Christoph Wittmann

List of Publications by Citations

233 papers	12,849 citations	67 h-index	106 g-index
256 ext. papers	14,773 ext. citations	6.1 avg, IF	6.89 L-index

#	Paper	IF	Citations
233	From zero to hero--design-based systems metabolic engineering of Corynebacterium glutamicum for L-lysine production. *Metabolic Engineering*, **2011**, 13, 159-68	9.7	432
232	A roadmap for interpreting (13)C metabolite labeling patterns from cells. *Current Opinion in Biotechnology*, **2015**, 34, 189-201	11.4	368
231	The yeast Kluyveromyces marxianus and its biotechnological potential. *Applied Microbiology and Biotechnology*, **2008**, 79, 339-54	5.7	361
230	Sampling for metabolome analysis of microorganisms. *Analytical Chemistry*, **2007**, 79, 3843-9	7.8	316
229	Complete genome sequence of the myxobacterium Sorangium cellulosum. *Nature Biotechnology*, **2007**, 25, 1281-9	44.5	307
228	Bio-based production of chemicals, materials and fuels -Corynebacterium glutamicum as versatile cell factory. *Current Opinion in Biotechnology*, **2012**, 23, 631-40	11.4	280
227	Industrial biotechnology of Pseudomonas putida and related species. *Applied Microbiology and Biotechnology*, **2012**, 93, 2279-90	5.7	230
226	Advanced biotechnology: metabolically engineered cells for the bio-based production of chemicals and fuels, materials, and health-care products. *Angewandte Chemie - International Edition*, **2015**, 54, 3328-50	16.4	209
225	Impact of the cold shock phenomenon on quantification of intracellular metabolites in bacteria. *Analytical Biochemistry*, **2004**, 327, 135-9	3.1	209
224	From zero to hero - production of bio-based nylon from renewable resources using engineered Corynebacterium glutamicum. *Metabolic Engineering*, **2014**, 25, 113-23	9.7	202
223	OpenFLUX: efficient modelling software for 13C-based metabolic flux analysis. *Microbial Cell Factories*, **2009**, 8, 25	6.4	191
222	Top value platform chemicals: bio-based production of organic acids. *Current Opinion in Biotechnology*, **2015**, 36, 168-75	11.4	184
221	Correcting mass isotopomer distributions for naturally occurring isotopes. *Biotechnology and Bioengineering*, **2002**, 80, 477-9	4.9	184
220	In-depth profiling of lysine-producing Corynebacterium glutamicum by combined analysis of the transcriptome, metabolome, and fluxome. *Journal of Bacteriology*, **2004**, 186, 1769-84	3.5	181
219	Amplified expression of fructose 1,6-bisphosphatase in Corynebacterium glutamicum increases in vivo flux through the pentose phosphate pathway and lysine production on different carbon sources. *Applied and Environmental Microbiology*, **2005**, 71, 8587-96	4.8	180
218	Systems and synthetic metabolic engineering for amino acid production - the heartbeat of industrial strain development. *Current Opinion in Biotechnology*, **2012**, 23, 718-26	11.4	176
217	Comparative metabolic flux analysis of lysine-producing Corynebacterium glutamicum cultured on glucose or fructose. *Applied and Environmental Microbiology*, **2004**, 70, 229-39	4.8	172

216	Integrated optical sensing of dissolved oxygen in microtiter plates: a novel tool for microbial cultivation. *Biotechnology and Bioengineering*, **2003**, 81, 829-36	4.9	172
215	Fluxome analysis using GC-MS. *Microbial Cell Factories*, **2007**, 6, 6	6.4	170
214	A field of dreams: Lignin valorization into chemicals, materials, fuels, and health-care products. *Biotechnology Advances*, **2019**, 37, 107360	17.8	169
213	Systems-wide metabolic pathway engineering in Corynebacterium glutamicum for bio-based production of diaminopentane. *Metabolic Engineering*, **2010**, 12, 341-51	9.7	162
212	Genealogy profiling through strain improvement by using metabolic network analysis: metabolic flux genealogy of several generations of lysine-producing corynebacteria. *Applied and Environmental Microbiology*, **2002**, 68, 5843-59	4.8	162
211	Minibioreactors. *Biotechnology Letters*, **2004**, 26, 1-10	3	155
210	Characterization and control of fungal morphology for improved production performance in biotechnology. *Journal of Biotechnology*, **2013**, 163, 112-23	3.7	145
209	Characterization of the metabolic shift between oxidative and fermentative growth in Saccharomyces cerevisiae by comparative 13C flux analysis. *Microbial Cell Factories*, **2005**, 4, 30	6.4	144
208	From lignin to nylon: Cascaded chemical and biochemical conversion using metabolically engineered Pseudomonas putida. *Metabolic Engineering*, **2018**, 47, 279-293	9.7	140
207	Bio-based production of the platform chemical 1,5-diaminopentane. *Applied Microbiology and Biotechnology*, **2011**, 91, 1287-96	5.7	140
206	Mass spectrometry for metabolic flux analysis. *Biotechnology and Bioengineering*, **1999**, 62, 739-750	4.9	138
205	Metabolic flux engineering of L-lysine production in Corynebacterium glutamicum--over expression and modification of G6P dehydrogenase. *Journal of Biotechnology*, **2007**, 132, 99-109	3.7	136
204	In-silico-driven metabolic engineering of Pseudomonas putida for enhanced production of poly-hydroxyalkanoates. *Metabolic Engineering*, **2013**, 15, 113-23	9.7	133
203	Metabolic pathway analysis for rational design of L-methionine production by Escherichia coli and Corynebacterium glutamicum. *Metabolic Engineering*, **2006**, 8, 353-69	9.7	123
202	Metabolic engineering of cellular transport for overproduction of the platform chemical 1,5-diaminopentane in Corynebacterium glutamicum. *Metabolic Engineering*, **2011**, 13, 617-27	9.7	121
201	Metabolically engineered Corynebacterium glutamicum for bio-based production of chemicals, fuels, materials, and healthcare products. *Metabolic Engineering*, **2018**, 50, 122-141	9.7	120
200	Improved enzyme production by bio-pellets of Aspergillus niger: targeted morphology engineering using titanate microparticles. *Biotechnology and Bioengineering*, **2012**, 109, 462-71	4.9	118
199	Fermentation of plant-based milk alternatives for improved flavour and nutritional value. *Applied Microbiology and Biotechnology*, **2019**, 103, 9263-9275	5.7	111

198	Metabolic engineering of Corynebacterium glutamicum for production of 1,5-diaminopentane from hemicellulose. *Biotechnology Journal*, **2011**, 6, 306-17	5.6	107
197	Morphology engineering of Aspergillus niger for improved enzyme production. *Biotechnology and Bioengineering*, **2010**, 105, 1058-68	4.9	102
196	Metabolic engineering of industrial platform microorganisms for biorefinery applications--optimization of substrate spectrum and process robustness by rational and evolutive strategies. *Bioresource Technology*, **2013**, 135, 544-54	11	101
195	Identification and elimination of the competing N-acetyldiaminopentane pathway for improved production of diaminopentane by Corynebacterium glutamicum. *Applied and Environmental Microbiology*, **2010**, 76, 5175-80	4.8	99
194	Biotechnology of riboflavin. *Applied Microbiology and Biotechnology*, **2016**, 100, 2107-19	5.7	97
193	Metabolic engineering of Corynebacterium glutamicum for the production of cis, cis-muconic acid from lignin. *Microbial Cell Factories*, **2018**, 17, 115	6.4	97
192	Areal activities and stratification of hydrolytic enzymes involved in the biochemical cycles of carbon, nitrogen, sulphur and phosphorus in podsolized boreal forest soils. *Soil Biology and Biochemistry*, **2004**, 36, 425-433	7.5	97
191	Metabolic engineering of the tricarboxylic acid cycle for improved lysine production by Corynebacterium glutamicum. *Applied and Environmental Microbiology*, **2009**, 75, 7866-9	4.8	95
190	Application of MALDI-TOF MS to lysine-producing Corynebacterium glutamicum: a novel approach for metabolic flux analysis. *FEBS Journal*, **2001**, 268, 2441-55		95
189	Systems metabolic engineering of xylose-utilizing Corynebacterium glutamicum for production of 1,5-diaminopentane. *Biotechnology Journal*, **2013**, 8, 557-70	5.6	90
188	In vivo analysis of intracellular amino acid labelings by GC/MS. *Analytical Biochemistry*, **2002**, 307, 379-82	3.1	89
187	Systems metabolic engineering of Corynebacterium glutamicum for the production of the carbon-5 platform chemicals 5-aminovalerate and glutarate. *Microbial Cell Factories*, **2016**, 15, 154	6.4	88
186	Pyrazine Biosynthesis in Corynebacterium glutamicum. *European Journal of Organic Chemistry*, **2010**, 2010, 2687-2695	3.2	88
185	Metabolic fluxes in Corynebacterium glutamicum during lysine production with sucrose as carbon source. *Applied and Environmental Microbiology*, **2004**, 70, 7277-87	4.8	88
184	Physiology of the yeast Kluyveromyces marxianus during batch and chemostat cultures with glucose as the sole carbon source. *FEMS Yeast Research*, **2007**, 7, 422-35	3.1	87
183	Systems metabolic engineering of Escherichia coli for production of the antitumor drugs violacein and deoxyviolacein. *Metabolic Engineering*, **2013**, 20, 29-41	9.7	85
182	Increased lysine production by flux coupling of the tricarboxylic acid cycle and the lysine biosynthetic pathway--metabolic engineering of the availability of succinyl-CoA in Corynebacterium glutamicum. *Metabolic Engineering*, **2013**, 15, 184-95	9.7	83
181	Morphology and rheology in filamentous cultivations. *Advances in Applied Microbiology*, **2010**, 72, 89-136	4.9	83

180	Characterization and application of an optical sensor for quantification of dissolved O2 in shake-flasks. *Biotechnology Letters*, **2003**, 25, 377-80	3	83
179	Growth inhibition by ammonia and use of a pH-controlled feeding strategy for the effective cultivation of Mycobacterium chlorophenolicum. *Applied Microbiology and Biotechnology*, **1995**, 44, 519-25	5.7	80
178	Metabolic fluxes and beyond-systems biology understanding and engineering of microbial metabolism. *Applied Microbiology and Biotechnology*, **2010**, 88, 1065-75	5.7	79
177	In vivo quantification of intracellular amino acids and intermediates of the methionine pathway in Corynebacterium glutamicum. *Analytical Biochemistry*, **2005**, 340, 171-3	3.1	79
176	Systems-wide analysis and engineering of metabolic pathway fluxes in bio-succinate producing Basfia succiniciproducens. *Biotechnology and Bioengineering*, **2013**, 110, 3013-23	4.9	77
175	Production of medium chain length polyhydroxyalkanoate in metabolic flux optimized Pseudomonas putida. *Microbial Cell Factories*, **2014**, 13, 88	6.4	76
174	Enabling the valorization of guaiacol-based lignin: Integrated chemical and biochemical production of cis,cis-muconic acid using metabolically engineered Amycolatopsis sp ATCC 39116. *Metabolic Engineering*, **2018**, 45, 200-210	9.7	76
173	Metabolic physiology of aroma-producing Kluyveromyces marxianus. *Yeast*, **2002**, 19, 1351-63	3.4	75
172	Flux Design: In silico design of cell factories based on correlation of pathway fluxes to desired properties. *BMC Systems Biology*, **2009**, 3, 120	3.5	73
171	Quantification of intracellular amino acids in batch cultures of Saccharomyces cerevisiae. *Applied Microbiology and Biotechnology*, **2001**, 56, 776-9	5.7	72
170	Modeling and experimental design for metabolic flux analysis of lysine-producing Corynebacteria by mass spectrometry. *Metabolic Engineering*, **2001**, 3, 173-91	9.7	72
169	Metabolic responses to pyruvate kinase deletion in lysine producing Corynebacterium glutamicum. *Microbial Cell Factories*, **2008**, 7, 8	6.4	71
168	Response of fluxome and metabolome to temperature-induced recombinant protein synthesis in Escherichia coli. *Journal of Biotechnology*, **2007**, 132, 375-84	3.7	68
167	The key to acetate: metabolic fluxes of acetic acid bacteria under cocoa pulp fermentation-simulating conditions. *Applied and Environmental Microbiology*, **2014**, 80, 4702-16	4.8	67
166	Systems metabolic engineering of Corynebacterium glutamicum for production of the chemical chaperone ectoine. *Microbial Cell Factories*, **2013**, 12, 110	6.4	66
165	Adaptation of Bacillus subtilis carbon core metabolism to simultaneous nutrient limitation and osmotic challenge: a multi-omics perspective. *Environmental Microbiology*, **2014**, 16, 1898-917	5.2	61
164	GC-MS-based C metabolic flux analysis resolves the parallel and cyclic glucose metabolism of Pseudomonas putida KT2440 and Pseudomonas aeruginosa PAO1. *Metabolic Engineering*, **2019**, 54, 35-53	9.7	59
163	Metabolic network analysis of lysine producing Corynebacterium glutamicum at a miniaturized scale. *Biotechnology and Bioengineering*, **2004**, 87, 1-6	4.9	59

162	Transcriptional and metabolic responses of Bacillus subtilis to the availability of organic acids: transcription regulation is important but not sufficient to account for metabolic adaptation. *Applied and Environmental Microbiology*, **2007**, 73, 499-507	4.8	58
161	Derivatization of small biomolecules for optimized matrix-assisted laser desorption/ionization mass spectrometry. *Journal of Mass Spectrometry*, **2002**, 37, 963-73	2.2	58
160	Consequences of phosphoenolpyruvate:sugar phosphotranferase system and pyruvate kinase isozymes inactivation in central carbon metabolism flux distribution in Escherichia coli. *Microbial Cell Factories*, **2012**, 11, 127	6.4	56
159	MALDI-TOF MS for quantification of substrates and products in cultivations of Corynebacterium glutamicum. *Biotechnology and Bioengineering*, **2001**, 72, 642-647	4.9	56
158	Integration of in vivo and in silico metabolic fluxes for improvement of recombinant protein production. *Metabolic Engineering*, **2012**, 14, 47-58	9.7	54
157	Appropriate sampling for intracellular amino acid analysis in five phylogenetically different yeasts. *Biotechnology Letters*, **2008**, 30, 1993-2000	3	53
156	Integrated analysis of gene expression and metabolic fluxes in PHA-producing Pseudomonas putida grown on glycerol. *Microbial Cell Factories*, **2016**, 15, 73	6.4	52
155	Physiological response of Corynebacterium glutamicum to oxidative stress induced by deletion of the transcriptional repressor McbR. *Microbiology (United Kingdom)*, **2008**, 154, 3917-3930	2.9	51
154	Robustness and plasticity of metabolic pathway flux among uropathogenic isolates of Pseudomonas aeruginosa. *PLoS ONE*, **2014**, 9, e88368	3.7	50
153	Dynamics of intracellular metabolites of glycolysis and TCA cycle during cell-cycle-related oscillation in Saccharomyces cerevisiae. *Biotechnology and Bioengineering*, **2005**, 89, 839-47	4.9	50
152	Large-Scale 13C flux profiling reveals conservation of the Entner-Doudoroff pathway as a glycolytic strategy among marine bacteria that use glucose. *Applied and Environmental Microbiology*, **2015**, 81, 2408-22	4.8	49
151	Core fluxome and metafluxome of lactic acid bacteria under simulated cocoa pulp fermentation conditions. *Applied and Environmental Microbiology*, **2013**, 79, 5670-81	4.8	49
150	Response of the central metabolism of Escherichia coli to modified expression of the gene encoding the glucose-6-phosphate dehydrogenase. *FEBS Letters*, **2007**, 581, 3771-6	3.8	49
149	The l-Lysine Story: From Metabolic Pathways to Industrial Production **2007**, 39-70		48
148	Free intracellular amino acid pools during autonomous oscillations in Saccharomyces cerevisiae. *Biotechnology and Bioengineering*, **2003**, 82, 143-51	4.9	48
147	Theoretical aspects of 13C metabolic flux analysis with sole quantification of carbon dioxide labeling. *Computational Biology and Chemistry*, **2005**, 29, 121-33	3.6	48
146	Polyunsaturated fatty acid production by Yarrowia lipolytica employing designed myxobacterial PUFA synthases. *Nature Communications*, **2019**, 10, 4055	17.4	47
145	Systems biology of recombinant protein production using Bacillus megaterium. *Methods in Enzymology*, **2011**, 500, 165-95	1.7	47

144	Optimized bioprocess for production of fructofuranosidase by recombinant Aspergillus niger. *Applied Microbiology and Biotechnology*, **2010**, 87, 2011-24	5.7	47
143	Lysine production from the sugar alcohol mannitol: Design of the cell factory Corynebacterium glutamicum SEA-3 through integrated analysis and engineering of metabolic pathway fluxes. *Metabolic Engineering*, **2018**, 47, 475-487	9.7	46
142	A bio-based route to the carbon-5 chemical glutaric acid and to bionylon-6,5 using metabolically engineered Corynebacterium glutamicum. *Green Chemistry*, **2018**, 20, 4662-4674	10	46
141	The pyruvate-tricarboxylic acid cycle node: a focal point of virulence control in the enteric pathogen Yersinia pseudotuberculosis. *Journal of Biological Chemistry*, **2014**, 289, 30114-32	5.4	45
140	Metabolic fluxes in the central carbon metabolism of Dinoroseobacter shibae and Phaeobacter gallaeciensis, two members of the marine Roseobacter clade. *BMC Microbiology*, **2009**, 9, 209	4.5	45
139	Standard reporting requirements for biological samples in metabolomics experiments: microbial and in vitro biology experiments. *Metabolomics*, **2007**, 3, 189-194	4.7	45
138	Filamentous fungi in good shape: microparticles for tailor-made fungal morphology and enhanced enzyme production. *Bioengineered Bugs*, **2011**, 2, 100-4		44
137	Accumulation of homolanthionine and activation of a novel pathway for isoleucine biosynthesis in Corynebacterium glutamicum McbR deletion strains. *Journal of Bacteriology*, **2006**, 188, 609-18	3.5	44
136	Respirometric 13C flux analysis--Part II: in vivo flux estimation of lysine-producing Corynebacterium glutamicum. *Metabolic Engineering*, **2006**, 8, 432-46	9.7	44
135	Biochemistry, genetics and biotechnology of glycerol utilization in Pseudomonas species. *Microbial Biotechnology*, **2020**, 13, 32-53	6.3	44
134	Sampling of intracellular metabolites for stationary and non-stationary (13)C metabolic flux analysis in Escherichia coli. *Analytical Biochemistry*, **2014**, 465, 38-49	3.1	42
133	Debottlenecking recombinant protein production in Bacillus megaterium under large-scale conditions--targeted precursor feeding designed from metabolomics. *Biotechnology and Bioengineering*, **2012**, 109, 1538-50	4.9	42
132	From systems biology to metabolically engineered cells-an omics perspective on the development of industrial microbes. *Current Opinion in Microbiology*, **2018**, 45, 180-188	7.9	41
131	Reconciling in vivo and in silico key biological parameters of Pseudomonas putida KT2440 during growth on glucose under carbon-limited condition. *BMC Biotechnology*, **2013**, 13, 93	3.5	40
130	Towards methionine overproduction in Corynebacterium glutamicum--methanethiol and dimethyldisulfide as reduced sulfur sources. *Journal of Microbiology and Biotechnology*, **2010**, 20, 1196-203	2.3	40
129	Improved riboflavin production with Ashbya gossypii from vegetable oil based on C metabolic network analysis with combined labeling analysis by GC/MS, LC/MS, 1D, and 2D NMR. *Metabolic Engineering*, **2018**, 47, 357-373	9.7	38
128	Anodic electro-fermentation: Anaerobic production of L-Lysine by recombinant Corynebacterium glutamicum. *Biotechnology and Bioengineering*, **2018**, 115, 1499-1508	4.9	38
127	Effect of different carbon sources on central metabolic fluxes and the recombinant production of a hydrolase from Thermobifida fusca in Bacillus megaterium. *Journal of Biotechnology*, **2007**, 132, 385-94	3.7	38

126	Industrial biotechnology of Pseudomonas putida: advances and prospects. *Applied Microbiology and Biotechnology*, **2020**, 104, 7745-7766	5.7	38
125	Systems metabolic engineering of Escherichia coli for gram scale production of the antitumor drug deoxyviolacein from glycerol. *Biotechnology and Bioengineering*, **2014**, 111, 2280-9	4.9	37
124	Systems level engineering of Corynebacterium glutamicum - Reprogramming translational efficiency for superior production. *Engineering in Life Sciences*, **2010**, 10, 430-438	3.4	37
123	Getting the big beast to work--systems biotechnology of Bacillus megaterium for novel high-value proteins. *Journal of Biotechnology*, **2013**, 163, 87-96	3.7	36
122	Erythritol feeds the pentose phosphate pathway via three new isomerases leading to D-erythrose-4-phosphate in Brucella. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 17815-20	11.5	35
121	Respirometric 13C flux analysis, Part I: design, construction and validation of a novel multiple reactor system using on-line membrane inlet mass spectrometry. *Metabolic Engineering*, **2006**, 8, 417-31	9.7	35
120	Systems metabolic engineering of Escherichia coli for the heterologous production of high value molecules-a veteran at new shores. *Current Opinion in Biotechnology*, **2016**, 42, 178-188	11.4	35
119	Bio-based succinate from sucrose: High-resolution C metabolic flux analysis and metabolic engineering of the rumen bacterium Basfia succiniciproducens. *Metabolic Engineering*, **2017**, 44, 198-212	9.7	34
118	Analysis of 13C labeling enrichment in microbial culture applying metabolic tracer experiments using gas chromatography-combustion-isotope ratio mass spectrometry. *Analytical Biochemistry*, **2008**, 380, 202-10	3.1	34
117	Optoregulated Drug Release from an Engineered Living Material: Self-Replenishing Drug Depots for Long-Term, Light-Regulated Delivery. *Small*, **2019**, 15, e1804717	11	34
116	Microparticle based morphology engineering of filamentous microorganisms for industrial bio-production. *Biotechnology Letters*, **2012**, 34, 1975-82	3	32
115	Microbial production of the drugs violacein and deoxyviolacein: analytical development and strain comparison. *Biotechnology Letters*, **2012**, 34, 717-20	3	31
114	Use of Single-Frequency Impedance Spectroscopy to Characterize the Growth Dynamics of Biofilm Formation in Pseudomonas aeruginosa. *Scientific Reports*, **2017**, 7, 5223	4.9	31
113	Mineralization of detritus and oxidation of methane in acid boreal coniferous forest soils: seasonal and vertical distribution and effects of clear-cut. *Soil Biology and Biochemistry*, **2002**, 34, 1191-1200	7.5	30
112	Metabolic Engineering of Corynebacterium glutamicum for High-Level Ectoine Production: Design, Combinatorial Assembly, and Implementation of a Transcriptionally Balanced Heterologous Ectoine Pathway. *Biotechnology Journal*, **2019**, 14, e1800417	5.6	28
111	Corynebacterium glutamicum for Sustainable Bioproduction: From Metabolic Physiology to Systems Metabolic Engineering. *Advances in Biochemical Engineering/Biotechnology*, **2018**, 162, 217-263	1.7	28
110	Metabolic flux screening of Saccharomyces cerevisiae single knockout strains on glucose and galactose supports elucidation of gene function. *Journal of Biotechnology*, **2007**, 132, 395-404	3.7	27
109	Microbial production of extremolytes - high-value active ingredients for nutrition, health care, and well-being. *Current Opinion in Biotechnology*, **2020**, 65, 118-128	11.4	26

108	Oxygen supply in disposable shake-flasks: prediction of oxygen transfer rate, oxygen saturation and maximum cell concentration during aerobic growth. *Biotechnology Letters*, **2013**, 35, 1223-30	3	25
107	High yield production of extracellular recombinant levansucrase by Bacillus megaterium. *Applied Microbiology and Biotechnology*, **2013**, 97, 3343-53	5.7	25
106	Comparative study on central metabolic fluxes of Bacillus megaterium strains in continuous culture using 13C labelled substrates. *Bioprocess and Biosystems Engineering*, **2007**, 30, 47-59	3.7	25
105	Microbial production of polyunsaturated fatty acids - high-value ingredients for aquafeed, superfoods, and pharmaceuticals. *Current Opinion in Biotechnology*, **2021**, 69, 199-211	11.4	25
104	Comparative metabolic flux analysis of an Ashbya gossypii wild type strain and a high riboflavin-producing mutant strain. *Journal of Bioscience and Bioengineering*, **2015**, 119, 101-6	3.3	24
103	Advances in Consolidated Bioprocessing Using Clostridium thermocellum and Thermoanaerobacter saccharolyticum **2016**, 365-394		24
102	Contextual Flexibility in Pseudomonas aeruginosa Central Carbon Metabolism during Growth in Single Carbon Sources. *MBio*, **2020**, 11,	7.8	22
101	Metabolic flux pattern of glucose utilization by Xanthomonas campestris pv. campestris: prevalent role of the Entner-Doudoroff pathway and minor fluxes through the pentose phosphate pathway and glycolysis. *Molecular BioSystems*, **2014**, 10, 2663-76		22
100	Glycolytic Shunts Replenish the Calvin-Benson-Bassham Cycle as Anaplerotic Reactions in Cyanobacteria. *Molecular Plant*, **2020**, 13, 471-482	14.4	21
99	Towards better understanding of industrial cell factories: novel approaches for C metabolic flux analysis in complex nutrient environments. *Current Opinion in Biotechnology*, **2018**, 54, 128-137	11.4	21
98	Gene regulatory and metabolic adaptation processes of Dinoroseobacter shibae DFL12T during oxygen depletion. *Journal of Biological Chemistry*, **2014**, 289, 13219-31	5.4	21
97	Limited life cycle and cost assessment for the bioconversion of lignin-derived aromatics into adipic acid. *Biotechnology and Bioengineering*, **2020**, 117, 1381-1393	4.9	20
96	Biotechnologie von Morgen: metabolisch optimierte Zellen f□die bio-basierte Produktion von Chemikalien und Treibstoffen, Materialien und Gesundheitsprodukten. *Angewandte Chemie*, **2015**, 127, 3383-3407	3.6	20
95	Green pathways: Metabolic network analysis of plant systems. *Metabolic Engineering*, **2016**, 34, 1-24	9.7	19
94	Transposon mutagenesis identified chromosomal and plasmid genes essential for adaptation of the marine bacterium Dinoroseobacter shibae to anaerobic conditions. *Journal of Bacteriology*, **2013**, 195, 4769-77	3.5	19
93	Metabolic flux analysis in Ashbya gossypii using C-labeled yeast extract: industrial riboflavin production under complex nutrient conditions. *Microbial Cell Factories*, **2018**, 17, 162	6.4	19
92	Metabolite profiling studies in Saccharomyces cerevisiae: an assisting tool to prioritize host targets for antiviral drug screening. *Microbial Cell Factories*, **2009**, 8, 12	6.4	17
91	Investigation of the central carbon metabolism of Sorangium cellulosum: metabolic network reconstruction and quantification of pathway fluxes. *Journal of Microbiology and Biotechnology*, **2009**, 19, 23-36	3.3	17

90	Novel Approach for High-Throughput Metabolic Screening of Whole Plants by Stable Isotopes. *Plant Physiology*, **2016**, 171, 25-41	6.6	16
89	A Precise Temperature-Responsive Bistable Switch Controlling Yersinia Virulence. *PLoS Pathogens*, **2016**, 12, e1006091	7.6	16
88	Cascaded valorization of seaweed using microbial cell factories. *Current Opinion in Biotechnology*, **2020**, 65, 102-113	11.4	15
87	Customization of Aspergillus niger morphology through addition of talc micro particles. *Journal of Visualized Experiments*, **2012**,	1.6	15
86	Metabolic screening of Saccharomyces cerevisiae single knockout strains reveals unexpected mobilization of metabolic potential. *Process Biochemistry*, **2006**, 41, 2170-2179	4.8	15
85	Metabolic physiology of Pseudomonas putida for heterologous production of myxochromide. *Process Biochemistry*, **2006**, 41, 2146-2152	4.8	15
84	Metabolic network simulation using logical loop algorithm and Jacobian matrix. *Metabolic Engineering*, **2004**, 6, 256-67	9.7	15
83	Acetate Dissimilation and Assimilation in Mycobacterium tuberculosis Depend on Carbon Availability. *Journal of Bacteriology*, **2015**, 197, 3182-90	3.5	14
82	Production of non-proteinogenic amino acids from α-keto acid precursors with recombinant Corynebacterium glutamicum. *Biotechnology and Bioengineering*, **2013**, 110, 2846-55	4.9	14
81	Analysis and engineering of metabolic pathway fluxes in Corynebacterium glutamicum. *Advances in Biochemical Engineering/Biotechnology*, **2010**, 120, 21-49	1.7	14
80	Dynamic calibration and dissolved gas analysis using membrane inlet mass spectrometry for the quantification of cell respiration. *Rapid Communications in Mass Spectrometry*, **2003**, 17, 2721-31	2.2	14
79	Advances in metabolic engineering of Corynebacterium glutamicum to produce high-value active ingredients for food, feed, human health, and well-being. *Essays in Biochemistry*, **2021**, 65, 197-212	7.6	14
78	Biotechnological Production of Organic Acids from Renewable Resources. *Advances in Biochemical Engineering/Biotechnology*, **2019**, 166, 373-410	1.7	12
77	Functionalization of magnetic nanoparticles with high-binding capacity for affinity separation of therapeutic proteins. *Journal of Nanoparticle Research*, **2014**, 16, 1	2.3	12
76	Proteome and carbon flux analysis of Pseudomonas aeruginosa clinical isolates from different infection sites. *Proteomics*, **2016**, 16, 1381-5	4.8	12
75	Industrial Microorganisms: Corynebacterium glutamicum **2016**, 183-220		12
74	In silico metabolic network analysis of Arabidopsis leaves. *BMC Systems Biology*, **2016**, 10, 102	3.5	10
73	A common approach for absolute quantification of short chain CoA thioesters in prokaryotic and eukaryotic microbes. *Microbial Cell Factories*, **2020**, 19, 160	6.4	10

72	Microparticles globally reprogram Streptomyces albus toward accelerated morphogenesis, streamlined carbon core metabolism, and enhanced production of the antituberculosis polyketide pamamycin. *Biotechnology and Bioengineering*, **2020**, 117, 3858-3875	4.9	9
71	Cell-Free Synthetic Systems for Metabolic Engineering and Biosynthetic Pathway Prototyping **2016**, 125-148		9
70	Viability characterization of Taxus chinensis plant cell suspension cultures by rapid colorimetric- and image analysis-based techniques. *Bioprocess and Biosystems Engineering*, **2014**, 37, 1799-1808	3.7	8
69	Matrix-assisted laser desorption/ionization time-of-flight mass spectrometry for metabolic flux analyses using isotope-labeled ethanol. *Rapid Communications in Mass Spectrometry*, **2007**, 21, 336-42	2.2	8
68	First and Second Generation Production of Bio-Adipic Acid **2014**, 519-540		7
67	Membrane fluidity of halophilic ectoine-secreting bacteria related to osmotic and thermal treatment. *Bioprocess and Biosystems Engineering*, **2013**, 36, 1829-41	3.7	7
66	Improved assessment of aggregate size in Taxus plant cell suspension cultures using laser diffraction. *Engineering in Life Sciences*, **2012**, 12, 595-602	3.4	7
65	Cell Immobilization: Fundamentals, Technologies, and Applications **2016**, 205-235		7
64	Application of cation-exchange membranes for characterisation and imaging ammonia-oxidising bacteria in soils. *FEMS Microbiology Ecology*, **2005**, 53, 463-72	4.3	6
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