Dirk Weuster-Botz

List of Publications by Year
in descending order

195	6,718	71102	88630
papers	citations	41 h-index	70 g-index

205	205	205	6100
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Biotechnological mass production of DNA origami. Nature, 2017, 552, 84-87.	27.8	374
2	Succinic acid from renewable resources as a C₄building-block chemicalâ€"a review of the catalytic possibilities in aqueous media. Green Chemistry, 2009, 11, 13-26.	9.0	303
3	Metabolic engineering of Saccharomyces cerevisiae for the biotechnological production of succinic acid. Metabolic Engineering, 2010, 12, 518-525.	7.0	191
4	Experimental design for fermentation media development: Statistical design or global random search?. Journal of Bioscience and Bioengineering, 2000, 90, 473-483.	2.2	174
5	Efficient Whole-Cell Biotransformation in a Biphasic Ionic Liquid/Water System. Angewandte Chemie - International Edition, 2004, 43, 4529-4531.	13.8	162
6	Water immiscible ionic liquids as solvents for whole cell biocatalysis. Journal of Biotechnology, 2006, 124, 182-190.	3.8	162
7	Recovery of succinic acid from fermentation broth. Biotechnology Letters, 2010, 32, 331-339.	2.2	148
8	Using gas mixtures of CO, CO₂ and H₂ as microbial substrates: the do's and don'ts of successful technology transfer from laboratory to production scale. Microbial Biotechnology, 2018, 11, 606-625.	4.2	126
9	Selective enhancement of autotrophic acetate production with genetically modified Acetobacterium woodii. Journal of Biotechnology, 2014, 178, 67-72.	3.8	119
10	Bacterial Anaerobic Synthesis Gas (Syngas) and CO 2 + H 2 Fermentation. Advances in Applied Microbiology, 2018, 103, 143-221.	2.4	118
11	Whole-cell biocatalysis: Evaluation of new hydrophobic ionic liquids for efficient asymmetric reduction of prochiral ketones. Enzyme and Microbial Technology, 2009, 45, 310-316.	3.2	104
12	Continuous gas fermentation by Acetobacterium woodii in a submerged membrane reactor with full cell retention. Journal of Biotechnology, 2015, 212, 11-18.	3.8	103
13	Reaction engineering analysis of hydrogenotrophic production of acetic acid by Acetobacterium woodii. Biotechnology and Bioengineering, 2011, 108, 470-474.	3.3	102
14	Efficient Production of Single-Stranded Phage DNA as Scaffolds for DNA Origami. Nano Letters, 2015, 15, 4672-4676.	9.1	100
15	Methods and milliliter scale devices for high-throughput bioprocess design. Bioprocess and Biosystems Engineering, 2005, 28, 109-119.	3.4	88
16	Asymmetric whole cell biotransformations in biphasic ionic liquid/water-systems by use of recombinant Escherichia coli with intracellular cofactor regeneration. Tetrahedron: Asymmetry, 2007, 18, 1883-1887.	1.8	87
17	Engineering of formate dehydrogenase: synergistic effect of mutations affecting cofactor specificity and chemical stability. Applied Microbiology and Biotechnology, 2013, 97, 2473-2481.	3.6	79
18	Parallel substrate feeding and pH-control in shaking-flasks. Biochemical Engineering Journal, 2001, 7, 163-170.	3.6	78

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19	Modifying the product pattern of Clostridium acetobutylicum. Applied Microbiology and Biotechnology, 2012, 94, 743-754.	3.6	75
20	Process intensification of wholeâ€cell biocatalysis with ionic liquids. Chemical Record, 2007, 7, 334-340.	5.8	74
21	New reactive extraction systems for separation of bio-succinic acid. Bioprocess and Biosystems Engineering, 2011, 34, 779-787.	3.4	73
22	Miniature bioreactors for automated high-throughput bioprocess design (HTBD): reproducibility of parallel fed-batch cultivations with Escherichia coli. Biotechnology and Applied Biochemistry, 2005, 42, 227.	3.1	72
23	Advanced protein crystallization using water-soluble ionic liquids as crystallization additives. Biotechnology Letters, 2007, 29, 1703-1711.	2.2	72
24	Catalytic hydrogenation of levulinic acid in aqueous phase. Journal of Organometallic Chemistry, 2013, 724, 297-299.	1.8	71
25	Comparative reaction engineering analysis of different acetogenic bacteria for gas fermentation. Journal of Biotechnology, 2016, 228, 82-94.	3.8	69
26	Human Chymotrypsinogen B Production with Pichia pastoris by Integrated Development of Fermentation and Downstream Processing. Part 1. Fermentation. Biotechnology Progress, 2001, 17, 495-502.	2.6	68
27	Fully automated single-use stirred-tank bioreactors for parallel microbial cultivations. Bioprocess and Biosystems Engineering, 2008, 31, 207-215.	3.4	68
28	Open thin-layer cascade reactors for saline microalgae production evaluated in a physically simulated Mediterranean summer climate. Algal Research, 2017, 25, 381-390.	4.6	66
29	Evaluation of artificial neural networks for modelling and optimization of medium composition with a genetic algorithm. Process Biochemistry, 2006, 41, 2200-2206.	3.7	65
30	Engineering solutions for open microalgae mass cultivation and realistic indoor simulation of outdoor environments. Bioprocess and Biosystems Engineering, 2015, 38, 995-1008.	3.4	62
31	Leakage of adenylates during cold methanol/glycerol quenching of Escherichia coli. Metabolomics, 2008, 4, 240-247.	3.0	61
32	Population heterogeneity in microbial bioprocesses: origin, analysis, mechanisms, and future perspectives. Bioprocess and Biosystems Engineering, 2018, 41, 889-916.	3.4	61
33	Scale-down and parallel operation of the riboflavin production process with Bacillus subtilis. Biochemical Engineering Journal, 2007, 33, 263-274.	3.6	59
34	Recycling of the ionic liquid phase in process integrated biphasic whole-cell biocatalysis. Process Biochemistry, 2011, 46, 1132-1137.	3.7	53
35	Continuous computer controlled production of formate dehydrogenase (FDH) and isolation on a pilot scale. Chemical Engineering and Technology, 1994, 17, 131-137.	1.5	52
36	New milliliterâ€scale stirred tank bioreactors for the cultivation of mycelium forming microorganisms. Biotechnology and Bioengineering, 2010, 106, 443-451.	3.3	47

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37	Fed-batch production of l-phenylalanine from glycerol and ammonia with recombinant Escherichia coli. Biochemical Engineering Journal, 2014, 83, 62-69.	3.6	47
38	Sampling Tube Device for Monitoring Intracellular Metabolite Dynamics. Analytical Biochemistry, 1997, 246, 225-233.	2.4	45
39	Asymmetric synthesis of the chiral synthon ethyl (S)-4-chloro-3-hydroxybutanoate using Lactobacillus kefir. Tetrahedron: Asymmetry, 2005, 16, 899-901.	1.8	44
40	Parallel Reactor Systems for Bioprocess Development. Advances in Biochemical Engineering/Biotechnology, 2005, 92, 125-143.	1.1	44
41	Protein crystallization in stirred systemsâ€"scaleâ€up via the maximum local energy dissipation. Biotechnology and Bioengineering, 2013, 110, 1956-1963.	3.3	43
42	Development and Scale up of High-Yield Crystallization Processes of Lysozyme and Lipase Using Additives. Crystal Growth and Design, 2013, 13, 2499-2506.	3.0	41
43	A new microfluidic concept for parallel operated milliliterâ€scale stirred tank bioreactors. Biotechnology Progress, 2011, 27, 684-690.	2.6	38
44	New miniature stirred-tank bioreactors for parallel study of enzymatic biomass hydrolysis. Bioresource Technology, 2012, 106, 138-146.	9.6	38
45	Comparative characterization of novel eneâ€reductases from cyanobacteria. Biotechnology and Bioengineering, 2013, 110, 1293-1301.	3.3	38
46	Model-based optimization of microalgae areal productivity in flat-plate gas-lift photobioreactors. Algal Research, 2016, 20, 153-163.	4.6	38
47	Stereoselective reduction of ethyl 4-chloro acetoacetate with recombinant Pichia pastoris. Tetrahedron: Asymmetry, 2004, 15, 3591-3593.	1.8	36
48	Fast sampling and quenching procedures for microbial metabolic profiling. Biotechnology Letters, 2007, 29, 1161-1167.	2.2	36
49	Metabolic profiling of Escherichia coli cultivations: evaluation of extraction and metabolite analysis procedures. Biotechnology Letters, 2007, 29, 1169-1178.	2.2	36
50	Reaction engineering studies for the production of 2-hydroxyisobutyric acid with recombinant Cupriavidus necator H 16. Applied Microbiology and Biotechnology, 2010, 88, 477-484.	3.6	36
51	Two stirred-tank bioreactors in series enable continuous production of alcohols from carbon monoxide with Clostridium carboxidivorans. Bioprocess and Biosystems Engineering, 2018, 41, 1403-1416.	3.4	36
52	Identification, Cloning, and Characterization of a Novel Ketoreductase from the Cyanobacterium Synechococcus sp. Strain PCC 7942. Applied and Environmental Microbiology, 2008, 74, 6697-6702.	3.1	35
53	Effects of hydrogen partial pressure on autotrophic growth and product formation of Acetobacterium woodii. Bioprocess and Biosystems Engineering, 2016, 39, 1325-1330.	3.4	35
54	Continuous Crystallization of Proteins in a Stirred Classified Product Removal Tank with a Tubular Reactor in Bypass. Crystal Growth and Design, 2017, 17, 4162-4169.	3.0	35

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55	Glucose-controlled l-isoleucine fed-batch production with recombinant strains of Corynebacterium glutamicum. Journal of Biotechnology, 1996, 50, 123-136.	3.8	34
56	Model-supported optimization of phototrophic growth in a stirred-tank photobioreactor. Biotechnology and Bioengineering, 2006, 95, 1177-1187.	3.3	34
57	Feeding strategies enhance high cell density cultivation and protein expression in milliliter scale bioreactors. Biotechnology Journal, 2014, 9, 1293-1303.	3.5	34
58	Anodic respiration of Pseudomonas putida KT2440 in a stirred-tank bioreactor. Biochemical Engineering Journal, 2016, 115, 1-13.	3.6	34
59	Genetic algorithm for multi-objective experimental optimization. Bioprocess and Biosystems Engineering, 2006, 29, 385-390.	3.4	33
60	Milliliter-Scale Stirred Tank Reactors for the Cultivation of Microorganisms. Advances in Applied Microbiology, 2010, 73, 61-82.	2.4	33
61	Asymmetric whole-cell bioreduction of (R)-carvone by recombinant Escherichia coli with in situ substrate supply and product removal. Biochemical Engineering Journal, 2017, 117, 102-111.	3.6	33
62	Lab-scale photobioreactor systems: principles, applications, and scalability. Bioprocess and Biosystems Engineering, 2022, 45, 791-813.	3.4	33
63	A novel milliliter-scale chemostat system for parallel cultivation of microorganisms in stirred-tank bioreactors. Journal of Biotechnology, 2015, 210, 19-24.	3.8	32
64	Specific growth rate and multiplicity of infection affect highâ€cellâ€density fermentation with bacteriophage M13 for ssDNA production. Biotechnology and Bioengineering, 2017, 114, 777-784.	3.3	32
65	Combined sulfite method for the measurement of the oxygen transfer coefficient kLa in bioreactors. Journal of Biotechnology, 2005, 120, 430-438.	3.8	31
66	Discrimination of riboflavin producing Bacillus subtilis strains based on their fed-batch process performances on a millilitre scale. Applied Microbiology and Biotechnology, 2009, 84, 71-76.	3.6	31
67	Growth and recombinant protein expression with Escherichia coli in different batch cultivation media. Applied Microbiology and Biotechnology, 2011, 90, 69-76.	3.6	31
68	Power consumption and maximum energy dissipation in a milliliterâ€scale bioreactor. Biotechnology Progress, 2010, 26, 595-599.	2.6	29
69	Enantioselective reduction of prochiral ketones by engineered bifunctional fusion proteins. Biotechnology and Applied Biochemistry, 2010, 56, 131-140.	3.1	29
70	Modelâ€supported phototrophic growth studies with Scenedesmus obtusiusculus in a flatâ€plate photobioreactor. Biotechnology and Bioengineering, 2017, 114, 308-320.	3.3	28
71	Rapid media transition: An experimental approach for steady state analysis of metabolic pathways. Biotechnology Progress, 2010, 26, 1-10.	2.6	27
72	Lipid production with Trichosporon oleaginosus in a membrane bioreactor using microalgae hydrolysate. Journal of Biotechnology, 2017, 241, 1-10.	3.8	27

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73	Kinetic studies on autohydrogenotrophic growth of Ralstonia eutropha with nitrate as terminal electron acceptor. Applied Microbiology and Biotechnology, 2007, 76, 75-81.	3.6	26
74	New oxidoreductases from cyanobacteria: Exploring nature's diversity. Enzyme and Microbial Technology, 2010, 47, 228-235.	3.2	26
75	A novel ene-reductase from Synechococcus sp. PCC 7942 for the asymmetric reduction of alkenes. Process Biochemistry, 2012, 47, 1988-1997.	3.7	26
76	Esterification of bio-based succinic acid in biphasic systems: Comparison of chemical and biological catalysts. Journal of Molecular Catalysis B: Enzymatic, 2012, 80, 39-47.	1.8	26
77	Fedâ€batch production of <scp>l</scp>â€tryptophan from glycerol using recombinant Escherichia coli. Biotechnology and Bioengineering, 2018, 115, 2881-2892.	3.3	26
78	Carbon monoxide conversion with Clostridium aceticum. Biotechnology and Bioengineering, 2018, 115, 2740-2750.	3.3	26
79	Process-engineering characterization of small-scale bubble columns for microbial process development. Bioprocess and Biosystems Engineering, 2001, 24, 3-11.	3.4	25
80	Parallel-operated stirred-columns for microbial process development. Biochemical Engineering Journal, 2002, 11, 69-72.	3.6	25
81	Asymmetric synthesis of tert-butyl (3R, 5S) 6-chloro-dihydroxyhexanoate with Lactobacillus kefir. Applied Microbiology and Biotechnology, 2005, 69, 9-15.	3.6	25
82	Comparison of genetic algorithms for experimental multi-objective optimization on the example of medium design for cyanobacteria. Biotechnology Journal, 2006, 1, 549-555.	3.5	25
83	Evaluation of fluorimetric pH sensors for bioprocess monitoring at low pH. Bioprocess and Biosystems Engineering, 2015, 38, 1685-1692.	3.4	25
84	Light-dependent growth kinetics enable scale-up of well-mixed phototrophic bioprocesses in different types of photobioreactors. Journal of Biotechnology, 2019, 297, 41-48.	3.8	25
85	Comparative Study of Cyanobacteria as Biocatalysts for the Asymmetric Synthesis of Chiral Building Blocks. Engineering in Life Sciences, 2006, 6, 175-179.	3.6	24
86	General medium for the autotrophic cultivation of acetogens. Bioprocess and Biosystems Engineering, 2016, 39, 1645-1650.	3.4	24
87	Reversible retrofitting of a stirred-tank bioreactor for gas-lift operation to perform synthesis gas fermentation studies. Biochemical Engineering Journal, 2019, 141, 89-101.	3.6	24
88	Studies on Syngas Fermentation With Clostridium carboxidivorans in Stirred-Tank Reactors With Defined Gas Impurities. Frontiers in Microbiology, 2021, 12, 655390.	3.5	24
89	Production of Lactobacillus kefir cells for asymmetric synthesis of a 3,5-dihydroxycarboxylate. Applied Microbiology and Biotechnology, 2005, 67, 619-622.	3.6	23
90	Multiâ€enzymatic oneâ€pot reduction of dehydrocholic acid to 12â€ketoâ€ursodeoxycholic acid with wholeâ€cell biocatalysts. Biotechnology and Bioengineering, 2013, 110, 68-77.	3.3	23

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91	Metabolic control analysis of L-tryptophan production with Escherichia coli based on data from short-term perturbation experiments. Journal of Biotechnology, 2020, 307, 15-28.	3.8	23
92	Evaluation of parallel milliliter-scale stirred-tank bioreactors for the study of biphasic whole-cell biocatalysis with ionic liquids. Journal of Biotechnology, 2012, 157, 253-257.	3.8	22
93	High-cell-density cultivation and recombinant protein production with Komagataella pastoris in stirred-tank bioreactors from milliliter to cubic meter scale. Process Biochemistry, 2016, 51, 177-184.	3.7	22
94	A two-stage biological gas to liquid transfer process to convert carbon dioxide into bioplastic. Bioresource Technology Reports, 2018, 1, 61-68.	2.7	22
95	Continuous conversion of CO2/H2 with Clostridium aceticum in biofilm reactors. Bioresource Technology, 2019, 291, 121760.	9.6	22
96	Fed-batch production of recombinant human calcitonin precursor fusion protein using Staphylococcus carnosus as an expression-secretion system. Applied Microbiology and Biotechnology, 2000, 54, 361-369.	3.6	21
97	Estimation of optimal feeding strategies for fed-batch bioprocesses. Bioprocess and Biosystems Engineering, 2005, 27, 255-262.	3.4	21
98	Multi-objective steady state optimization of biochemical reaction networks using a constrained genetic algorithm. Computers and Chemical Engineering, 2008, 32, 1707-1713.	3.8	21
99	Biocatalytic process optimization based on mechanistic modeling of cholic acid oxidation with cofactor regeneration. Biotechnology and Bioengineering, 2011, 108, 1307-1317.	3.3	21
100	Production of halophilic proteins using Haloferax volcanii H1895 in a stirred-tank bioreactor. Applied Microbiology and Biotechnology, 2016, 100, 1183-1195.	3.6	21
101	High-performance recombinant protein production with Escherichia coli in continuously operated cascades of stirred-tank reactors. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 1021-1029.	3.0	21
102	Production of Î²â€carotene with Dunaliella salina CCAP19/18 at physically simulated outdoor conditions. Engineering in Life Sciences, 2021, 21, 115-125.	3.6	21
103	One-step synthesis of 12-ketoursodeoxycholic acid from dehydrocholic acid using a multienzymatic system. Applied Microbiology and Biotechnology, 2013, 97, 633-639.	3.6	20
104	Reaction engineering analysis of L-lysine transport by Corynebacterium glutamicum. , 2000, 51, 40-50.		19
105	Novel whole-cell biocatalysts with recombinant hydroxysteroid dehydrogenases for the asymmetric reduction of dehydrocholic acid. Applied Microbiology and Biotechnology, 2012, 95, 1457-1468.	3.6	19
106	IPTG can replace lactose in autoâ€induction media to enhance protein expression in batchâ€cultured Escherichia coli. Engineering in Life Sciences, 2015, 15, 824-829.	3.6	19
107	Identification and Experimental Characterization of an Extremophilic Brine Pool Alcohol Dehydrogenase from Single Amplified Genomes. ACS Chemical Biology, 2018, 13, 161-170.	3.4	19
108	Characterization of stirrers for screening studies of enzymatic biomass hydrolyses on a milliliter scale. Bioprocess and Biosystems Engineering, 2013, 36, 927-935.	3.4	18

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109	Experimental validation of in silico estimated biomass yields of Pseudomonas putida KT2440. Biotechnology Journal, 2017, 12, 1600720.	3.5	18
110	Enabling Technologies: Fermentation and Downstream Processing. , 2007, 105, 205-247.		17
111	Cofactor regeneration in phototrophic cyanobacteria applied for asymmetric reduction of ketones. Applied Microbiology and Biotechnology, 2007, 75, 1031-1037.	3.6	17
112	Comparative reaction engineering studies for succinic acid production from sucrose by metabolically engineered Escherichia coli in fedâ€batchâ€operated stirred tank bioreactors. Biotechnology Journal, 2012, 7, 1277-1287.	3.5	17
113	Improvement of constraintâ€based flux estimation during Lâ€phenylalanine production with Escherichia coli using targeted knockâ€out mutants. Biotechnology and Bioengineering, 2014, 111, 1406-1416.	3.3	17
114	Parallelized small-scale production of uniformly 13C-labeled cell extract for quantitative metabolome analysis. Analytical Biochemistry, 2015, 478, 134-140.	2.4	17
115	Integrated separation process for isolation and purification of biosuccinic acid. Biotechnology Progress, 2011, 27, 1623-1628.	2.6	16
116	Reaction engineering studies of acetoneâ€butanolâ€ethanol fermentation with Clostridium acetobutylicum. Biotechnology Journal, 2012, 7, 656-661.	3.5	16
117	A novel one-step expression and immobilization method for the production of biocatalytic preparations. Microbial Cell Factories, 2015, 14, 180.	4.0	16
118	Parallel steady state studies on a milliliter scale accelerate fedâ€batch bioprocess design for recombinant protein production with Escherichia coli. Biotechnology Progress, 2016, 32, 1426-1435.	2.6	16
119	Non-water miscible ionic liquid improves biocatalytic production of geranyl glucoside with Escherichia coli overexpressing a glucosyltransferase. Bioprocess and Biosystems Engineering, 2016, 39, 1409-1414.	3.4	16
120	Reaction engineering analysis of the autotrophic energy metabolism of Clostridium aceticum. FEMS Microbiology Letters, 2017, 364, .	1.8	16
121	Reaction engineering analysis of Scenedesmus ovalternus in a flat-plate gas-lift photobioreactor. Bioresource Technology, 2017, 225, 165-174.	9.6	16
122	Studies on the scale-up of biomass production with Scenedesmus spp. in flat-plate gas-lift photobioreactors. Bioprocess and Biosystems Engineering, 2018, 41, 213-220.	3.4	16
123	Synthetic coâ€culture of autotrophic Clostridium carboxidivorans and chain elongating Clostridium kluyveri monitored by flow cytometry. Microbial Biotechnology, 2022, 15, 1471-1485.	4.2	16
124	Microbial production of homogeneously layered cellulose pellicles in a membrane bioreactor. Biotechnology and Bioengineering, 2011, 108, 2237-2240.	3.3	15
125	Reaction engineering analysis of cellulase production with Trichoderma reesei RUT-C30 with intermittent substrate supply. Bioprocess and Biosystems Engineering, 2013, 36, 893-900.	3.4	15
126	CFD analysis of interphase mass transfer and energy dissipation in a milliliter-scale stirred-tank reactor for filamentous microorganisms. Chemical Engineering Research and Design, 2014, 92, 240-248.	5.6	15

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127	Investigation of vertical mixing in thin-layer cascade reactors using computational fluid dynamics. Chemical Engineering Research and Design, 2018, 132, 436-444.	5.6	15
128	High-Density Microalgae Cultivation in Open Thin-Layer Cascade Photobioreactors with Water Recycling. Applied Sciences (Switzerland), 2020, 10, 3883.	2.5	15
129	Development and characterization of Escherichia coli triple reporter strains for investigation of population heterogeneity in bioprocesses. Microbial Cell Factories, 2020, 19, 14.	4.0	15
130	Artificial microbial consortia for bioproduction processes. Engineering in Life Sciences, 2023, 23, .	3.6	15
131	Production of protease with Bacillus licheniformis mutants insensitive to repression of exoenzyme biosynthesis. Applied Microbiology and Biotechnology, 1994, 40, 611-617.	3.6	14
132	Regioselective oxidation of terfenadine with Cunninghamella blakesleeana. Journal of Molecular Catalysis B: Enzymatic, 2000, 10, 313-324.	1.8	14
133	Enhancement of the NAD(P)(H) Pool in Saccharomyces cerevisiae. Engineering in Life Sciences, 2008, 8, 381-389.	3.6	13
134	L-Erythrulose production with a multideletion strain of Gluconobacter oxydans. Applied Microbiology and Biotechnology, 2019, 103, 4393-4404.	3.6	13
135	A Newly Designed Automatically Controlled, Sterilizable Flat Panel Photobioreactor for Axenic Algae Culture. Frontiers in Bioengineering and Biotechnology, 2021, 9, 697354.	4.1	13
136	Process performance of parallel bioreactors for batch cultivation of Streptomyces tendae. Bioprocess and Biosystems Engineering, 2011, 34, 297-304.	3.4	12
137	Rational selection of biphasic reaction systems for geranyl glucoside production by Escherichia coli whole-cell biocatalysts. Enzyme and Microbial Technology, 2018, 112, 79-87.	3.2	12
138	Carbon storage in recombinant Escherichia coli during growth on glycerol and lactic acid. Biotechnology and Bioengineering, 2014, 111, 2508-2519.	3.3	11
139	Asymmetric Whole-Cell Bio-Reductions of (R)-Carvone Using Optimized Ene Reductases. Molecules, 2019, 24, 2550.	3.8	11
140	Advances in automated realâ€time flow cytometry for monitoring of bioreactor processes. Engineering in Life Sciences, 2022, 22, 260-278.	3.6	11
141	Metabolic control analysis of l -phenylalanine production from glycerol with engineered E. coli using data from short-term steady-state perturbation experiments. Biochemical Engineering Journal, 2017, 126, 86-100.	3.6	10
142	Continuous Production of Lipids with Microchloropsis salina in Open Thin-Layer Cascade Photobioreactors on a Pilot Scale. Energies, 2021, 14, 500.	3.1	10
143	Reaction engineering analysis of Lâ€Lysine transport by Corynebacterium glutamicum. Biotechnology and Bioengineering, 1996, 51, 40-50.	3.3	10
144	The SiLAÂ2 Manager for rapid device integration and workflow automation. SoftwareX, 2022, 17, 100991.	2.6	10

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145	Comparison of Syngas-Fermenting Clostridia in Stirred-Tank Bioreactors and the Effects of Varying Syngas Impurities. Microorganisms, 2022, 10, 681.	3.6	10
146	A parallel bubble column system for the cultivation of phototrophic microorganisms. Biotechnology Letters, 2008, 30, 1197-1200.	2.2	9
147	Experimental optimization of protein refolding with a genetic algorithm. Protein Science, 2010, 19, 2085-2095.	7.6	9
148	Modeling of transient flow through a viscoelastic preparative chromatography packing. Biotechnology Progress, 2013, 29, 958-967.	2.6	9
149	Rapid salinity measurements for fluid flow characterisation using minimal invasive sensors. Chemical Engineering Science, 2017, 166, 161-167.	3.8	9
150	Loop Swapping as a Potent Approach to Increase Ene Reductase Activity with Nicotinamide Adenine Dinucleotide (NADH). Advanced Synthesis and Catalysis, 2019, 361, 2505-2513.	4.3	9
151	Comparative evaluation of Aspergillus niger strains for endogenous pectin-depolymerization capacity and suitability for d-galacturonic acid production. Bioprocess and Biosystems Engineering, 2020, 43, 1549-1560.	3.4	9
152	Optimization of fermentation medium composition in substrate-controlled continuous stirred tank reactors. Chemical Engineering and Technology, 1997, 20, 403-413.	1.5	8
153	Steady-state analysis of metabolic pathways: Comparing the double modulation method and the linâ€“log approach. Metabolic Engineering, 2007, 9, 433-441.	7.0	8
154	Enantiocomplementary inverting sec-alkylsulfatase activity in cyano- and thio-bacteria Synechococcus and Paracoccus spp.: selectivity enhancement by medium engineering. Tetrahedron: Asymmetry, 2009, 20, 115-118.	1.8	8
155	Combination of hydrodynamic cavitation and chlorine dioxide for disinfection of water. Engineering in Life Sciences, 2011, 11, 350-358.	3.6	8
156	Macroscopic investigation of the transient hydrodynamic memory behavior of preparative packed chromatography beds. Journal of Chromatography A, 2011, 1218, 944-950.	3.7	8
157	Purification of proteins from solutions containing residual host cell proteins via preparative crystallization. Biotechnology Letters, 2015, 37, 1791-1801.	2.2	8
158	Dynamic mechanistic modeling of the multienzymatic oneâ€pot reduction of dehydrocholic acid to 12â€keto ursodeoxycholic acid with competing substrates and cofactors. Biotechnology Progress, 2015, 31, 375-386.	2.6	8
159	Studies on the enzymatic synthesis of N-acetylneuraminic acid with continuously operated enzyme membrane reactors on a milliliter scale. Biochemical Engineering Journal, 2017, 119, 9-19.	3.6	8
160	Crystal Contact Engineering Enables Efficient Capture and Purification of an Oxidoreductase by Technical Crystallization. Biotechnology Journal, 2020, 15, e2000010.	3.5	8
161	Automated multi-scale cascade of parallel stirred-tank bioreactors for fast protein expression studies. Journal of Biotechnology, 2021, 332, 103-113.	3.8	8
162	Monitoring co-cultures of Clostridium carboxidivorans and Clostridium kluyveri by fluorescence in situ hybridization with specific 23S rRNA oligonucleotide probes. Systematic and Applied Microbiology, 2021, 44, 126271.	2.8	8

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163	Continuous sulfide supply enhanced autotrophic production of alcohols with Clostridium ragsdalei. Bioresources and Bioprocessing, 2022, 9, .	4.2	8
164	Application of fuzzy-logic models for metabolic control analysis. Journal of Theoretical Biology, 2007, 245, 391-399.	1.7	7
165	Statistical vs. Stochastic experimental design: An experimental comparison on the example of protein refolding. Biotechnology Progress, 2012, 28, 1499-1506.	2.6	7
166	Non-chromatographic preparative purification of enhanced green fluorescent protein. Journal of Biotechnology, 2015, 194, 84-90.	3.8	7
167	Phosphoenolpyruvate Transporter Enables Targeted Perturbation During Metabolic Analysis of Lâ€Phenylalanine Production With Escherichia coli. Biotechnology Journal, 2018, 13, e1700611.	3.5	7
168	Rational Crystal Contact Engineering of Lactobacillus brevis Alcohol Dehydrogenase To Promote Technical Protein Crystallization. Crystal Growth and Design, 2019, 19, 2380-2387.	3.0	7
169	Validated numerical fluid simulation of a thinâ€layer cascade photobioreactor in OpenFOAM. Engineering in Life Sciences, 2019, 19, 97-103.	3.6	7
170	Engineering cofactor supply and NADH-dependent d-galacturonic acid reductases for redox-balanced production of l-galactonate in Saccharomyces cerevisiae. Scientific Reports, 2020, 10, 19021.	3.3	7
171	Novel synthetic coâ€culture of Acetobacterium woodii and Clostridium drakei using CO₂ and in situ generated H₂ for the production of caproic acid via lactic acid. Engineering in Life Sciences, 2023, 23, .	3.6	7
172	Utilization of organophosphate:phosphate antiporter for isotope-labeling experiments inE.Âcoli. FEMS Microbiology Letters, 2014, 361, 52-61.	1.8	6
173	Perturbation Experiments: Approaches for Metabolic Pathway Analysis in Bioreactors. Advances in Biochemical Engineering/Biotechnology, 2015, 152, 91-136.	1.1	6
174	Neutron and X-ray crystal structures of Lactobacillus brevis alcohol dehydrogenase reveal new insights into hydrogen-bonding pathways. Acta Crystallographica Section F, Structural Biology Communications, 2018, 74, 754-764.	0.8	6
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