

Knut Drescher

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.

57
papers

5,237
citations

29
h-index

63
g-index

63
ext. papers

6,762
ext. citations

11.1
avg, IF

5.95
L-index

#	Paper	IF	Citations
57	Meso-scale turbulence in living fluids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 14308-13	11.5	549
56	Fluid dynamics and noise in bacterial cell-cell and cell-surface scattering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 10940-5	11.5	486
55	Spatial structure, cooperation and competition in biofilms. <i>Nature Reviews Microbiology</i> , 2016 , 14, 589-600.2	20.2	466
54	A quorum-sensing inhibitor blocks <i>Pseudomonas aeruginosa</i> virulence and biofilm formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 17981-6	11.5	452
53	Fluid dynamics of bacterial turbulence. <i>Physical Review Letters</i> , 2013 , 110, 228102	7.4	301
52	<i>Chlamydomonas</i> swims with two "gears" in a eukaryotic version of run-and-tumble locomotion. <i>Science</i> , 2009 , 325, 487-90	33.3	301
51	The mechanical world of bacteria. <i>Cell</i> , 2015 , 161, 988-997	56.2	281
50	Direct measurement of the flow field around swimming microorganisms. <i>Physical Review Letters</i> , 2010 , 105, 168101	7.4	277
49	Biofilm streamers cause catastrophic disruption of flow with consequences for environmental and medical systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 4345-50	11.5	230
48	Solutions to the public goods dilemma in bacterial biofilms. <i>Current Biology</i> , 2014 , 24, 50-55	6.3	229
47	Dancing volvox: hydrodynamic bound states of swimming algae. <i>Physical Review Letters</i> , 2009 , 102, 168101	10.1	219
46	Dynamic biofilm architecture confers individual and collective mechanisms of viral protection. <i>Nature Microbiology</i> , 2018 , 3, 26-31	26.6	129
45	Architectural transitions in <i>Vibrio cholerae</i> biofilms at single-cell resolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E2066-72	11.5	119
44	Extracellular matrix structure governs invasion resistance in bacterial biofilms. <i>ISME Journal</i> , 2015 , 9, 1700-9	11.9	119
43	Emergence of three-dimensional order and structure in growing biofilms. <i>Nature Physics</i> , 2019 , 15, 251-266.2	26.2	116
42	Fidelity of adaptive phototaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 11171-6	11.5	97
41	Cutting through the complexity of cell collectives. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2013 , 280, 20122770	4.4	88

40	Phage mobility is a core determinant of phage-bacteria coexistence in biofilms. <i>ISME Journal</i> , 2018 , 12, 531-543	11.9	60
39	Comparison of hypercapnia-based calibration techniques for measurement of cerebral oxygen metabolism with MRI. <i>Magnetic Resonance in Medicine</i> , 2009 , 61, 391-8	4.4	54
38	Swimming like algae: biomimetic soft artificial cilia. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20120666	11.6	53
37	Learning the space-time phase diagram of bacterial swarm expansion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 1489-1494	11.5	50
36	Quantitative image analysis of microbial communities with BiofilmQ. <i>Nature Microbiology</i> , 2021 , 6, 151-156	15.6	49
35	Flow environment and matrix structure interact to determine spatial competition in biofilms. <i>ELife</i> , 2017 , 6,	8.9	47
34	Vibrio cholerae Combines Individual and Collective Sensing to Trigger Biofilm Dispersal. <i>Current Biology</i> , 2017 , 27, 3359-3366.e7	6.3	43
33	Filaments in curved streamlines: Rapid formation of biofilm streamers. <i>New Journal of Physics</i> , 2014 , 16, 065024	2.9	41
32	Breakdown of Vibrio cholerae biofilm architecture induced by antibiotics disrupts community barrier function. <i>Nature Microbiology</i> , 2019 , 4, 2136-2145	26.6	36
31	Diversification of Gene Expression during Formation of Static Submerged Biofilms by. <i>Frontiers in Microbiology</i> , 2016 , 7, 1568	5.7	35
30	Structural dynamics of RbmA governs plasticity of biofilms. <i>ELife</i> , 2017 , 6,	8.9	34
29	How to track protists in three dimensions. <i>Review of Scientific Instruments</i> , 2009 , 80, 014301	1.7	33
28	Upregulation of virulence genes promotes biofilm hyperinfectivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 11010-11017	11.5	23
27	BacStalk: A comprehensive and interactive image analysis software tool for bacterial cell biology. <i>Molecular Microbiology</i> , 2020 , 114, 140-150	4.1	20
26	Biofilm Structure Promotes Coexistence of Phage-Resistant and Phage-Susceptible Bacteria. <i>MSystems</i> , 2020 , 5,	7.6	19
25	Flow-Induced Symmetry Breaking in Growing Bacterial Biofilms. <i>Physical Review Letters</i> , 2019 , 123, 258101	11.1	18
24	Chemotactic behaviour of Escherichia coli at high cell density. <i>Nature Communications</i> , 2019 , 10, 5329	17.4	18
23	Cell adhesion and fluid flow jointly initiate genotype spatial distribution in biofilms. <i>PLoS Computational Biology</i> , 2018 , 14, e1006094	5	17

22	Kin discrimination in social yeast is mediated by cell surface receptors of the Flo11 adhesin family. <i>ELife</i> , 2020 , 9,	8.9	15
21	Advances and opportunities in image analysis of bacterial cells and communities. <i>FEMS Microbiology Reviews</i> , 2021 , 45,	15.1	13
20	Selective Enrichment of Slow-Growing Bacteria in a Metabolism-Wide CRISPRi Library with a TIMER Protein. <i>ACS Synthetic Biology</i> , 2018 , 7, 2775-2782	5.7	13
19	THE FLAGELLAR PHOTORESPONSE IN VOLVOX SPECIES (VOLVOCEAE, CHLOROPHYCEAE). <i>Journal of Phycology</i> , 2011 , 47, 580-583	3	10
18	Flagellar phenotypic plasticity in volvocalean algae correlates with Pfllet number. <i>Journal of the Royal Society Interface</i> , 2011 , 8, 1409-17	4.1	9
17	Multicellular and unicellular responses of microbial biofilms to stress. <i>Biological Chemistry</i> , 2020 , 401, 1365-1374	4.5	9
16	Privatization of Biofilm Matrix in Structurally Heterogeneous Biofilms. <i>MSystems</i> , 2020 , 5,	7.6	7
15	Stability of dancing Volvox. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	6
14	RNA-mediated control of cell shape modulates antibiotic resistance in <i>Vibrio cholerae</i> . <i>Nature Communications</i> , 2020 , 11, 6067	17.4	6
13	BacStalk: a comprehensive and interactive image analysis software tool for bacterial cell biology		5
12	Evolutionary dynamics of phage resistance in bacterial biofilms		5
11	A tyrosine phosphoregulatory system controls exopolysaccharide biosynthesis and biofilm formation in <i>Vibrio cholerae</i> . <i>PLoS Pathogens</i> , 2020 , 16, e1008745	7.6	4
10	Dynamic relocalization of cytosolic type III secretion system components prevents premature protein secretion at low external pH. <i>Nature Communications</i> , 2021 , 12, 1625	17.4	4
9	Spatial alanine metabolism determines local growth dynamics of colonies. <i>ELife</i> , 2021 , 10,	8.9	3
8	Common concepts for bacterial collectives. <i>ELife</i> , 2019 , 8,	8.9	3
7	Dynamic relocalization of the cytosolic type III secretion system components prevents premature protein secretion at low external pH		3
6	Matrix-trapped viruses can prevent invasion of bacterial biofilms by colonizing cells. <i>ELife</i> , 2021 , 10,	8.9	3
5	An Emerging Grip on the Growth of Grounded Bacteria. <i>ACS Nano</i> , 2016 , 10, 9109-9110	16.7	2

4	Bakterielle Multizellularität in Biofilmen. <i>BioSpektrum</i> , 2019 , 25, 258-260	0.1	2
3	Single-objective high-resolution confocal light sheet fluorescence microscopy for standard biological sample geometries. <i>Biomedical Optics Express</i> , 2021 , 12, 3372-3391	3.5	2
2	Multispecies phase diagram reveals biophysical principles of bacterial biofilm architectures		2
1	Privatization of biofilm matrix in structurally heterogeneous biofilms		1