Bruno BÃ¼hler

List of Publications by Year
in descending order

92	4,011	117625	123424
papers	citations	34 h-index	61 g-index

105	105	105	3194
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Maximizing Photosynthesis-Driven Baeyerâ€“Villiger Oxidation Efficiency in Recombinant Synechocystis sp. PCC6803. Frontiers in Catalysis, 2022, 1, .	3.9	14
2	Rational orthologous pathway and biochemical process engineering for adipic acid production using Pseudomonas taiwanensis VLB120. Metabolic Engineering, 2022, 70, 206-217.	7.0	17
3	Heterologous Lactate Synthesis in Synechocystis sp. Strain PCC 6803 Causes a Growth Condition-Dependent Carbon Sink Effect. Applied and Environmental Microbiology, 2022, 88, e0006322.	3.1	3
4	Generation of Synthetic Shuttle Vectors Enabling Modular Genetic Engineering of Cyanobacteria. ACS Synthetic Biology, 2022, 11, 1758-1771.	3.8	15
5	Exploitation of Hetero- and Phototrophic Metabolic Modules for Redox-Intensive Whole-Cell Biocatalysis. Frontiers in Bioengineering and Biotechnology, 2022, 10, 855715.	4.1	6
6	Hydrophobic Outer Membrane Pores Boost Testosterone Hydroxylation by Cytochrome P450 BM3 Containing Cells. Frontiers in Catalysis, 2022, 2, .	3.9	1
7	Conversion of Cyclohexane to 6-Hydroxyhexanoic Acid Using Recombinant Pseudomonas taiwanensis in a Stirred-Tank Bioreactor. Frontiers in Catalysis, 2021, 1, .	3.9	11
8	Characterization of different biocatalyst formats for BVMOâ€catalyzed cyclohexanone oxidation. Biotechnology and Bioengineering, 2021, 118, 2719-2733.	3.3	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. Metabolic Engineering, 2021, 68, 199-209.	7.0	12
11	Oneâ€pot synthesis of 6â€aminohexanoic acid from cyclohexane using mixedâ€species cultures. Microbial Biotechnology, 2021, 14, 1011-1025.	4.2	8
12	Highly Efficient Access to (S)â€Sulfoxides Utilizing a Promiscuous Flavoprotein Monooxygenase in a Wholeâ€Cell Biocatalyst Format. ChemCatChem, 2020, 12, 4664-4671.	3.7	12
13	Molecular and Engineering Aspects of Biocatalysis. Biotechnology Journal, 2020, 15, 2000499.	3.5	0
14	Rational Engineering of a Multiâ€Step Biocatalytic Cascade for the Conversion of Cyclohexane to Polycaprolactone Monomers in Pseudomonas taiwanensis. Biotechnology Journal, 2020, 15, e2000091.	3.5	16
15	Maximizing Biocatalytic Cyclohexane Hydroxylation by Modulating Cytochrome P450 Monooxygenase Expression in P. taiwanensis VLB120. Frontiers in Bioengineering and Biotechnology, 2020, 8, 140.	4.1	15
16	Regulatory systems for gene expression control in cyanobacteria. Applied Microbiology and Biotechnology, 2020, 104, 1977-1991.	3.6	28
17	Mixed-trophies biofilm cultivation in capillary reactors. MethodsX, 2019, 6, 1822-1831.	1.6	9
18	Data on mixed trophies biofilm for continuous cyclohexane oxidation to cyclohexanol using Synechocystis sp. PCC 6803. Data in Brief, 2019, 25, 104059.	1.0	4

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19	Anaerobic Câ€“H Oxyfunctionalization: Coupling of Nitrate Reduction and Quinoline Hydroxylation in Recombinant Pseudomonas putida. Biotechnology Journal, 2019, 14, 1800615.	3.5	1
20	Lightâ€Dependent and Aerationâ€Independent Gramâ€Scale Hydroxylation of Cyclohexane to Cyclohexanol by CYP450 Harboring Synechocystis sp. PCC 6803. Biotechnology Journal, 2019, 14, e1800724.	3.5	55
21	Stabilization and scaleâ€up of photosynthesisâ€driven ï‰â€hydroxylation of nonanoic acid methyl ester by twoâ€liquid phase wholeâ€cell biocatalysis. Biotechnology and Bioengineering, 2019, 116, 1887-1900.	3.3	16
22	Electron balancing under different sink conditions reveals positive effects on photon efficiency and metabolic activity of Synechocystis sp. PCC 6803. Biotechnology for Biofuels, 2019, 12, 43.	6.2	18
23	Mixed-species biofilms for high-cell-density application of Synechocystis sp. PCC 6803 in capillary reactors for continuous cyclohexane oxidation to cyclohexanol. Bioresource Technology, 2019, 282, 171-178.	9.6	62
24	Constitutively solventâ€tolerant Pseudomonas taiwanensis VLB120âˆ†Câˆ†ttgV supports particularly highâ€styrene epoxidation activities when grown under glucose excess conditions. Biotechnology and Bioengineering, 2019, 116, 1089-1101.	3.3	16
25	In Situ O2Generation for Biocatalytic Oxyfunctionalization Reactions. ChemCatChem, 2018, 10, 5366-5371.	3.7	19
26	Cyanobacterial biofilms as lightâ€driven biocatalysts. Chemie-Ingenieur-Technik, 2018, 90, 1261-1261.	0.8	0
27	An artificial TCA cycle selects for efficient Î±â€ketoglutarate dependent hydroxylase catalysis in engineered Escherichia coli. Biotechnology and Bioengineering, 2017, 114, 1511-1520.	3.3	29
28	The application of constitutively solventâ€tolerant P. taiwanensis VLB120Î”CÎ”ttgV for stereospecific epoxidation of toxic styrene alleviates carrier solvent use. Biotechnology Journal, 2017, 12, 1600558.	3.5	15
29	Hydrolase BioH knockout in E. coli enables efficient fatty acid methyl ester bioprocessing. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 339-351.	3.0	9
30	Umgehung des Gasâ€flÃ¼ssigâ€Stofftransports von Sauerstoff durch Kopplung der photosynthetischen Wasseroxidation an eine biokatalytische Oxyfunktionalisierung. Angewandte Chemie, 2017, 129, 15343-15346.	2.0	18
31	Overcoming the Gasâ€“Liquid Mass Transfer of Oxygen by Coupling Photosynthetic Water Oxidation with Biocatalytic Oxyfunctionalization. Angewandte Chemie - International Edition, 2017, 56, 15146-15149.	13.8	60
32	Maximizing the stability of metabolic engineeringâ€derived wholeâ€cell biocatalysts. Biotechnology Journal, 2017, 12, 1600170.	3.5	34
33	Maximization of cell viability rather than biocatalyst activity improves wholeâ€cell ï‰â€oxyfunctionalization performance. Biotechnology and Bioengineering, 2017, 114, 874-884.	3.3	30
34	Decoupling production from growth by magnesium sulfate limitation boosts de novo limonene production. Biotechnology and Bioengineering, 2016, 113, 1305-1314.	3.3	25
35	Efficient production of the Nylon 12 monomer ï‰-aminododecanoic acid methyl ester from renewable dodecanoic acid methyl ester with engineered Escherichia coli. Metabolic Engineering, 2016, 36, 1-9.	7.0	70
36	Direct infusion-SIM as fast and robust method for absolute protein quantification in complex samples. EuPA Open Proteomics, 2015, 7, 20-26.	2.5	3

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37	Process boundaries of irreversible scCO₂â€assisted phase separation in biphasic wholeâ€cell biocatalysis. Biotechnology and Bioengineering, 2015, 112, 2316-2323.	3.3	6
38	Variability in subpopulation formation propagates into biocatalytic variability of engineered Pseudomonas putida strains. Frontiers in Microbiology, 2015, 6, 1042.	3.5	16
39	The dynamic influence of cells on the formation of stable emulsions in organicâ€“aqueous biotransformations. Journal of Industrial Microbiology and Biotechnology, 2015, 42, 1011-1026.	3.0	15
40	Making variability less variable: matching expression system and host for oxygenase-based biotransformations. Journal of Industrial Microbiology and Biotechnology, 2015, 42, 851-866.	3.0	14
41	Guiding bioprocess design by microbial ecology. Current Opinion in Microbiology, 2015, 25, 25-32.	5.1	15
42	Coupling limonene formation and oxyfunctionalization by mixedâ€culture resting cell fermentation. Biotechnology and Bioengineering, 2015, 112, 1738-1750.	3.3	25
43	Metabolic network capacity of Escherichia coli for Krebs cycle-dependent proline hydroxylation. Microbial Cell Factories, 2015, 14, 108.	4.0	25
44	Efficient hydroxyproline production from glucose in minimal media by Corynebacterium glutamicum. Biotechnology and Bioengineering, 2015, 112, 322-330.	3.3	31
45	Engineering the productivity of recombinant Escherichia coli for limonene formation from glycerol in minimal media. Biotechnology Journal, 2014, 9, 1000-1012.	3.5	101
46	Engineering of Pseudomonas taiwanensis VLB120 for Constitutive Solvent Tolerance and Increased Specific Styrene Epoxidation Activity. Applied and Environmental Microbiology, 2014, 80, 6539-6548.	3.1	62
47	The microbial cell â€" functional unit for energy dependent multistep biocatalysis. Current Opinion in Biotechnology, 2014, 30, 178-189.	6.6	57
48	Reaction and catalyst engineering to exploit kinetically controlled wholeâ€cell multistep biocatalysis for terminal FAME oxyfunctionalization. Biotechnology and Bioengineering, 2014, 111, 1820-1830.	3.3	61
49	Accurate Determination of Plasmid Copy Number of Flow-Sorted Cells using Droplet Digital PCR. Analytical Chemistry, 2014, 86, 5969-5976.	6.5	45
50	Subpopulation-proteomics in prokaryotic populations. Current Opinion in Biotechnology, 2013, 24, 79-87.	6.6	35
51	Whole-cell biocatalysis for selective and productive Câ€“O functional group introduction and modification. Chemical Society Reviews, 2013, 42, 6346.	38.1	188
52	Subtoxic product levels limit the epoxidation capacity of recombinant E. coli by increasing microbial energy demands. Journal of Biotechnology, 2013, 163, 194-203.	3.8	25
53	Construction and characterization of nitrate and nitrite respiring Pseudomonas putida KT2440 strains for anoxic biotechnical applications. Journal of Biotechnology, 2013, 163, 155-165.	3.8	26
54	Wholeâ€cellâ€based CYP153A6â€catalyzed (S)â€limonene hydroxylation efficiency depends on host background and profits from monoterpene uptake via AlkL. Biotechnology and Bioengineering, 2013, 110, 1282-1292.	3.3	69

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55	Direct Terminal Alkylaminoâ€Functionalization via Multistep Biocatalysis in One Recombinant Wholeâ€Cell Catalyst. Advanced Synthesis and Catalysis, 2013, 355, 1693-1697.	4.3	103
56	Proline Availability Regulates Proline-4-Hydroxylase Synthesis and Substrate Uptake in Proline-Hydroxylating Recombinant Escherichia coli. Applied and Environmental Microbiology, 2013, 79, 3091-3100.	3.1	33
57	Stable Emulsions in Biphasic Whole-Cell Biocatalysis: The Mechanism of scCO2-Assisted Phase Separation. Chemie-Ingenieur-Technik, 2013, 85, 1420-1420.	0.8	0
58	Outer Membrane Protein AlkL Boosts Biocatalytic Oxyfunctionalization of Hydrophobic Substrates in Escherichia coli. Applied and Environmental Microbiology, 2012, 78, 5724-5733.	3.1	100
59	Production host selection for asymmetric styrene epoxidation: Escherichia coli vs. solvent-tolerant Pseudomonas. Journal of Industrial Microbiology and Biotechnology, 2012, 39, 1125-1133.	3.0	36
60	Systematic optimization of a biocatalytic two-liquid phase oxyfunctionalization process guided by ecological and economic assessment. Green Chemistry, 2012, 14, 645.	9.0	34
61	Steroid biotransformations in biphasic systems with Yarrowia lipolytica expressing human liver cytochrome P450 genes. Microbial Cell Factories, 2012, 11, 106.	4.0	44
62	Resting cells of recombinant E. coli show high epoxidation yields on energy source and high sensitivity to product inhibition. Biotechnology and Bioengineering, 2012, 109, 1109-1119.	3.3	66
63	Integrated organicâ€“aqueous biocatalysis and product recovery for quinaldine hydroxylation catalyzed by living recombinant Pseudomonas putida. Journal of Industrial Microbiology and Biotechnology, 2012, 39, 1049-1059.	3.0	8
64	Comparison of microbial hosts and expression systems for mammalian CYP1A1 catalysis. Journal of Industrial Microbiology and Biotechnology, 2012, 39, 275-287.	3.0	12
65	Enzyme-mediated oxidations for the chemist. Green Chemistry, 2011, 13, 226-265.	9.0	395
66	Regioselective aromatic hydroxylation of quinaldine by water using quinaldine 4-oxidase in recombinant Pseudomonas putida. Journal of Industrial Microbiology and Biotechnology, 2011, 38, 1067-1077.	3.0	8
67	Cell physiology rather than enzyme kinetics can determine the efficiency of cytochrome P450-catalyzed Câ€“H-oxyfunctionalization. Journal of Industrial Microbiology and Biotechnology, 2011, 38, 1359-1370.	3.0	27
68	Enzymeâ€Catalyzed Laurolactam Synthesis via Intramolecular Amide Bond Formation in Aqueous Solution. Advanced Synthesis and Catalysis, 2011, 353, 2501-2510.	4.3	13
69	Kinetic Analysis of Terminal and Unactivated Cï¿½H Bond Oxyfunctionalization in Fatty Acid Methyl Esters by Monooxygenaseâ€Based Wholeâ€Cell Biocatalysis. Advanced Synthesis and Catalysis, 2011, 353, 3485-3495.	4.3	45
70	Mikrobielle Prozesse. , 2011, , 477-505.		0
71	Systems biotechnology â€“ Rational wholeâ€cell biocatalyst and bioprocess design. Engineering in Life Sciences, 2010, 10, 384-397.	3.6	51
72	Redox Biocatalysis and Metabolism: Molecular Mechanisms and Metabolic Network Analysis. Antioxidants and Redox Signaling, 2010, 13, 349-394.	5.4	101

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73	Biocatalysis Meets Systems Biotechnology. Chemie-Ingenieur-Technik, 2010, 82, 1520-1520.	0.8	0
74	Efficient phase separation and product recovery in organicâ€aqueous bioprocessing using supercritical carbon dioxide. Biotechnology and Bioengineering, 2010, 107, 642-651.	3.3	24
75	Intensification and economic and ecological assessment of a biocatalytic oxyfunctionalization process. Green Chemistry, 2010, 12, 815.	9.0	91
76	Ein Vergleich von ruhenden und wachsenden E. coli Zellen fÃ¼r die oxygenasenbasierte Biokatalyse. Chemie-Ingenieur-Technik, 2009, 81, 1312-1313.	0.8	0
77	Modellbasierte Performanceâ€AbschÃtzung von Mikroorganismen fÃ¼r die Redoxbiokatalyse. Chemie-Ingenieur-Technik, 2009, 81, 1244-1244.	0.8	0
78	Metabolic capacity estimation of Escherichia coli as a platform for redox biocatalysis: constraintâ€based modeling and experimental verification. Biotechnology and Bioengineering, 2008, 100, 1050-1065.	3.3	84
79	Heme-iron oxygenases: powerful industrial biocatalysts?. Current Opinion in Chemical Biology, 2008, 12, 177-186.	6.1	158
80	Metabolic response of Pseudomonasâ€ƒputida during redox biocatalysis in the presence of a second octanol phase. FEBS Journal, 2008, 275, 5173-5190.	4.7	135
81	NADH Availability Limits Asymmetric Biocatalytic Epoxidation in a Growing Recombinant Escherichia coli Strain. Applied and Environmental Microbiology, 2008, 74, 1436-1446.	3.1	74
82	Carbon metabolism and product inhibition determine the epoxidation efficiency of solvent-tolerantPseudomonas sp. strain VLB120Î”C. Biotechnology and Bioengineering, 2007, 98, 1219-1229.	3.3	66
83	Process and Catalyst Design Objectives for Specific Redox Biocatalysis. Advances in Applied Microbiology, 2006, 59, 53-91.	2.4	32
84	Analysis of Two-Liquid-Phase Multistep Biooxidation Based on a Process Model:Â Indications for Biological Energy Shortage. Organic Process Research and Development, 2006, 10, 628-643.	2.7	31
85	The efficiency of recombinantEscherichia coli as biocatalyst for stereospecific epoxidation. Biotechnology and Bioengineering, 2006, 95, 501-512.	3.3	102
86	Process implementation aspects for biocatalytic hydrocarbon oxyfunctionalization. Journal of Biotechnology, 2004, 113, 183-210.	3.8	121
87	Use of the two-liquid phase concept to exploit kinetically controlled multistep biocatalysis. Biotechnology and Bioengineering, 2003, 81, 683-694.	3.3	99
88	Chemical biotechnology for the specific oxyfunctionalization of hydrocarbons on a technical scale. Biotechnology and Bioengineering, 2003, 82, 833-842.	3.3	59
89	Characterization and Application of Xylene Monooxygenase for Multistep Biocatalysis. Applied and Environmental Microbiology, 2002, 68, 560-568.	3.1	100
90	The use of enzymes in the chemical industry in Europe. Current Opinion in Biotechnology, 2002, 13, 359-366.	6.6	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.	3.4	78
92	Mass Balances and Life Cycle Assessment. , 0, , 200-227.		10