

# Knut Drescher

## List of Publications by Year in Descending Order

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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	Spatial alanine metabolism determines local growth dynamics of colonies. <i>ELife</i> , <b>2021</b> , 10,	8.9	3
56	Dynamic relocalization of cytosolic type III secretion system components prevents premature protein secretion at low external pH. <i>Nature Communications</i> , <b>2021</b> , 12, 1625	17.4	4
55	Single-objective high-resolution confocal light sheet fluorescence microscopy for standard biological sample geometries. <i>Biomedical Optics Express</i> , <b>2021</b> , 12, 3372-3391	3.5	2
54	Matrix-trapped viruses can prevent invasion of bacterial biofilms by colonizing cells. <i>ELife</i> , <b>2021</b> , 10,	8.9	3
53	Advances and opportunities in image analysis of bacterial cells and communities. <i>FEMS Microbiology Reviews</i> , <b>2021</b> , 45,	15.1	13
52	Quantitative image analysis of microbial communities with BiofilmQ. <i>Nature Microbiology</i> , <b>2021</b> , 6, 151-156	15.6	49
51	BacStalk: A comprehensive and interactive image analysis software tool for bacterial cell biology. <i>Molecular Microbiology</i> , <b>2020</b> , 114, 140-150	4.1	20
50	Upregulation of virulence genes promotes biofilm hyperinfectivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 11010-11017	11.5	23
49	Multicellular and unicellular responses of microbial biofilms to stress. <i>Biological Chemistry</i> , <b>2020</b> , 401, 1365-1374	4.5	9
48	Kin discrimination in social yeast is mediated by cell surface receptors of the Flo11 adhesin family. <i>ELife</i> , <b>2020</b> , 9,	8.9	15
47	Privatization of Biofilm Matrix in Structurally Heterogeneous Biofilms. <i>MSystems</i> , <b>2020</b> , 5,	7.6	7
46	Stability of dancing Volvox. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 903,	3.7	6
45	RNA-mediated control of cell shape modulates antibiotic resistance in <i>Vibrio cholerae</i> . <i>Nature Communications</i> , <b>2020</b> , 11, 6067	17.4	6
44	Biofilm Structure Promotes Coexistence of Phage-Resistant and Phage-Susceptible Bacteria. <i>MSystems</i> , <b>2020</b> , 5,	7.6	19
43	A tyrosine phosphoregulatory system controls exopolysaccharide biosynthesis and biofilm formation in <i>Vibrio cholerae</i> . <i>PLoS Pathogens</i> , <b>2020</b> , 16, e1008745	7.6	4
42	Bakterielle Multizellularität in Biofilmen. <i>BioSpektrum</i> , <b>2019</b> , 25, 258-260	0.1	2
41	Common concepts for bacterial collectives. <i>ELife</i> , <b>2019</b> , 8,	8.9	3

40	Flow-Induced Symmetry Breaking in Growing Bacterial Biofilms. <i>Physical Review Letters</i> , <b>2019</b> , 123, 258101	18
39	Chemotactic behaviour of Escherichia coli at high cell density. <i>Nature Communications</i> , <b>2019</b> , 10, 5329	17.4 18
38	Breakdown of Vibrio cholerae biofilm architecture induced by antibiotics disrupts community barrier function. <i>Nature Microbiology</i> , <b>2019</b> , 4, 2136-2145	26.6 36
37	Emergence of three-dimensional order and structure in growing biofilms. <i>Nature Physics</i> , <b>2019</b> , 15, 251-256	26.2 116
36	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> , <b>2019</b> , 116, 1489-1494	11.5 50
35	Dynamic biofilm architecture confers individual and collective mechanisms of viral protection. <i>Nature Microbiology</i> , <b>2018</b> , 3, 26-31	26.6 129
34	Cell adhesion and fluid flow jointly initiate genotype spatial distribution in biofilms. <i>PLoS Computational Biology</i> , <b>2018</b> , 14, e1006094	5 17
33	Phage mobility is a core determinant of phage-bacteria coexistence in biofilms. <i>ISME Journal</i> , <b>2018</b> , 12, 531-543	11.9 60
32	Selective Enrichment of Slow-Growing Bacteria in a Metabolism-Wide CRISPRi Library with a TIMER Protein. <i>ACS Synthetic Biology</i> , <b>2018</b> , 7, 2775-2782	5.7 13
31	Vibrio cholerae Combines Individual and Collective Sensing to Trigger Biofilm Dispersal. <i>Current Biology</i> , <b>2017</b> , 27, 3359-3366.e7	6.3 43
30	Structural dynamics of RbmA governs plasticity of biofilms. <i>ELife</i> , <b>2017</b> , 6,	8.9 34
29	Flow environment and matrix structure interact to determine spatial competition in biofilms. <i>ELife</i> , <b>2017</b> , 6,	8.9 47
28	Spatial structure, cooperation and competition in biofilms. <i>Nature Reviews Microbiology</i> , <b>2016</b> , 14, 589-600	20.2 466
27	An Emerging Grip on the Growth of Grounded Bacteria. <i>ACS Nano</i> , <b>2016</b> , 10, 9109-9110	16.7 2
26	Architectural transitions in Vibrio cholerae biofilms at single-cell resolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, E2066-72	11.5 119
25	Diversification of Gene Expression during Formation of Static Submerged Biofilms by. <i>Frontiers in Microbiology</i> , <b>2016</b> , 7, 1568	5.7 35
24	The mechanical world of bacteria. <i>Cell</i> , <b>2015</b> , 161, 988-997	56.2 281
23	Extracellular matrix structure governs invasion resistance in bacterial biofilms. <i>ISME Journal</i> , <b>2015</b> , 9, 1700-9	11.9 119

22	Solutions to the public goods dilemma in bacterial biofilms. <i>Current Biology</i> , <b>2014</b> , 24, 50-55	6.3	229
21	Filaments in curved streamlines: Rapid formation of biofilm streamers. <i>New Journal of Physics</i> , <b>2014</b> , 16, 065024	2.9	41
20	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> , <b>2013</b> , 110, 17981-6	11.5	452
19	Fluid dynamics of bacterial turbulence. <i>Physical Review Letters</i> , <b>2013</b> , 110, 228102	7.4	301
18	Swimming like algae: biomimetic soft artificial cilia. <i>Journal of the Royal Society Interface</i> , <b>2013</b> , 10, 20120666	4.6	53
17	Cutting through the complexity of cell collectives. <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2013</b> , 280, 20122770	4.4	88
16	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> , <b>2013</b> , 110, 4345-50	11.5	230
15	Meso-scale turbulence in living fluids. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2012</b> , 109, 14308-13	11.5	549
14	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> , <b>2011</b> , 108, 10940-5	11.5	486
13	THE FLAGELLAR PHOTORESPONSE IN VOLVOX SPECIES (VOLVOCEAE, CHLOROPHYCEAE). <i>Journal of Phycology</i> , <b>2011</b> , 47, 580-583	3	10
12	Flagellar phenotypic plasticity in volvoclean algae correlates with Péclet number. <i>Journal of the Royal Society Interface</i> , <b>2011</b> , 8, 1409-17	4.1	9
11	Fidelity of adaptive phototaxis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 11171-6	11.5	97
10	Direct measurement of the flow field around swimming microorganisms. <i>Physical Review Letters</i> , <b>2010</b> , 105, 168101	7.4	277
9	Dancing volvox: hydrodynamic bound states of swimming algae. <i>Physical Review Letters</i> , <b>2009</b> , 102, 168101	7.4	219
8	How to track protists in three dimensions. <i>Review of Scientific Instruments</i> , <b>2009</b> , 80, 014301	1.7	33
7	Comparison of hypercapnia-based calibration techniques for measurement of cerebral oxygen metabolism with MRI. <i>Magnetic Resonance in Medicine</i> , <b>2009</b> , 61, 391-8	4.4	54
6	<i>Chlamydomonas</i> swims with two "gears" in a eukaryotic version of run-and-tumble locomotion. <i>Science</i> , <b>2009</b> , 325, 487-90	33.3	301
5	Privatization of biofilm matrix in structurally heterogeneous biofilms		1

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