

James C Liao

List of Publications by Year in descending order

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225
papers

24,257
citations

5574

82
h-index

8167

148
g-index

278
all docs

278
docs citations

278
times ranked

15802
citing authors

#	ARTICLE	IF	CITATIONS
1	Non-fermentative pathways for synthesis of branched-chain higher alcohols as biofuels. <i>Nature</i> , 2008, 451, 86-89.	27.8	1,696
2	Direct photosynthetic recycling of carbon dioxide to isobutyraldehyde. <i>Nature Biotechnology</i> , 2009, 27, 1177-1180.	17.5	769
3	Metabolic engineering of <i>Escherichia coli</i> for 1-butanol production. <i>Metabolic Engineering</i> , 2008, 10, 305-311.	7.0	764
4	Integrated Electromicrobial Conversion of CO ₂ to Higher Alcohols. <i>Science</i> , 2012, 335, 1596-1596.	12.6	605
5	Driving Forces Enable High-Titer Anaerobic 1-Butanol Synthesis in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2011, 77, 2905-2915.	3.1	572
6	Network component analysis: Reconstruction of regulatory signals in biological systems. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 15522-15527.	7.1	550
7	Issues in cDNA microarray analysis: quality filtering, channel normalization, models of variations and assessment of gene effects. <i>Nucleic Acids Research</i> , 2001, 29, 2549-2557.	14.5	494
8	Improving lycopene production in <i>Escherichia coli</i> by engineering metabolic control. <i>Nature Biotechnology</i> , 2000, 18, 533-537.	17.5	485
9	Fuelling the future: microbial engineering for the production of sustainable biofuels. <i>Nature Reviews Microbiology</i> , 2016, 14, 288-304.	28.6	476
10	Design and characterization of synthetic fungal-bacterial consortia for direct production of isobutanol from cellulosic biomass. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 14592-14597.	7.1	391
11	Expanding metabolism for biosynthesis of nonnatural alcohols. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 20653-20658.	7.1	372
12	A synthetic geneâ€“metabolic oscillator. <i>Nature</i> , 2005, 435, 118-122.	27.8	357
13	Metabolic engineering of cyanobacteria for 1-butanol production from carbon dioxide. <i>Metabolic Engineering</i> , 2011, 13, 353-363.	7.0	352
14	Metabolic engineering of <i>Escherichia coli</i> for 1-butanol and 1-propanol production via the keto-acid pathways. <i>Metabolic Engineering</i> , 2008, 10, 312-320.	7.0	350
15	Synthetic non-oxidative glycolysis enables complete carbon conservation. <i>Nature</i> , 2013, 502, 693-697.	27.8	329
16	ATP drives direct photosynthetic production of 1-butanol in cyanobacteria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 6018-6023.	7.1	327
17	Engineering <i>Corynebacterium glutamicum</i> for isobutanol production. <i>Applied Microbiology and Biotechnology</i> , 2010, 87, 1045-1055.	3.6	304
18	Intravascular flow decreases erythrocyte consumption of nitric oxide. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999, 96, 8757-8761.	7.1	289

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19	Metabolic engineering for advanced biofuels production from <i>Escherichia coli</i> . <i>Current Opinion in Biotechnology</i> , 2008, 19, 414-419.	6.6	275
20	Metabolic Engineering of <i>Clostridium cellulolyticum</i> for Production of Isobutanol from Cellulose. <i>Applied and Environmental Microbiology</i> , 2011, 77, 2727-2733.	3.1	274
21	Engineering the isobutanol biosynthetic pathway in <i>Escherichia coli</i> by comparison of three aldehyde reductase/alcohol dehydrogenase genes. <i>Applied Microbiology and Biotechnology</i> , 2010, 85, 651-657.	3.6	270
22	Conversion of proteins into biofuels by engineering nitrogen flux. <i>Nature Biotechnology</i> , 2011, 29, 346-351.	17.5	265
23	Global Expression Profiling of Acetate-grown <i>Escherichia coli</i> . <i>Journal of Biological Chemistry</i> , 2002, 277, 13175-13183.	3.4	252
24	Evolution, genomic analysis, and reconstruction of isobutanol tolerance in <i>Escherichia coli</i> . <i>Molecular Systems Biology</i> , 2010, 6, 449.	7.2	252
25	Engineered Synthetic Pathway for Isopropanol Production in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2007, 73, 7814-7818.	3.1	251
26	<i>Escherichia coli</i> as a host for metabolic engineering. <i>Metabolic Engineering</i> , 2018, 50, 16-46.	7.0	250
27	Estimation of nitric oxide production and reaction rates in tissue by use of a mathematical model. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 1998, 274, H2163-H2176.	3.2	240
28	Ensemble Modeling of Metabolic Networks. <i>Biophysical Journal</i> , 2008, 95, 5606-5617.	0.5	233
29	Directed Evolution of <i>Methanococcus jannaschii</i> Citramalate Synthase for Biosynthesis of 1-Propanol and 1-Butanol by <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2008, 74, 7802-7808.	3.1	226
30	High-flux isobutanol production using engineered <i>Escherichia coli</i> : a bioreactor study with in situ product removal. <i>Applied Microbiology and Biotechnology</i> , 2011, 90, 1681-1690.	3.6	214
31	Erythrocytes Possess an Intrinsic Barrier to Nitric Oxide Consumption. <i>Journal of Biological Chemistry</i> , 2000, 275, 2342-2348.	3.4	205
32	Single-Gene Disorders: What Role Could Moonlighting Enzymes Play?. <i>American Journal of Human Genetics</i> , 2005, 76, 911-924.	6.2	199
33	Nitric oxide is consumed, rather than conserved, by reaction with oxyhemoglobin under physiological conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 10341-10346.	7.1	195
34	Precursor Balancing for Metabolic Engineering of Lycopene Production in <i>Escherichia coli</i> . <i>Biotechnology Progress</i> , 2001, 17, 57-61.	2.6	190
35	Microbial production of advanced transportation fuels in non-natural hosts. <i>Current Opinion in Biotechnology</i> , 2009, 20, 307-315.	6.6	182
36	An integrated network approach identifies the isobutanol response network of <i>Escherichia coli</i> . <i>Molecular Systems Biology</i> , 2009, 5, 277.	7.2	175

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37	Microbial synthesis of n-butanol, isobutanol, and other higher alcohols from diverse resources. <i>Bioresource Technology</i> , 2013, 135, 339-349.	9.6	171
38	Pathway analysis, engineering, and physiological considerations for redirecting central metabolism. , 1996, 52, 129-140.		165
39	Effective diffusion distance of nitric oxide in the microcirculation. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 1998, 274, H1705-H1714.	3.2	164
40	Modulation of nitric oxide bioavailability by erythrocytes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 11771-11776.	7.1	160
41	A kinetic model of <i>Escherichia coli</i> core metabolism satisfying multiple sets of mutant flux data. <i>Metabolic Engineering</i> , 2014, 25, 50-62.	7.0	160
42	Arginase modulates nitric oxide production in activated macrophages. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 1998, 274, H342-H348.	3.2	159
43	Improvement of isopropanol production by metabolically engineered <i>Escherichia coli</i> using gas stripping. <i>Journal of Bioscience and Bioengineering</i> , 2010, 110, 696-701.	2.2	159
44	Dynamic Cell and Microparticle Control via Optoelectronic Tweezers. <i>Journal of Microelectromechanical Systems</i> , 2007, 16, 491-499.	2.5	155
45	Converting <i>Escherichia coli</i> to a Synthetic Methylophilic Growing Solely on Methanol. <i>Cell</i> , 2020, 182, 933-946.e14.	28.9	154
46	Engineered isoprenoid pathway enhances astaxanthin production in <i>Escherichia coli</i> . , 1999, 62, 235-241.		152
47	Design of artificial cell-cell communication using gene and metabolic networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 2299-2304.	7.1	151
48	Engineering of an <i>Escherichia coli</i> Strain for the Production of 3-Methyl-1-Butanol. <i>Applied and Environmental Microbiology</i> , 2008, 74, 5769-5775.	3.1	149
49	Consolidated bioprocessing of cellulose to isobutanol using <i>Clostridium thermocellum</i> . <i>Metabolic Engineering</i> , 2015, 31, 44-52.	7.0	149
50	Engineering synergy in biotechnology. <i>Nature Chemical Biology</i> , 2014, 10, 319-322.	8.0	147
51	3-Methyl-1-butanol production in <i>Escherichia coli</i> : random mutagenesis and two-phase fermentation. <i>Applied Microbiology and Biotechnology</i> , 2010, 86, 1155-1164.	3.6	146
52	Production of 2-methyl-1-butanol in engineered <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 2008, 81, 89-98.	3.6	143
53	Oxygen-tolerant coenzyme A-acylating aldehyde dehydrogenase facilitates efficient photosynthetic n-butanol biosynthesis in cyanobacteria. <i>Energy and Environmental Science</i> , 2013, 6, 2672.	30.8	143
54	Next generation biofuel engineering in prokaryotes. <i>Current Opinion in Chemical Biology</i> , 2013, 17, 462-471.	6.1	139

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55	Integrated network analysis identifies nitric oxide response networks and dihydroxyacid dehydratase as a crucial target in <i>Escherichia coli</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 8484-8489.	7.1	136
56	Extending Carbon Chain Length of 1-Butanol Pathway for 1-Hexanol Synthesis from Glucose by Engineered <i>Escherichia coli</i> . <i>Journal of the American Chemical Society</i> , 2011, 133, 11399-11401.	13.7	131
57	Transcriptome-based determination of multiple transcription regulator activities in <i>Escherichia coli</i> by using network component analysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 641-646.	7.1	129
58	Expanding metabolism for total biosynthesis of the nonnatural amino acid L-homoalanine. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 6234-6239.	7.1	129
59	Engineering a synthetic pathway in cyanobacteria for isopropanol production directly from carbon dioxide and light. <i>Metabolic Engineering</i> , 2013, 20, 101-108.	7.0	128
60	Gene Expression Profiling by DNA Microarrays and Metabolic Fluxes in <i>Escherichia coli</i> . <i>Biotechnology Progress</i> , 2000, 16, 278-286.	2.6	126
61	A selection platform for carbon chain elongation using the CoA-dependent pathway to produce linear higher alcohols. <i>Metabolic Engineering</i> , 2012, 14, 504-511.	7.0	126
62	Pentanol isomer synthesis in engineered microorganisms. <i>Applied Microbiology and Biotechnology</i> , 2010, 85, 893-899.	3.6	125
63	Combined inactivation of the <i>Clostridium cellulolyticum</i> lactate and malate dehydrogenase genes substantially increases ethanol yield from cellulose and switchgrass fermentations. <i>Biotechnology for Biofuels</i> , 2012, 5, 2.	6.2	125
64	Pathway engineering for production of aromatics in <i>Escherichia coli</i> : Confirmation of stoichiometric analysis by independent modulation of AroG, TktA, and Pps activities. <i>Biotechnology and Bioengineering</i> , 1995, 46, 361-370.	3.3	124
65	Co-expression pattern from DNA microarray experiments as a tool for operon prediction. <i>Nucleic Acids Research</i> , 2002, 30, 2886-2893.	14.5	116
66	Building carbon-carbon bonds using a biocatalytic methanol condensation cycle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 15928-15933.	7.1	114
67	Enantioselective synthesis of pure (R,R)-2,3-butanediol in <i>Escherichia coli</i> with stereospecific secondary alcohol dehydrogenases. <i>Organic and Biomolecular Chemistry</i> , 2009, 7, 3914.	2.8	113
68	Isobutanol production at elevated temperatures in thermophilic <i>Geobacillus thermoglucosidasius</i> . <i>Metabolic Engineering</i> , 2014, 24, 1-8.	7.0	107
69	Directed Evolution of Metabolically Engineered <i>Escherichia coli</i> for Carotenoid Production. <i>Biotechnology Progress</i> , 2000, 16, 922-926.	2.6	106
70	A Synthetic Recursive Pathway for Carbon Chain Elongation. <i>ACS Chemical Biology</i> , 2012, 7, 689-697.	3.4	106
71	A modified serine cycle in <i>Escherichia coli</i> converts methanol and CO ₂ to two-carbon compounds. <i>Nature Communications</i> , 2018, 9, 3992.	12.8	106
72	An evolutionary strategy for isobutanol production strain development in <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2011, 13, 674-681.	7.0	105

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73	Engineering a cyanobacterium as the catalyst for the photosynthetic conversion of CO ₂ to 1,2-propanediol. <i>Microbial Cell Factories</i> , 2013, 12, 4.	4.0	104
74	Downregulation of Endothelial Constitutive Nitric Oxide Synthase Expression by Lipopolysaccharide. <i>Biochemical and Biophysical Research Communications</i> , 1996, 225, 1-5.	2.1	101
75	Isobutanol production as an alternative metabolic sink to rescue the growth deficiency of the glycogen mutant of <i>Synechococcus elongatus</i> PCC 7942. <i>Photosynthesis Research</i> , 2014, 120, 301-310.	2.9	101
76	Photosynthetic production of 2-methyl-1-butanol from CO ₂ in cyanobacterium <i>Synechococcus elongatus</i> PCC7942 and characterization of the native acetohydroxyacid synthase. <i>Energy and Environmental Science</i> , 2012, 5, 9574.	30.8	99
77	gNCA: A framework for determining transcription factor activity based on transcriptome: identifiability and numerical implementation. <i>Metabolic Engineering</i> , 2005, 7, 128-141.	7.0	98
78	Stimulation of glucose catabolism in <i>Escherichia coli</i> by a potential futile cycle. <i>Journal of Bacteriology</i> , 1992, 174, 7527-7532.	2.2	97
79	Nitric oxide reaction with red blood cells and hemoglobin under heterogeneous conditions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 7763-7768.	7.1	94
80	Engineering metabolic systems for production of advanced fuels. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2009, 36, 471-479.	3.0	93
81	Acetolactate Synthase from <i>Bacillus subtilis</i> Serves as a 2-Ketoisovalerate Decarboxylase for Isobutanol Biosynthesis in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2009, 75, 6306-6311.	3.1	92
82	Metabolic engineering of cyanobacteria for photosynthetic 3-hydroxypropionic acid production from CO ₂ using <i>Synechococcus elongatus</i> PCC 7942. <i>Metabolic Engineering</i> , 2015, 31, 163-170.	7.0	90
83	Ensemble Modeling for Robustness Analysis in engineering non-native metabolic pathways. <i>Metabolic Engineering</i> , 2014, 25, 63-71.	7.0	89
84	Construction and evolution of an <i>Escherichia coli</i> strain relying on nonoxidative glycolysis for sugar catabolism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 3538-3546.	7.1	87
85	Control of gluconeogenic growth by pps and pck in <i>Escherichia coli</i> . <i>Journal of Bacteriology</i> , 1993, 175, 6939-6944.	2.2	85
86	REVIEW: Metabolic Engineering of Isoprenoids. <i>Metabolic Engineering</i> , 2001, 3, 27-39.	7.0	85
87	DNA Microarray Detection of Metabolic Responses to Protein Overproduction in <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2000, 2, 201-209.	7.0	84
88	Consolidated conversion of protein waste into biofuels and ammonia using <i>Bacillus subtilis</i> . <i>Metabolic Engineering</i> , 2014, 23, 53-61.	7.0	83
89	oxLDL specifically impairs endothelium-dependent, NO-mediated dilation of coronary arterioles. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2000, 278, H175-H183.	3.2	80
90	Synthetic methanol auxotrophy of <i>Escherichia coli</i> for methanol-dependent growth and production. <i>Metabolic Engineering</i> , 2018, 49, 257-266.	7.0	80

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91	Metabolomics-driven approach to solving a CoA imbalance for improved 1-butanol production in <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2017, 41, 135-143.	7.0	79
92	Erythrocyte Consumption of Nitric Oxide: Competition Experiment and Model Analysis. <i>Nitric Oxide - Biology and Chemistry</i> , 2001, 5, 18-31.	2.7	78
93	Integrative genomic mining for enzyme function to enable engineering of a non-natural biosynthetic pathway. <i>Nature Communications</i> , 2015, 6, 10005.	12.8	77
94	Frontiers in microbial 1-butanol and isobutanol production. <i>FEMS Microbiology Letters</i> , 2016, 363, fnw020.	1.8	77
95	Biological conversion of carbon dioxide to photosynthetic fuels and electrofuels. <i>Energy and Environmental Science</i> , 2013, 6, 2892.	30.8	74
96	A Global Regulatory Role of Gluconeogenic Genes in <i>Escherichia coli</i> Revealed by Transcriptome Network Analysis. <i>Journal of Biological Chemistry</i> , 2005, 280, 36079-36087.	3.4	73
97	Rational engineering of diol dehydratase enables 1,4-butanediol biosynthesis from xylose. <i>Metabolic Engineering</i> , 2017, 40, 148-156.	7.0	73
98	Augmenting the Calvinâ€“Bensonâ€“Bascham cycle by a synthetic malyl-CoA-glycerate carbon fixation pathway. <i>Nature Communications</i> , 2018, 9, 2008.	12.8	73
99	Advances in metabolic control analysis. <i>Biotechnology Progress</i> , 1993, 9, 221-233.	2.6	70
100	Differential Association of Hemoglobin with Proinflammatory High Density Lipoproteins in Atherogenic/Hyperlipidemic Mice. <i>Journal of Biological Chemistry</i> , 2007, 282, 23698-23707.	3.4	69
101	Analysis of genomic distributions of SARS-CoV-2 reveals a dominant strain type with strong allelic associations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30679-30686.	7.1	69
102	Inverse Flux Analysis for Reduction of Acetate Excretion in <i>Escherichia coli</i> . <i>Biotechnology Progress</i> , 1997, 13, 361-367.	2.6	67
103	Singleâ€“cell zerothâ€“order protein degradation enhances the robustness of synthetic oscillator. <i>Molecular Systems Biology</i> , 2007, 3, 130.	7.2	67
104	Characterization and evolution of an activator-independent methanol dehydrogenase from <i>Cupriavidus necator</i> N-1. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 4969-4983.	3.6	65
105	Inferring yeast cell cycle regulators and interactions using transcription factor activities. <i>BMC Genomics</i> , 2005, 6, 90.	2.8	64
106	Ensemble modeling for strain development of l-lysine-producing <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2009, 11, 221-233.	7.0	63
107	Biofuels: Biomolecular Engineering Fundamentals and Advances. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2010, 1, 19-36.	6.8	61
108	Toward nitrogen neutral biofuel production. <i>Current Opinion in Biotechnology</i> , 2012, 23, 406-413.	6.6	59

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109	Synergy as design principle for metabolic engineering of 1-propanol production in <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2013, 17, 12-22.	7.0	59
110	Metabolic engineering and control analysis for production of aromatics: Role of transaldolase. , 1997, 53, 132-138.		57
111	Heat Shock Response of <i>Archaeoglobus fulgidus</i> . <i>Journal of Bacteriology</i> , 2005, 187, 6046-6057.	2.2	55
112	Transcriptome network component analysis with limited microarray data. <i>Bioinformatics</i> , 2006, 22, 1886-1894.	4.1	55
113	Glycerol kinase deficiency alters expression of genes involved in lipid metabolism, carbohydrate metabolism, and insulin signaling. <i>European Journal of Human Genetics</i> , 2007, 15, 646-657.	2.8	53
114	A reverse glyoxylate shunt to build a non-native route from C4 to C2 in <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , 2013, 19, 116-127.	7.0	53
115	Regulation of nitric oxide consumption by hypoxic red blood cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 12504-12509.	7.1	52
116	Reducing the allowable kinetic space by constructing ensemble of dynamic models with the same steady-state flux. <i>Metabolic Engineering</i> , 2011, 13, 60-75.	7.0	52
117	Ensemble Modeling for Aromatic Production in <i>Escherichia coli</i> . <i>PLoS ONE</i> , 2009, 4, e6903.	2.5	52
118	Microbial pathway engineering for industrial processes: evolution, combinatorial biosynthesis and rational design. <i>Current Opinion in Microbiology</i> , 2001, 4, 330-335.	5.1	51
119	Engineering synthetic recursive pathways to generate non-natural small molecules. <i>Nature Chemical Biology</i> , 2012, 8, 518-526.	8.0	51
120	Metabolic ensemble modeling for strain engineers. <i>Biotechnology Journal</i> , 2012, 7, 343-353.	3.5	51
121	CO ₂ -fixing one-carbon metabolism in a cellulose-degrading bacterium <i>Clostridium thermocellum</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 13180-13185.	7.1	48
122	Erythrocyte nitric oxide transport reduced by a submembrane cytoskeletal barrier. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2005, 1723, 135-142.	2.4	45
123	Analysis of Nitric Oxide Consumption by Erythrocytes in Blood Vessels using a Distributed Multicellular Model. <i>Annals of Biomedical Engineering</i> , 2003, 31, 294-309.	2.5	40
124	A cell-free self-replenishing CO ₂ -fixing system. <i>Nature Catalysis</i> , 2022, 5, 154-162.	34.4	40
125	A Generalized Framework for Network Component Analysis. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2005, 2, 289-301.	3.0	39
126	Identifying rate-controlling enzymes in metabolic pathways without kinetic parameters. <i>Biotechnology Progress</i> , 1991, 7, 15-20.	2.6	38

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127	Oxidized Low-Density Lipoprotein Inhibits Nitric Oxide-Mediated Coronary Arteriolar Dilation by Up-regulating Endothelial Arginase I. <i>Microcirculation</i> , 2011, 18, 36-45.	1.8	38
128	Alteration of Product Specificity of <i>Rhodobacter sphaeroides</i> Phytoene Desaturase by Directed Evolution. <i>Journal of Biological Chemistry</i> , 2001, 276, 41161-41164.	3.4	37
129	Protein engineering for metabolic engineering: Current and next-generation tools. <i>Biotechnology Journal</i> , 2013, 8, 545-555.	3.5	37
130	Determination of the <i>Escherichia coli</i> S-Nitrosoglutathione Response Network Using Integrated Biochemical and Systems Analysis. <i>Journal of Biological Chemistry</i> , 2008, 283, 5148-5157.	3.4	36
131	Bioengineering of microorganisms for C ₃ to C ₅ alcohols production. <i>Biotechnology Journal</i> , 2010, 5, 1297-1308.	3.5	35
132	Lumping analysis of biochemical reaction systems with time scale separation. <i>Biotechnology and Bioengineering</i> , 1988, 31, 869-879.	3.3	34
133	Incorporating qualitative knowledge in enzyme kinetic models using fuzzy logic. , 1999, 62, 722-729.		34
134	<i>Rhodospseudomonas palustris</i> CGA009 Has Two Functional ppsR Genes, Each of Which Encodes a Repressor of Photosynthesis Gene Expression. <i>Biochemistry</i> , 2006, 45, 14441-14451.	2.5	34
135	Resistance to Diet-Induced Obesity in Mice with Synthetic Glyoxylate Shunt. <i>Cell Metabolism</i> , 2009, 9, 525-536.	16.2	33
136	Targeted disruption of glycerol kinase gene in mice: expression analysis in liver shows alterations in network partners related to glycerol kinase activity. <i>Human Molecular Genetics</i> , 2006, 15, 405-415.	2.9	31
137	Protein-based biorefining: metabolic engineering for production of chemicals and fuel with regeneration of nitrogen fertilizers. <i>Applied Microbiology and Biotechnology</i> , 2013, 97, 1397-1406.	3.6	31
138	Sustainable biorefining in wastewater by engineered extreme alkaliphile <i>Bacillus marmarensis</i> . <i>Scientific Reports</i> , 2016, 6, 20224.	3.3	31
139	Control of metabolic pathways by time-scale separation. <i>BioSystems</i> , 1995, 36, 55-70.	2.0	30
140	Global metabolic effects of glycerol kinase overexpression in rat hepatoma cells. <i>Molecular Genetics and Metabolism</i> , 2008, 93, 145-159.	1.1	30
141	Effect of ice nucleators on snow making and spray freezing. <i>Industrial & Engineering Chemistry Research</i> , 1990, 29, 361-366.	3.7	29
142	Using Network Component Analysis to Dissect Regulatory Networks Mediated by Transcription Factors in Yeast. <i>PLoS Computational Biology</i> , 2009, 5, e1000311.	3.2	28
143	Quantitative target analysis and kinetic profiling of acyl-CoAs reveal the rate-limiting step in cyanobacterial 1-butanol production. <i>Metabolomics</i> , 2016, 12, 26.	3.0	28
144	Fermentation data analysis and state estimation in the presence of incomplete mass balance. <i>Biotechnology and Bioengineering</i> , 1989, 33, 613-622.	3.3	27

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145	Experimental determination of flux control distribution in biochemical systems: In vitro model to analyze transient metabolite concentrations. <i>Biotechnology and Bioengineering</i> , 1993, 41, 1121-1128.	3.3	26
146	Lipopolysaccharide Activates Endothelial Nitric Oxide Synthase through Protein Tyrosine Kinase. <i>Biochemical and Biophysical Research Communications</i> , 1998, 245, 33-37.	2.1	26
147	Development of an NADPH-Dependent Homophenylalanine Dehydrogenase by Protein Engineering. <i>ACS Synthetic Biology</i> , 2014, 3, 13-20.	3.8	26
148	A Synthetic Anhydrotetracycline-Controllable Gene Expression System in <i>Ralstonia eutropha</i> H16. <i>ACS Synthetic Biology</i> , 2015, 4, 101-106.	3.8	26
149	A perspective of metabolic engineering strategies: moving up the systems hierarchy. <i>Biotechnology and Bioengineering</i> , 2003, 84, 815-821.	3.3	25
150	Metabolic engineering of 2-pentanone synthesis in <i>Escherichia coli</i> . <i>AIChE Journal</i> , 2013, 59, 3167-3175.	3.6	25
151	Rearrangement of Coenzyme A-Acylated Carbon Chain Enables Synthesis of Isobutanol via a Novel Pathway in <i>Ralstonia eutropha</i> . <i>ACS Synthetic Biology</i> , 2018, 7, 794-800.	3.8	25
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