Michael KÃ¶pke

List of Publications by Year
in descending order

#	Article	IF	Citations
1	<i>Clostridium ljungdahlii</i> represents a microbial production platform based on syngas. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 13087-13092.	7.1	594
2	2,3-Butanediol Production by Acetogenic Bacteria, an Alternative Route to Chemical Synthesis, Using Industrial Waste Gas. Applied and Environmental Microbiology, 2011, 77, 5467-5475.	3.1	362
3	Commercial Biomass Syngas Fermentation. Energies, 2012, 5, 5372-5417.	3.1	352
4	Gas Fermentationâ€"A Flexible Platform for Commercial Scale Production of Low-Carbon-Fuels and Chemicals from Waste and Renewable Feedstocks. Frontiers in Microbiology, 2016, 7, 694.	3.5	343
5	NADP-Specific Electron-Bifurcating [FeFe]-Hydrogenase in a Functional Complex with Formate Dehydrogenase in Clostridium autoethanogenum Grown on CO. Journal of Bacteriology, 2013, 195, 4373-4386.	2.2	208
6	Energy Conservation Associated with Ethanol Formation from H ₂ and CO ₂ in Clostridium autoethanogenum Involving Electron Bifurcation. Journal of Bacteriology, 2015, 197, 2965-2980.	2.2	198
7	Carbon-negative production of acetone and isopropanol by gas fermentation at industrial pilot scale. Nature Biotechnology, 2022, 40, 335-344.	17.5	195
8	Fermentative production of ethanol from carbon monoxide. Current Opinion in Biotechnology, 2011, 22, 320-325.	6.6	186
9	Metabolic engineering of Clostridium autoethanogenum for selective alcohol production. Metabolic Engineering, 2017, 40, 104-114.	7.0	178
10	Low carbon fuels and commodity chemicals from waste gases â€" systematic approach to understand energy metabolism in a model acetogen. Green Chemistry, 2016, 18, 3020-3028.	9.0	143
11	In vitro prototyping and rapid optimization of biosynthetic enzymes for cell design. Nature Chemical Biology, 2020, 16, 912-919.	8.0	142
12	Comparison of single-molecule sequencing and hybrid approaches for finishing the genome of Clostridium autoethanogenum and analysis of CRISPR systems in industrial relevant Clostridia. Biotechnology for Biofuels, 2014, 7, 40.	6.2	135
13	Maintenance of ATP Homeostasis Triggers Metabolic Shifts in Gas-Fermenting Acetogens. Cell Systems, 2017, 4, 505-515.e5.	6.2	128
14	Pollution to products: recycling of â€˜above groundâ€™ carbon by gas fermentation. Current Opinion in Biotechnology, 2020, 65, 180-189.	6.6	119
15	H2 drives metabolic rearrangements in gas-fermenting Clostridium autoethanogenum. Biotechnology for Biofuels, 2018, 11, 55.	6.2	103
16	Genome editing of Clostridium autoethanogenum using CRISPR/Cas9. Biotechnology for Biofuels, 2016, 9, 219.	6.2	96
17	Arginine deiminase pathway provides ATP and boosts growth of the gas-fermenting acetogen Clostridium autoethanogenum. Metabolic Engineering, 2017, 41, 202-211.	7.0	96
18	Reconstruction of an Acetogenic 2,3-Butanediol Pathway Involving a Novel NADPH-Dependent Primary-Secondary Alcohol Dehydrogenase. Applied and Environmental Microbiology, 2014, 80, 3394-3403.	3.1	89

#	ARTICLE	IF	CITATIONS
19	Insights into CO ₂ Fixation Pathway of <i>Clostridium autoethanogenum</i> by Targeted Mutagenesis. MBio, 2016, 7, .	4.1	83
20	Enhancing CO2-Valorization Using Clostridium autoethanogenum for Sustainable Fuel and Chemicals Production. Frontiers in Bioengineering and Biotechnology, 2020, 8, 204.	4.1	79
21	Clostridium difficile Is an Autotrophic Bacterial Pathogen. PLoS ONE, 2013, 8, e62157.	2.5	70
22	Stepping on the Gas to a Circular Economy: Accelerating Development of Carbon-Negative Chemical Production from Gas Fermentation. Annual Review of Chemical and Biomolecular Engineering, 2021, 12, 439-470.	6.8	69
23	Systems-level engineering and characterisation of Clostridium autoethanogenum through heterologous production of poly-3-hydroxybutyrate (PHB). Metabolic Engineering, 2019, 53, 14-23.	7.0	57
24	Redox controls metabolic robustness in the gas-fermenting acetogen <i>Clostridium autoethanogenum</i>. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13168-13175.	7.1	54
25	Advances in systems metabolic engineering of autotrophic carbon oxide-fixing biocatalysts towards a circular economy. Metabolic Engineering, 2022, 71, 117-141.	7.0	41
26	Sequence data for Clostridium autoethanogenum using three generations of sequencing technologies. Scientific Data, 2015, 2, 150014.	5.3	40
27	A novel conjugal donor strain for improved DNA transfer into Clostridium spp.. Anaerobe, 2019, 59, 184-191.	2.1	32
28	Syngas Biorefinery and Syngas Utilization. Advances in Biochemical Engineering/Biotechnology, 2017, 166, 247-280.	1.1	31
29	Kinetic ensemble model of gas fermenting Clostridium autoethanogenum for improved ethanol production. Biochemical Engineering Journal, 2019, 148, 46-56.	3.6	27
30	Development of a clostridia-based cell-free system for prototyping genetic parts and metabolic pathways. Metabolic Engineering, 2020, 62, 95-105.	7.0	27
31	Cell-free prototyping enables implementation of optimized reverse Î²-oxidation pathways in heterotrophic and autotrophic bacteria. Nature Communications, 2022, 13, .	12.8	27
32	Engineering of vitamin prototrophy in Clostridium ljungdahlii and Clostridium autoethanogenum. Applied Microbiology and Biotechnology, 2019, 103, 4633-4648.	3.6	25
33	Gas Fermentation for Commercial Biofuels Production. , 0, , .		24
34	Transcriptional control of <i>Clostridium autoethanogenum</i> using CRISPRi. Synthetic Biology, 2021, 6, ysab008.	2.2	16
35	Reverse Î²-oxidation pathways for efficient chemical production. Journal of Industrial Microbiology and Biotechnology, 2022, 49, .	3.0	14
36	Low-Carbon Fuel and Chemical Production by Anaerobic Gas Fermentation. Advances in Biochemical Engineering/Biotechnology, 2015, 156, 293-321.	1.1	13

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37	A TetR-Family Protein (CAETHG_0459) Activates Transcription From a New Promoter Motif Associated With Essential Genes for Autotrophic Growth in Acetogens. Frontiers in Microbiology, 2019, 10, 2549.	3.5	12
38	Biochemical production of biobutanol. , 2011, , 221-257.		11
39	The carbonic anhydrase of Clostridium autoethanogenum represents a new subclass of Î²-carbonic anhydrases. Applied Microbiology and Biotechnology, 2019, 103, 7275-7286.	3.6	11
40	Faster Growth Enhances Low Carbon Fuel and Chemical Production Through Gas Fermentation. Frontiers in Bioengineering and Biotechnology, 2022, 10, 879578.	4.1	11
41	Modular cell-free expression plasmids to accelerate biological design in cells. Synthetic Biology, 2020, 5, ysaa019.	2.2	10
42	Absolute Proteome Quantification in the Gas-Fermenting Acetogen <i>Clostridium autoethanogenum</i>. MSystems, 2022, 7, e0002622.	3.8	10
43	Required Gene Set for Autotrophic Growth of <i>Clostridium autoethanogenum</i>. Applied and Environmental Microbiology, 2022, 88, e0247921.	3.1	9
44	Agr Quorum Sensing influences the Wood-Ljungdahl pathway in Clostridium autoethanogenum. Scientific Reports, 2022, 12, 411.	3.3	8
45	Spacer2PAM: A computational framework to guide experimental determination of functional CRISPR-Cas system PAM sequences. Nucleic Acids Research, 2022, 50, 3523-3534.	14.5	8
46	Quantitative analysis of tetrahydrofolate metabolites from clostridium autoethanogenum. Metabolomics, 2018, 14, 35.	3.0	5