Dietrich Kohlheyer

List of Publications by Year
in descending order

64 papers	2,899 citations	172457 29 h-index	182427 51 g-index
69 all docs	69 docs citations	69 times ranked	2651 citing authors

#	Article	IF	Citations
1	Anaerobic singleâ€cell dispensing facilitates the cultivation of human gut bacteria. Environmental Microbiology, 2022, 24, 3861-3881.	3.8	15
2	N-dependent dynamics of root growth and nitrate and ammonium uptake are altered by the bacterium <i>Herbaspirillum seropedicae</i> in the cereal model <i>Brachypodium distachyon</i>. Journal of Experimental Botany, 2022, 73, 5306-5321.	4.8	11
3	Communities of Niche-optimized Strains (CoNoS) â€“ Design and creation of stable, genome-reduced co-cultures. Metabolic Engineering, 2022, 73, 91-103.	7.0	6
4	(Optochemical) Control of Synthetic Microbial Coculture Interactions on a Microcolony Level. ACS Synthetic Biology, 2021, 10, 1308-1319.	3.8	13
5	The iSplit GFP assay detects intracellular recombinant proteins in Bacillus subtilis. Microbial Cell Factories, 2021, 20, 174.	4.0	5
6	A microfluidic experiment and pore scale modelling diagnostics for assessing mineral precipitation and dissolution in confined spaces. Chemical Geology, 2019, 528, 119264.	3.3	29
7	A microfluidic co-cultivation platform to investigate microbial interactions at defined microenvironments. Lab on A Chip, 2019, 19, 98-110.	6.0	79
8	Analyzing Microbial Population Heterogeneityâ€"Expanding the Toolbox of Microfluidic Single-Cell Cultivations. Journal of Molecular Biology, 2019, 431, 4569-4588.	4.2	35
9	Microbial single-cell growth response at defined carbon limiting conditions. RSC Advances, 2019, 9, 14040-14050.	3.6	16
10	A microfluidic photobioreactor for simultaneous observation and cultivation of single microalgal cells or cell aggregates. PLoS ONE, 2019, 14, e0216093.	2.5	17
11	Reproduction of Large-Scale Bioreactor Conditions on Microfluidic Chips. Microorganisms, 2019, 7, 105.	3.6	26
12	Importance of Pyruvate Sensing and Transport for the Resuscitation of Viable but Nonculturable <i>Escherichia coli</i> K-12. Journal of Bacteriology, 2019, 201, .	2.2	39
13	Visualization of tandem repeat mutagenesis in Bacillus subtilis. DNA Repair, 2018, 63, 10-15.	2.8	9
14	Quantitative modelling of nutrient-limited growth of bacterial colonies in microfluidic cultivation. Journal of the Royal Society Interface, 2018, 15, 20170713.	3.4	21
15	Quantitative measurements in single-cell analysis: towards scalability in microbial bioprocess development. Current Opinion in Biotechnology, 2018, 54, 121-127.	6.6	12
16	Microbial single-cell analysis in picoliter-sized batch cultivation chambers. New Biotechnology, 2018, 47, 50-59.	4.4	26
17	A Single-Cell View of the BtsSR/YpdAB Pyruvate Sensing Network in Escherichia coli and Its Biological Relevance. Journal of Bacteriology, 2018, 200, .	2.2	25
18	Germination and Growth Analysis of Streptomyces lividans at the Single-Cell Level Under Varying Medium Compositions. Frontiers in Microbiology, 2018, 9, 2680.	3.5	10

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19	Selective Pressure for Biofilm Formation in Bacillus subtilis: Differential Effect of Mutations in the Master Regulator SinR on Bistability. MBio, 2018, 9, .	4.1	21
20	Inheritance of Cell-Cycle Duration in the Presence of Periodic Forcing. Physical Review X, 2018, 8, .	8.9	20
21	Natural biocide cocktails: Combinatorial antibiotic effects of prodigiosin and biosurfactants. PLoS ONE, 2018, 13, e0200940.	2.5	41
22	Realâ€time monitoring of fungal growth and morphogenesis at singleâ€cell resolution. Engineering in Life Sciences, 2017, 17, 86-92.	3.6	16
23	Homogenizing bacterial cell factories: Analysis and engineering of phenotypic heterogeneity. Metabolic Engineering, 2017, 42, 145-156.	7.0	96
24	Autonomous Integrated Microfluidic Circuits for Chipâ€Level Flow Control Utilizing Chemofluidic Transistors. Advanced Functional Materials, 2017, 27, 1700430.	14.9	28
25	Coarseâ€graining bacteria colonies for modelling critical solute distributions in picolitre bioreactors for bacterial studies on singleâ€cell level. Microbial Biotechnology, 2017, 10, 845-857.	4.2	11
26	Application of Mini- and Micro-Bioreactors for Microbial Bioprocesses. , 2017, , 433-461.		14
27	Optogenetic Regulation of Tunable Gene Expression in Yeast Using Photo-Labile Caged Methionine. ACS Chemical Biology, 2016, 11, 2915-2922.	3.4	11
28	Light-mediated gene regulation for complex expression procedures in yeast. New Biotechnology, 2016, 33, S189.	4.4	0
29	Light-Controlled Cell Factories: Employing Photocaged Isopropyl-Î²- <scp>d</scp> -Thiogalactopyranoside for Light-Mediated Optimization of <i>lac</i> Promoter-Based Gene Expression and (+)-Valencene Biosynthesis in Corynebacterium glutamicum. Applied and Environmental Microbiology, 2016, 82, 6141-6149.	3.1	40
30	Artificial fluorogenic substrates in microfluidic devices for bacterial diagnostics in biotechnology. Journal of Flow Chemistry, 2016, 6, 3-7.	1.9	2
31	Time-resolved, single-cell analysis of induced and programmed cell death via non-invasive propidium iodide and counterstain perfusion. Scientific Reports, 2016, 6, 32104.	3.3	49
32	Silencing of cryptic prophages inCorynebacterium glutamicum. Nucleic Acids Research, 2016, 44, gkw692.	14.5	35
33	Photocaged Arabinose: A Novel Optogenetic Switch for Rapid and Gradual Control of Microbial Gene Expression. ChemBioChem, 2016, 17, 296-299.	2.6	26
34	Comparative Single-Cell Analysis of Different E. coli Expression Systems during Microfluidic Cultivation. PLoS ONE, 2016, 11, e0160711.	2.5	35
35	Image-Based Single Cell Profiling: High-Throughput Processing of Mother Machine Experiments. PLoS ONE, 2016, 11, e0163453.	2.5	39
36	Live cell imaging of <scp>SOS</scp> and prophage dynamics in isogenic bacterial populations. Molecular Microbiology, 2015, 98, 636-650.	2.5	41

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37	Spatiotemporal microbial singleâ€cell analysis using a highâ€throughput microfluidics cultivation platform. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2015, 87, 1101-1115.	1.5	88
38	Technical bias of microcultivation environments on single-cell physiology. Lab on A Chip, 2015, 15, 1822-1834.	6.0	39
39	Modeling and CFD simulation of nutrient distribution in picoliter bioreactors for bacterial growth studies on single-cell level. Lab on A Chip, 2015, 15, 4177-4186.	6.0	34
40	Vizardous: interactive analysis of microbial populations with single cell resolution. Bioinformatics, 2015, 31, 3875-3877.	4.1	9
41	Rapid inoculation of single bacteria into parallel picoliter fermentation chambers. Analytical Methods, 2015, 7, 91-98.	2.7	32
42	Non-Invasive Microbial Metabolic Activity Sensing at Single Cell Level by Perfusion of Calcein Acetoxymethyl Ester. PLoS ONE, 2015, 10, e0141768.	2.5	17
43	Application of a Genetically Encoded Biosensor for Live Cell Imaging of L-Valine Production in Pyruvate Dehydrogenase Complex-Deficient Corynebacterium glutamicum Strains. PLoS ONE, 2014, 9, e85731.	2.5	100
44	Analysis of SOS-Induced Spontaneous Prophage Induction in Corynebacterium glutamicum at the Single-Cell Level. Journal of Bacteriology, 2014, 196, 180-188.	2.2	64
45	Taking Control over Control: Use of Product Sensing in Single Cells to Remove Flux Control at Key Enzymes in Biosynthesis Pathways. ACS Synthetic Biology, 2014, 3, 21-29.	3.8	125
46	Single-cell microfluidics: opportunity for bioprocess development. Current Opinion in Biotechnology, 2014, 29, 15-23.	6.6	159
47	Beyond growth rate 0.6: What drives <i>Corynebacterium glutamicum</i> to higher growth rates in defined medium. Biotechnology and Bioengineering, 2014, 111, 359-371.	3.3	117
48	Light-responsive control of bacterial gene expression: precise triggering of the<i>lac</i>promoter activity using photocaged IPTG. Integrative Biology (United Kingdom), 2014, 6, 755-765.	1.3	39
49	Microfluidic growth chambers with optical tweezers for full spatial single-cell control and analysis of evolving microbes. Journal of Microbiological Methods, 2013, 95, 470-476.	1.6	42
50	Beyond growth rate 0.6: <i>Corynebacterium glutamicum</i> cultivated in highly diluted environments. Biotechnology and Bioengineering, 2013, 110, 220-228.	3.3	75
51	Microfluidic Picoliter Bioreactor for Microbial Single-cell Analysis: Fabrication, System Setup, and Operation. Journal of Visualized Experiments, 2013, , 50560.	0.3	49
52	Polydimethylsiloxane (PDMS) Sub-Micron Traps for Single-Cell Analysis of Bacteria. Micromachines, 2013, 4, 357-369.	2.9	45
53	The development and application of a single-cell biosensor for the detection of l-methionine and branched-chain amino acids. Metabolic Engineering, 2012, 14, 449-457.	7.0	200
54	A disposable picolitre bioreactor for cultivation and investigation of industrially relevant bacteria on the single cell level. Lab on A Chip, 2012, 12, 2060.	6.0	103

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55	A prefilled, ready-to-use electrophoresis based lab-on-a-chip device for monitoring lithium in blood. Lab on A Chip, 2010, 10, 1799.	6.0	75
56	Integrated Electrokinetic Sample Focusing and Surface Plasmon Resonance Imaging System for Measuring Biomolecular Interactions. Analytical Chemistry, 2009, 81, 1957-1963.	6.5	23
57	A microfluidic device for array patterning by perpendicular electrokinetic focusing. Microfluidics and Nanofluidics, 2008, 4, 557-564.	2.2	17
58	Miniaturizing freeâ€flow electrophoresis â€" a critical review. Electrophoresis, 2008, 29, 977-993.	2.4	178
59	Bubble-Free Operation of a Microfluidic Free-Flow Electrophoresis Chip with Integrated Pt Electrodes. Analytical Chemistry, 2008, 80, 4111-4118.	6.5	78
60	Synchronized, Continuous-Flow Zone Electrophoresis. Analytical Chemistry, 2008, 80, 6228-6234.	6.5	7
61	Microfluidic High-Resolution Free-Flow Isoelectric Focusing. Analytical Chemistry, 2007, 79, 8190-8198.	6.5	97
62	Free-flow zone electrophoresis and isoelectric focusing using a microfabricated glass device with ion permeable membranes. Lab on A Chip, 2006, 6, 374.	6.0	140
63	Electro-osmotically controllable multi-flow microreactor. Microfluidics and Nanofluidics, 2005, 1, 242-248.	2.2	24
64	Reaction and diffusion dynamics in a microfluidic format. Materials Research Society Symposia Proceedings, 2004, 820, 79.	0.1	0