near zero load. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 15752-15755.	3.3	32
38	The Screw-Like Movement of a Gliding Bacterium Is Powered by Spiral Motion of Cell-Surface Adhesins. Biophysical Journal, 2016, 111, 1008-1013.	0.2	30
39	The flagellar motor of CaulobacterÂcrescentus generates more torque when a cell swimsÂbackwards. Nature Physics, 2016, 12, 175-178.	6.5	30
40	Towards a model for Flavobacterium gliding. Current Opinion in Microbiology, 2015, 28, 93-97.	2.3	29
41	Response thresholds in bacterial chemotaxis. Science Advances, 2015, 1, e1500299.	4.7	27
42	A molecular rack and pinion actuates a cell-surface adhesin and enables bacterial gliding motility. Science Advances, 2020, 6, eaay6616.	4.7	22
43	The bacterium has landed. Science, 2017, 358, 446-447.	6.0	21
44	Keeping up with the F1-ATPase. Nature, 1998, 394, 324-325.	13.7	19
45	Mechanosensitive remodeling of the bacterial flagellar motor is independent of direction of rotation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	19
46	Switching of Bacterial Flagellar Motors Triggered by Mutant FliG. Biophysical Journal, 2015, 108, 1275-1280.	0.2	17
47	Internal and external components of the bacterial flagellar motor rotate as a unit. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4783-4787.	3.3	16
48	How Spiroplasma Might Swim. Journal of Bacteriology, 2002, 184, 2063-2064.	1.0	15
49	The flagellar motor adapts, optimizing bacterial behavior. Protein Science, 2017, 26, 1249-1251.	3.1	13
50	CW and CCW Conformations of the E.Âcoli Flagellar Motor C-Ring Evaluated by Fluorescence Anisotropy. Biophysical Journal, 2018, 114, 641-649.	0.2	13
51	Labeling Bacterial Flagella with Fluorescent Dyes. Methods in Molecular Biology, 2018, 1729, 71-76.	0.4	9
52	Turning failure into function. Nature Physics, 2013, 9, 460-461.	6.5	7
53	Spin Relaxation of Atoms in Molecular Buffer Gases. Journal of Chemical Physics, 1965, 43, 1851-1851.	1.2	5
54	Howard Berg. Current Biology, 2005, 15, R189-R190.	1.8	5

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55	Comments on 'The use of flash photolysis for ... analysis of bacterial chemotactic behaviour ...' Mol Microbiol 25: 295-302 (1997). Molecular Microbiology, 1998, 27, 507-508.	1.2	3
56	Signaling events that occur when cells of Escherichia coli encounter a glass surface. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2116830119.	3.3	2
57	Perspectives on working at the physics-biology interface. Physical Biology, 2014, 11, 050301.	0.8	1
58	Amplitude and Decay Rate Analysis of Low Level Exponentially Decaying Radioâ€Frequency Signals. Review of Scientific Instruments, 1965, 36, 330-334.	0.6	0
59	The Gain Paradox. Progress in Biophysics and Molecular Biology, 2009, 100, 2-3.	1.4	0
60	1SDA-04 Wonders of bacterial motility(1SDA Prof Berg's featured lecture and dancing harmonized) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Butsuri, 2013, 53, S85.	0.0	0