

# Bruno BÃ¼hler

## List of Publications by Year in descending order

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92  
papers

4,011  
citations

117453

34  
h-index

123241

61  
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105  
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105  
docs citations

105  
times ranked

3194  
citing authors

#	ARTICLE	IF	CITATIONS
1	Maximizing Photosynthesis-Driven Baeyer-Villiger Oxidation Efficiency in Recombinant <i>Synechocystis</i> sp. PCC6803. <i>Frontiers in Catalysis</i> , 2022, 1, .	1.8	14
2	Rational orthologous pathway and biochemical process engineering for adipic acid production using <i>Pseudomonas taiwanensis</i> VLB120. <i>Metabolic Engineering</i> , 2022, 70, 206-217.	3.6	17
3	Heterologous Lactate Synthesis in <i>Synechocystis</i> sp. Strain PCC 6803 Causes a Growth Condition-Dependent Carbon Sink Effect. <i>Applied and Environmental Microbiology</i> , 2022, 88, e0006322.	1.4	3
4	Generation of Synthetic Shuttle Vectors Enabling Modular Genetic Engineering of Cyanobacteria. <i>ACS Synthetic Biology</i> , 2022, 11, 1758-1771.	1.9	15
5	Exploitation of Hetero- and Phototrophic Metabolic Modules for Redox-Intensive Whole-Cell Biocatalysis. <i>Frontiers in Bioengineering and Biotechnology</i> , 2022, 10, 855715.	2.0	6
6	Hydrophobic Outer Membrane Pores Boost Testosterone Hydroxylation by Cytochrome P450 BM3 Containing Cells. <i>Frontiers in Catalysis</i> , 2022, 2, .	1.8	1
7	Conversion of Cyclohexane to 6-Hydroxyhexanoic Acid Using Recombinant <i>Pseudomonas taiwanensis</i> in a Stirred-Tank Bioreactor. <i>Frontiers in Catalysis</i> , 2021, 1, .	1.8	11
8	Characterization of different biocatalyst formats for BVMO-catalyzed cyclohexanone oxidation. <i>Biotechnology and Bioengineering</i> , 2021, 118, 2719-2733.	1.7	7
9	11 Biocatalytic production of white hydrogen from water using cyanobacteria. , 2021, , 279-306.		3
10	Rewiring cyanobacterial photosynthesis by the implementation of an oxygen-tolerant hydrogenase. <i>Metabolic Engineering</i> , 2021, 68, 199-209.	3.6	12
11	One-pot synthesis of 6-aminohexanoic acid from cyclohexane using mixed-species cultures. <i>Microbial Biotechnology</i> , 2021, 14, 1011-1025.	2.0	8
12	Highly Efficient Access to (S)-Sulfoxides Utilizing a Promiscuous Flavoprotein Monooxygenase in a Whole-Cell Biocatalyst Format. <i>ChemCatChem</i> , 2020, 12, 4664-4671.	1.8	12
13	Molecular and Engineering Aspects of Biocatalysis. <i>Biotechnology Journal</i> , 2020, 15, 2000499.	1.8	0
14	Rational Engineering of a Multi-Step Biocatalytic Cascade for the Conversion of Cyclohexane to Polycaprolactone Monomers in <i>Pseudomonas taiwanensis</i> . <i>Biotechnology Journal</i> , 2020, 15, e2000091.	1.8	16
15	Maximizing Biocatalytic Cyclohexane Hydroxylation by Modulating Cytochrome P450 Monooxygenase Expression in <i>P. taiwanensis</i> VLB120. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 140.	2.0	15
16	Regulatory systems for gene expression control in cyanobacteria. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 1977-1991.	1.7	28
17	Mixed-trophies biofilm cultivation in capillary reactors. <i>MethodsX</i> , 2019, 6, 1822-1831.	0.7	9
18	Data on mixed trophies biofilm for continuous cyclohexane oxidation to cyclohexanol using <i>Synechocystis</i> sp. PCC 6803. <i>Data in Brief</i> , 2019, 25, 104059.	0.5	4

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19	Anaerobic C-H Oxyfunctionalization: Coupling of Nitrate Reduction and Quinoline Hydroxylation in Recombinant <i>Pseudomonas putida</i> . <i>Biotechnology Journal</i> , 2019, 14, 1800615.	1.8	1
20	Light-Dependent and Aeration-Independent Gram-Scale Hydroxylation of Cyclohexane to Cyclohexanol by CYP450 Harboring <i>Synechocystis</i> sp. PCC 6803. <i>Biotechnology Journal</i> , 2019, 14, e1800724.	1.8	55
21	Stabilization and scale-up of photosynthesis-driven hydroxylation of nonanoic acid methyl ester by two-liquid phase whole-cell biocatalysis. <i>Biotechnology and Bioengineering</i> , 2019, 116, 1887-1900.	1.7	16
22	Electron balancing under different sink conditions reveals positive effects on photon efficiency and metabolic activity of <i>Synechocystis</i> sp. PCC 6803. <i>Biotechnology for Biofuels</i> , 2019, 12, 43.	6.2	18
23	Mixed-species biofilms for high-cell-density application of <i>Synechocystis</i> sp. PCC 6803 in capillary reactors for continuous cyclohexane oxidation to cyclohexanol. <i>Bioresource Technology</i> , 2019, 282, 171-178.	4.8	62
24	Constitutively solvent-tolerant <i>Pseudomonas taiwanensis</i> VLB120 <sup>†††</sup> supports particularly high styrene epoxidation activities when grown under glucose excess conditions. <i>Biotechnology and Bioengineering</i> , 2019, 116, 1089-1101.	1.7	16
25	In Situ O <sub>2</sub> Generation for Biocatalytic Oxyfunctionalization Reactions. <i>ChemCatChem</i> , 2018, 10, 5366-5371.	1.8	19
26	Cyanobacterial biofilms as light-driven biocatalysts. <i>Chemie-Ingenieur-Technik</i> , 2018, 90, 1261-1261.	0.4	0
27	An artificial TCA cycle selects for efficient $\pm$ -ketoglutarate dependent hydroxylase catalysis in engineered <i>Escherichia coli</i> . <i>Biotechnology and Bioengineering</i> , 2017, 114, 1511-1520.	1.7	29
28	The application of constitutively solvent-tolerant <i>P. taiwanensis</i> VLB120 <sup>†††</sup> for stereospecific epoxidation of toxic styrene alleviates carrier solvent use. <i>Biotechnology Journal</i> , 2017, 12, 1600558.	1.8	15
29	Hydrolase BioH knockout in <i>E. coli</i> enables efficient fatty acid methyl ester bioprocessing. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2017, 44, 339-351.	1.4	9
30	Umgehung des Gasflüssig-Stofftransports von Sauerstoff durch Kopplung der photosynthetischen Wasseroxidation an eine biokatalytische Oxyfunktionalisierung. <i>Angewandte Chemie</i> , 2017, 129, 15343-15346.	1.6	18
31	Overcoming the Gas-Liquid Mass Transfer of Oxygen by Coupling Photosynthetic Water Oxidation with Biocatalytic Oxyfunctionalization. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 15146-15149.	7.2	60
32	Maximizing the stability of metabolic engineering-derived whole-cell biocatalysts. <i>Biotechnology Journal</i> , 2017, 12, 1600170.	1.8	34
33	Maximization of cell viability rather than biocatalyst activity improves whole-cell hydroxyfunctionalization performance. <i>Biotechnology and Bioengineering</i> , 2017, 114, 874-884.	1.7	30
34	Decoupling production from growth by magnesium sulfate limitation boosts de novo limonene production. <i>Biotechnology and Bioengineering</i> , 2016, 113, 1305-1314.	1.7	25
35	Efficient production of the Nylon 12 monomer $\omega$ -aminododecanoic acid methyl ester from renewable dodecanoic acid methyl ester with engineered <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2016, 36, 1-9.	3.6	70
36	Direct infusion-SIM as fast and robust method for absolute protein quantification in complex samples. <i>EuPA Open Proteomics</i> , 2015, 7, 20-26.	2.5	3

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37	Process boundaries of irreversible scCO <sub>2</sub> -assisted phase separation in biphasic whole-cell biocatalysis. <i>Biotechnology and Bioengineering</i> , 2015, 112, 2316-2323.	1.7	6
38	Variability in subpopulation formation propagates into biocatalytic variability of engineered <i>Pseudomonas putida</i> strains. <i>Frontiers in Microbiology</i> , 2015, 6, 1042.	1.5	16
39	The dynamic influence of cells on the formation of stable emulsions in organic-aqueous biotransformations. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2015, 42, 1011-1026.	1.4	15
40	Making variability less variable: matching expression system and host for oxygenase-based biotransformations. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2015, 42, 851-866.	1.4	14
41	Guiding bioprocess design by microbial ecology. <i>Current Opinion in Microbiology</i> , 2015, 25, 25-32.	2.3	15
42	Coupling limonene formation and oxyfunctionalization by mixed-culture resting cell fermentation. <i>Biotechnology and Bioengineering</i> , 2015, 112, 1738-1750.	1.7	25
43	Metabolic network capacity of <i>Escherichia coli</i> for Krebs cycle-dependent proline hydroxylation. <i>Microbial Cell Factories</i> , 2015, 14, 108.	1.9	25
44	Efficient hydroxyproline production from glucose in minimal media by <i>Corynebacterium glutamicum</i> . <i>Biotechnology and Bioengineering</i> , 2015, 112, 322-330.	1.7	31
45	Engineering the productivity of recombinant <i>Escherichia coli</i> for limonene formation from glycerol in minimal media. <i>Biotechnology Journal</i> , 2014, 9, 1000-1012.	1.8	101
46	Engineering of <i>Pseudomonas taiwanensis</i> VLB120 for Constitutive Solvent Tolerance and Increased Specific Styrene Epoxidation Activity. <i>Applied and Environmental Microbiology</i> , 2014, 80, 6539-6548.	1.4	62
47	The microbial cell functional unit for energy dependent multistep biocatalysis. <i>Current Opinion in Biotechnology</i> , 2014, 30, 178-189.	3.3	57
48	Reaction and catalyst engineering to exploit kinetically controlled whole-cell multistep biocatalysis for terminal FAME oxyfunctionalization. <i>Biotechnology and Bioengineering</i> , 2014, 111, 1820-1830.	1.7	61
49	Accurate Determination of Plasmid Copy Number of Flow-Sorted Cells using Droplet Digital PCR. <i>Analytical Chemistry</i> , 2014, 86, 5969-5976.	3.2	45
50	Subpopulation-proteomics in prokaryotic populations. <i>Current Opinion in Biotechnology</i> , 2013, 24, 79-87.	3.3	35
51	Whole-cell biocatalysis for selective and productive C=O functional group introduction and modification. <i>Chemical Society Reviews</i> , 2013, 42, 6346.	18.7	188
52	Subtoxic product levels limit the epoxidation capacity of recombinant <i>E. coli</i> by increasing microbial energy demands. <i>Journal of Biotechnology</i> , 2013, 163, 194-203.	1.9	25
53	Construction and characterization of nitrate and nitrite respiring <i>Pseudomonas putida</i> KT2440 strains for anoxic biotechnical applications. <i>Journal of Biotechnology</i> , 2013, 163, 155-165.	1.9	26
54	Whole-cell-based CYP153A6-catalyzed ( <i>S</i> )-limonene hydroxylation efficiency depends on host background and profits from monoterpene uptake via AlkL. <i>Biotechnology and Bioengineering</i> , 2013, 110, 1282-1292.	1.7	69

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55	Direct Terminal Alkylamino-Functionalization <i>via</i> Multistep Biocatalysis in One Recombinant Whole-Cell Catalyst. <i>Advanced Synthesis and Catalysis</i> , 2013, 355, 1693-1697.	2.1	103
56	Proline Availability Regulates Proline-4-Hydroxylase Synthesis and Substrate Uptake in Proline-Hydroxylating Recombinant <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2013, 79, 3091-3100.	1.4	33
57	Stable Emulsions in Biphasic Whole-Cell Biocatalysis: The Mechanism of <i>scCO</i> <sub>2</sub> -Assisted Phase Separation. <i>Chemie-Ingenieur-Technik</i> , 2013, 85, 1420-1420.	0.4	0
58	Outer Membrane Protein AlkL Boosts Biocatalytic Oxyfunctionalization of Hydrophobic Substrates in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2012, 78, 5724-5733.	1.4	100
59	Production host selection for asymmetric styrene epoxidation: <i>Escherichia coli</i> vs. solvent-tolerant <i>Pseudomonas</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2012, 39, 1125-1133.	1.4	36
60	Systematic optimization of a biocatalytic two-liquid phase oxyfunctionalization process guided by ecological and economic assessment. <i>Green Chemistry</i> , 2012, 14, 645.	4.6	34
61	Steroid biotransformations in biphasic systems with <i>Yarrowia lipolytica</i> expressing human liver cytochrome P450 genes. <i>Microbial Cell Factories</i> , 2012, 11, 106.	1.9	44
62	Resting cells of recombinant <i>E. coli</i> show high epoxidation yields on energy source and high sensitivity to product inhibition. <i>Biotechnology and Bioengineering</i> , 2012, 109, 1109-1119.	1.7	66
63	Integrated organic-aqueous biocatalysis and product recovery for quinaldine hydroxylation catalyzed by living recombinant <i>Pseudomonas putida</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2012, 39, 1049-1059.	1.4	8
64	Comparison of microbial hosts and expression systems for mammalian CYP1A1 catalysis. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2012, 39, 275-287.	1.4	12
65	Enzyme-mediated oxidations for the chemist. <i>Green Chemistry</i> , 2011, 13, 226-265.	4.6	395
66	Regioselective aromatic hydroxylation of quinaldine by water using quinaldine 4-oxidase in recombinant <i>Pseudomonas putida</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2011, 38, 1067-1077.	1.4	8
67	Cell physiology rather than enzyme kinetics can determine the efficiency of cytochrome P450-catalyzed C-H-oxyfunctionalization. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2011, 38, 1359-1370.	1.4	27
68	Enzyme-Catalyzed Lauro lactam Synthesis <i>via</i> Intramolecular Amide Bond Formation in Aqueous Solution. <i>Advanced Synthesis and Catalysis</i> , 2011, 353, 2501-2510.	2.1	13
69	Kinetic Analysis of Terminal and Unactivated C-H Bond Oxyfunctionalization in Fatty Acid Methyl Esters by Monooxygenase-Based Whole-Cell Biocatalysis. <i>Advanced Synthesis and Catalysis</i> , 2011, 353, 3485-3495.	2.1	45
70	Mikrobielle Prozesse. , 2011, , 477-505.		0
71	Systems biotechnology - Rational whole-cell biocatalyst and bioprocess design. <i>Engineering in Life Sciences</i> , 2010, 10, 384-397.	2.0	51
72	Redox Biocatalysis and Metabolism: Molecular Mechanisms and Metabolic Network Analysis. Antioxidants and Redox Signaling, 2010, 13, 349-394.	2.5	101

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73	Biocatalysis Meets Systems Biotechnology. <i>Chemie-Ingenieur-Technik</i> , 2010, 82, 1520-1520.	0.4	0
74	Efficient phase separation and product recovery in organic-aqueous bioprocessing using supercritical carbon dioxide. <i>Biotechnology and Bioengineering</i> , 2010, 107, 642-651.	1.7	24
75	Intensification and economic and ecological assessment of a biocatalytic oxyfunctionalization process. <i>Green Chemistry</i> , 2010, 12, 815.	4.6	91
76	Ein Vergleich von ruhenden und wachsenden <i>E. coli</i> Zellen für die oxygenasenbasierte Biokatalyse. <i>Chemie-Ingenieur-Technik</i> , 2009, 81, 1312-1313.	0.4	0
77	Modellbasierte Performance-Abschätzung von Mikroorganismen für die Redoxbiokatalyse. <i>Chemie-Ingenieur-Technik</i> , 2009, 81, 1244-1244.	0.4	0
78	Metabolic capacity estimation of <i>Escherichia coli</i> as a platform for redox biocatalysis: constraint-based modeling and experimental verification. <i>Biotechnology and Bioengineering</i> , 2008, 100, 1050-1065.	1.7	84
79	Heme-iron oxygenases: powerful industrial biocatalysts?. <i>Current Opinion in Chemical Biology</i> , 2008, 12, 177-186.	2.8	158
80	Metabolic response of <i>Pseudomonas putida</i> during redox biocatalysis in the presence of a second octanol phase. <i>FEBS Journal</i> , 2008, 275, 5173-5190.	2.2	135
81	NADH Availability Limits Asymmetric Biocatalytic Epoxidation in a Growing Recombinant <i>Escherichia coli</i> Strain. <i>Applied and Environmental Microbiology</i> , 2008, 74, 1436-1446.	1.4	74
82	Carbon metabolism and product inhibition determine the epoxidation efficiency of solvent-tolerant <i>Pseudomonas</i> sp. strain VLB1201 <sup>T</sup> . <i>Biotechnology and Bioengineering</i> , 2007, 98, 1219-1229.	1.7	66
83	Process and Catalyst Design Objectives for Specific Redox Biocatalysis. <i>Advances in Applied Microbiology</i> , 2006, 59, 53-91.	1.3	32
84	Analysis of Two-Liquid-Phase Multistep Biooxidation Based on a Process Model: Indications for Biological Energy Shortage. <i>Organic Process Research and Development</i> , 2006, 10, 628-643.	1.3	31
85	The efficiency of recombinant <i>Escherichia coli</i> as biocatalyst for stereospecific epoxidation. <i>Biotechnology and Bioengineering</i> , 2006, 95, 501-512.	1.7	102
86	Process implementation aspects for biocatalytic hydrocarbon oxyfunctionalization. <i>Journal of Biotechnology</i> , 2004, 113, 183-210.	1.9	121
87	Use of the two-liquid phase concept to exploit kinetically controlled multistep biocatalysis. <i>Biotechnology and Bioengineering</i> , 2003, 81, 683-694.	1.7	99
88	Chemical biotechnology for the specific oxyfunctionalization of hydrocarbons on a technical scale. <i>Biotechnology and Bioengineering</i> , 2003, 82, 833-842.	1.7	59
89	Characterization and Application of Xylene Monooxygenase for Multistep Biocatalysis. <i>Applied and Environmental Microbiology</i> , 2002, 68, 560-568.	1.4	100
90	The use of enzymes in the chemical industry in Europe. <i>Current Opinion in Biotechnology</i> , 2002, 13, 359-366.	3.3	175

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91	Xylene Monooxygenase Catalyzes the Multistep Oxygenation of Toluene and Pseudocumene to Corresponding Alcohols, Aldehydes, and Acids in Escherichia coli JM101. Journal of Biological Chemistry, 2000, 275, 10085-10092.	1.6	78
92	Mass Balances and Life Cycle Assessment. , 0, , 200-227.		10