Dietrich Kohlheyer

List of Publications by Year
in descending order

64	2,899	172457	182427
papers	citations	29 h-index	51 g-index

69	69	69	2651
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	Miniaturizing freeâ€flow electrophoresis â€“ a critical review. Electrophoresis, 2008, 29, 977-993.	2.4	178
3	Single-cell microfluidics: opportunity for bioprocess development. Current Opinion in Biotechnology, 2014, 29, 15-23.	6.6	159
4	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
5	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
6	Beyond growth rate 0.6: What drives Corynebacterium glutamicum to higher growth rates in defined medium. Biotechnology and Bioengineering, 2014, 111, 359-371.	3.3	117
7	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
8	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
9	Microfluidic High-Resolution Free-Flow Isoelectric Focusing. Analytical Chemistry, 2007, 79, 8190-8198.	6.5	97
10	Homogenizing bacterial cell factories: Analysis and engineering of phenotypic heterogeneity. Metabolic Engineering, 2017, 42, 145-156.	7.0	96
11	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
12	A microfluidic co-cultivation platform to investigate microbial interactions at defined microenvironments. Lab on A Chip, 2019, 19, 98-110.	6.0	79
13	Bubble-Free Operation of a Microfluidic Free-Flow Electrophoresis Chip with Integrated Pt Electrodes. Analytical Chemistry, 2008, 80, 4111-4118.	6.5	78
14	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
15	Beyond growth rate 0.6: Corynebacterium glutamicum cultivated in highly diluted environments. Biotechnology and Bioengineering, 2013, 110, 220-228.	3.3	75
16	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
17	Microfluidic Picoliter Bioreactor for Microbial Single-cell Analysis: Fabrication, System Setup, and Operation. Journal of Visualized Experiments, 2013, , 50560.	0.3	49
18	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

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19	Polydimethylsiloxane (PDMS) Sub-Micron Traps for Single-Cell Analysis of Bacteria. Micromachines, 2013, 4, 357-369.	2.9	45
20	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
21	Live cell imaging of <scp>SOS</scp> and prophage dynamics in isogenic bacterial populations. Molecular Microbiology, 2015, 98, 636-650.	2.5	41
22	Natural biocide cocktails: Combinatorial antibiotic effects of prodigiosin and biosurfactants. PLoS ONE, 2018, 13, e0200940.	2.5	41
23	Light-Controlled Cell Factories: Employing Photocaged Isopropyl-Î²- <scp>d</scp> -Thiogalactopyranoside for Light-Mediated Optimization of lac Promoter-Based Gene Expression and (+)-Valencene Biosynthesis in Corynebacterium glutamicum. Applied and Environmental Microbiology, 2016, 82, 6141-6149.	3.1	40
24	Light-responsive control of bacterial gene expression: precise triggering of thelacpromoter activity using photocaged IPTG. Integrative Biology (United Kingdom), 2014, 6, 755-765.	1.3	39
25	Technical bias of microcultivation environments on single-cell physiology. Lab on A Chip, 2015, 15, 1822-1834.	6.0	39
26	Importance of Pyruvate Sensing and Transport for the Resuscitation of Viable but Nonculturable Escherichia coli K-12. Journal of Bacteriology, 2019, 201, .	2.2	39
27	Image-Based Single Cell Profiling: High-Throughput Processing of Mother Machine Experiments. PLoS ONE, 2016, 11, e0163453.	2.5	39
28	Silencing of cryptic prophages inCorynebacterium glutamicum. Nucleic Acids Research, 2016, 44, gkw692.	14.5	35
29	Analyzing Microbial Population Heterogeneityâ€”Expanding the Toolbox of Microfluidic Single-Cell Cultivations. Journal of Molecular Biology, 2019, 431, 4569-4588.	4.2	35
30	Comparative Single-Cell Analysis of Different E. coli Expression Systems during Microfluidic Cultivation. PLoS ONE, 2016, 11, e0160711.	2.5	35
31	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
32	Rapid inoculation of single bacteria into parallel picoliter fermentation chambers. Analytical Methods, 2015, 7, 91-98.	2.7	32
33	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
34	Autonomous Integrated Microfluidic Circuits for Chipâ€Level Flow Control Utilizing Chemofluidic Transistors. Advanced Functional Materials, 2017, 27, 1700430.	14.9	28
35	Photocaged Arabinose: A Novel Optogenetic Switch for Rapid and Gradual Control of Microbial Gene Expression. ChemBioChem, 2016, 17, 296-299.	2.6	26
36	Microbial single-cell analysis in picoliter-sized batch cultivation chambers. New Biotechnology, 2018, 47, 50-59.	4.4	26

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37	Reproduction of Large-Scale Bioreactor Conditions on Microfluidic Chips. Microorganisms, 2019, 7, 105.	3.6	26
38	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
39	Electro-osmotically controllable multi-flow microreactor. Microfluidics and Nanofluidics, 2005, 1, 242-248.	2.2	24
40	Integrated Electrokinetic Sample Focusing and Surface Plasmon Resonance Imaging System for Measuring Biomolecular Interactions. Analytical Chemistry, 2009, 81, 1957-1963.	6.5	23
41	Quantitative modelling of nutrient-limited growth of bacterial colonies in microfluidic cultivation. Journal of the Royal Society Interface, 2018, 15, 20170713.	3.4	21
42	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
43	Inheritance of Cell-Cycle Duration in the Presence of Periodic Forcing. Physical Review X, 2018, 8, .	8.9	20
44	A microfluidic device for array patterning by perpendicular electrokinetic focusing. Microfluidics and Nanofluidics, 2008, 4, 557-564.	2.2	17
45	A microfluidic photobioreactor for simultaneous observation and cultivation of single microalgal cells or cell aggregates. PLoS ONE, 2019, 14, e0216093.	2.5	17
46	Non-Invasive Microbial Metabolic Activity Sensing at Single Cell Level by Perfusion of Calcein Acetoxymethyl Ester. PLoS ONE, 2015, 10, e0141768.	2.5	17
47	Realâ€time monitoring of fungal growth and morphogenesis at singleâ€cell resolution. Engineering in Life Sciences, 2017, 17, 86-92.	3.6	16
48	Microbial single-cell growth response at defined carbon limiting conditions. RSC Advances, 2019, 9, 14040-14050.	3.6	16
49	Anaerobic singleâ€cell dispensing facilitates the cultivation of human gut bacteria. Environmental Microbiology, 2022, 24, 3861-3881.	3.8	15
50	Application of Mini- and Micro-Bioreactors for Microbial Bioprocesses. , 2017, , 433-461.		14
51	(Optochemical) Control of Synthetic Microbial Coculture Interactions on a Microcolony Level. ACS Synthetic Biology, 2021, 10, 1308-1319.	3.8	13
52	Quantitative measurements in single-cell analysis: towards scalability in microbial bioprocess development. Current Opinion in Biotechnology, 2018, 54, 121-127.	6.6	12
53	Optogenetic Regulation of Tunable Gene Expression in Yeast Using Photo-Labile Caged Methionine. ACS Chemical Biology, 2016, 11, 2915-2922.	3.4	11
54	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

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55	N-dependent dynamics of root growth and nitrate and ammonium uptake are altered by the bacterium Herbaspirillum seropedicae in the cereal model Brachypodium distachyon. Journal of Experimental Botany, 2022, 73, 5306-5321.	4.8	11
56	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
57	Vizardous: interactive analysis of microbial populations with single cell resolution. Bioinformatics, 2015, 31, 3875-3877.	4.1	9
58	Visualization of tandem repeat mutagenesis in Bacillus subtilis. DNA Repair, 2018, 63, 10-15.	2.8	9
59	Synchronized, Continuous-Flow Zone Electrophoresis. Analytical Chemistry, 2008, 80, 6228-6234.	6.5	7
60	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
61	The iSplit GFP assay detects intracellular recombinant proteins in Bacillus subtilis. Microbial Cell Factories, 2021, 20, 174.	4.0	5
62	Artificial fluorogenic substrates in microfluidic devices for bacterial diagnostics in biotechnology. Journal of Flow Chemistry, 2016, 6, 3-7.	1.9	2
63	Reaction and diffusion dynamics in a microfluidic format. Materials Research Society Symposia Proceedings, 2004, 820, 79.	0.1	0
64	Light-mediated gene regulation for complex expression procedures in yeast. New Biotechnology, 2016, 33, S189.	4.4	0