

Jan-Ulrich Kreft

List of Publications by Year in descending order

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Version: 2024-02-01

61
papers

4,990
citations

186265

28
h-index

155660

55
g-index

96
all docs

96
docs citations

96
times ranked

5362
citing authors

#	ARTICLE	IF	CITATIONS
1	Predation Strategies of the Bacterium <i>Bdellovibrio bacteriovorus</i> Result in Overexploitation and Bottlenecks. <i>Applied and Environmental Microbiology</i> , 2022, 88, AEM0108221.	3.1	5
2	Experimental evolution of <i>Pseudomonas putida</i> under silver ion versus nanoparticle stress. <i>Environmental Microbiology</i> , 2022, 24, 905-918.	3.8	1
3	Towards a general model for predicting minimal metal concentrations co-selecting for antibiotic resistance plasmids. <i>Environmental Pollution</i> , 2021, 275, 116602.	7.5	22
4	EMBRACE-WATERS statement: Recommendations for reporting of studies on antimicrobial resistance in wastewater and related aquatic environments. <i>One Health</i> , 2021, 13, 100339.	3.4	11
5	Evolutionary causes and consequences of metabolic division of labour: why anaerobes do and aerobes don't. <i>Current Opinion in Biotechnology</i> , 2020, 62, 80-87.	6.6	31
6	Dual Predation by Bacteriophage and <i>Bdellovibrio bacteriovorus</i> Can Eradicate <i>Escherichia coli</i> Prey in Situations where Single Predation Cannot. <i>Journal of Bacteriology</i> , 2020, 202, .	2.2	29
7	A generalised model for generalised transduction: the importance of co-evolution and stochasticity in phage mediated antimicrobial resistance transfer. <i>FEMS Microbiology Ecology</i> , 2020, 96, .	2.7	10
8	Comparison of antibiotic-resistant bacteria and antibiotic resistance genes abundance in hospital and community wastewater: A systematic review. <i>Science of the Total Environment</i> , 2020, 743, 140804.	8.0	126
9	Toward Engineering Biosystems With Emergent Collective Functions. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 705.	4.1	22
10	Potential of curing by a broad-host-range self-transmissible vector for displacing resistance plasmids to tackle AMR. <i>PLoS ONE</i> , 2020, 15, e0225202.	2.5	10
11	Antimicrobial and ultrastructural properties of root canal filling materials exposed to bacterial challenge. <i>Journal of Dentistry</i> , 2020, 93, 103283.	4.1	13
12	Damage Repair versus Aging in an Individual-Based Model of Biofilms. <i>MSystems</i> , 2020, 5, .	3.8	5
13	Evolutionary strategies of <i>Bdellovibrio bacteriovorus</i> predators and prey. <i>Access Microbiology</i> , 2019, 1, .	0.5	0
14	Elucidating the impact of micro-scale heterogeneous bacterial distribution on biodegradation. <i>Advances in Water Resources</i> , 2018, 116, 67-76.	3.8	18
15	Editorial: The Individual Microbe: Single-Cell Analysis and Agent-Based Modelling. <i>Frontiers in Microbiology</i> , 2018, 9, 2825.	3.5	13
16	Editorial: The microbiome as a source of new enterprises and job creation. <i>Microbial Biotechnology</i> , 2018, 11, 145-148.	4.2	2
17	Mathematical Modeling of Plasmid Dynamics. , 2018, , 659-663.		0
18	Reducing discrepancies between 3D and 2D simulations due to cell packing density. <i>Journal of Theoretical Biology</i> , 2017, 423, 26-30.	1.7	4

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19	Time-resolved toxicity study reveals the dynamic interactions between uncoated silver nanoparticles and bacteria. <i>Nanotoxicology</i> , 2017, 11, 637-646.	3.0	20
20	From Genes to Ecosystems in Microbiology: Modeling Approaches and the Importance of Individuality. <i>Frontiers in Microbiology</i> , 2017, 8, 2299.	3.5	37
21	Challenges in microbial ecology: building predictive understanding of community function and dynamics. <i>ISME Journal</i> , 2016, 10, 2557-2568.	9.8	570
22	New, rapid method to measure dissolved silver concentration in silver nanoparticle suspensions by aggregation combined with centrifugation. <i>Journal of Nanoparticle Research</i> , 2016, 18, 259.	1.9	19
23	Advancing microbial sciences by individual-based modelling. <i>Nature Reviews Microbiology</i> , 2016, 14, 461-471.	28.6	193
24	Î±-1-Antitrypsin variants and the proteinase/antiproteinase imbalance in chronic obstructive pulmonary disease. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2015, 308, L179-L190.	2.9	49
25	Mathematical Modeling of Plasmid Dynamics. , 2014, , 1-6.		1
26	Repair rather than segregation of damage is the optimal unicellular aging strategy. <i>BMC Biology</i> , 2014, 12, 52.	3.8	33
27	Mighty small: Observing and modeling individual microbes becomes big science. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 18027-18028.	7.1	54
28	Explaining Bacterial Dispersion on Leaf Surfaces with an Individual-Based Model (PHYLLOSIM). <i>PLoS ONE</i> , 2013, 8, e75633.	2.5	22
29	Exploiting additive and subtractive patterning for spatially controlled and robust bacterial co-cultures. <i>Soft Matter</i> , 2012, 8, 9147.	2.7	8
30	A Multi-scale Agent-Based Distributed Simulation Framework for Groundwater Pollution Management. , 2011, , .		0
31	iDynoMiCS: next-generation individual-based modelling of biofilms. <i>Environmental Microbiology</i> , 2011, 13, 2416-2434.	3.8	217
32	Growth dependence of conjugation explains limited plasmid invasion in biofilms: an individual-based modelling study. <i>Environmental Microbiology</i> , 2011, 13, 2435-2452.	3.8	57
33	Protein Nanoarrays for High-Resolution Patterning of Bacteria on Gold Surfaces. <i>Methods in Molecular Biology</i> , 2011, 790, 191-200.	0.9	4
34	Cooperation and cheating in microbial exoenzyme production – Theoretical analysis for biotechnological applications. <i>Biotechnology Journal</i> , 2010, 5, 751-758.	3.5	31
35	Generalized Voronoi Tessellation as a Model of Two-dimensional Cell Tissue Dynamics. <i>Bulletin of Mathematical Biology</i> , 2010, 72, 1696-1731.	1.9	78
36	Conditions for partial nitrification in biofilm reactors and a kinetic explanation. <i>Biotechnology and Bioengineering</i> , 2009, 103, 282-295.	3.3	43

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37	Use of Game-Theoretical Methods in Biochemistry and Biophysics. Journal of Biological Physics, 2008, 34, 1-17.	1.5	85
38	A mathematical model for growth and osmoregulation in halophilic bacteria. Microbiology (United Kingdom), 2004, 150, 2751-2760.	1.8	273
39	Microbial motility involvement in biofilm structure formation – a 3D modelling study. Water Science and Technology, 2007, 55, 337-343.	2.5	72
40	Does efficiency sensing unify diffusion and quorum sensing?. Nature Reviews Microbiology, 2007, 5, 230-239.	28.6	439
41	Why is metabolic labour divided in nitrification?. Trends in Microbiology, 2006, 14, 213-219.	7.7	359
42	Dynamics of development and dispersal in sessile microbial communities: examples from Pseudomonas aeruginosa and Pseudomonas putida model biofilms. FEMS Microbiology Letters, 2006, 261, 1-11.	1.8	114
43	Individual-based modelling of growth and migration of in hens' eggs. International Journal of Food Microbiology, 2005, 100, 323-333.	4.7	16
44	Cell division theory and individual-based modeling of microbial lag. International Journal of Food Microbiology, 2005, 101, 319-332.	4.7	23
45	The evolution of groups of cooperating bacteria and the growth rate versus yield trade-off. Microbiology (United Kingdom), 2005, 151, 637-641.	1.8	63
46	Particle-Based Multidimensional Multispecies Biofilm Model. Applied and Environmental Microbiology, 2004, 70, 3024-3040.	3.1	273
47	Conflicts of interest in biofilms. Biofilms, 2004, 1, 265-276.	0.6	36
48	Biofilms promote altruism. Microbiology (United Kingdom), 2004, 150, 2751-2760.	1.8	273
49	A Novel Class of Predictive Microbial Growth Models: Implementation in an Individual-Based Framework. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 183-188.	0.4	2
50	Mathematical modelling of biofilm structures. Antonie Van Leeuwenhoek, 2002, 81, 245-256.	1.7	170
51	Effect of EPS on biofilm structure and function as revealed by an individual-based model of biofilm growth. Water Science and Technology, 2001, 43, 135-135.	2.5	148
52	Individual-based modelling of biofilms. Microbiology (United Kingdom), 2001, 147, 2897-2912.	1.8	360
53	BacSim, a simulator for individual-based modelling of bacterial colony growth. Microbiology (United Kingdom), 1997, 143, 1105-1114.	1.8	26
54	Effects of alternative methyl group acceptors on the growth energetics of the O-demethylating anaerobe Holophaga foetida. Microbiology (United Kingdom), 1997, 143, 1105-1114.	1.8	26

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55	Specificity of O -demethylation in extracts of the homoacetogenic <i>Holophaga foetida</i> and demethylation kinetics measured by a coupled photometric assay. <i>Archives of Microbiology</i> , 1997, 167, 363-368.	2.2	15
56	O -Demethylation by the Homoacetogenic Anaerobe <i>Holophaga Foetida</i> Studied by a New Photometric Methylation Assay Using Electrochemically Produced Cob(I)Alamin. <i>FEBS Journal</i> , 1994, 226, 945-951.	0.2	41
57	<i>Holophaga foetida</i> gen. nov., sp. nov., a new, homoacetogenic bacterium degrading methoxylated aromatic compounds. <i>Archives of Microbiology</i> , 1994, 162, 85-90.	2.2	155
58	<i>Holophaga foetida</i> . <i>Archives of Microbiology</i> , 1994, 162, 85.	2.2	100
59	Demethylation and degradation of phenylmethylethers by the sulfide-methylating homoacetogenic bacterium strain TMBS 4. <i>Archives of Microbiology</i> , 1993, 159, 308-315.	2.2	72
60	Mathematical Modeling of Microbial Ecology: Spatial Dynamics of Interactions in Biofilms and Guts. , 0, , 347-377.		6
61	The Individual Microbe: Single-Cell Analysis and Agent-Based Modelling. <i>Frontiers Research Topics</i> , 0, , .	0.2	0