Jay D Keasling

List of Publications by Year
in descending order

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Version: 2024-02-01

514 papers	53,284 citations	1094 112 h-index	2027 205 g-index
555 all docs	555 docs citations	555 times ranked	31029 citing authors

#	Article	IF	Citations
1	Production of the antimalarial drug precursor artemisinic acid in engineered yeast. Nature, 2006, 440, 940-943.	13.7	2,498
2	High-level semi-synthetic production of the potent antimalarial artemisinin. Nature, 2013, 496, 528-532.	13.7	1,668
3	Engineering a mevalonate pathway in Escherichia coli for production of terpenoids. Nature Biotechnology, 2003, 21, 796-802.	9.4	1,539
4	Microbial production of fatty-acid-derived fuels and chemicals from plant biomass. Nature, 2010, 463, 559-562.	13.7	1,192
5	Synthetic protein scaffolds provide modular control over metabolic flux. Nature Biotechnology, 2009, 27, 753-759.	9.4	1,071
6	Engineering Cellular Metabolism. Cell, 2016, 164, 1185-1197.	13.5	953
7	Microbial engineering for the production of advanced biofuels. Nature, 2012, 488, 320-328.	13.7	951
8	Manufacturing Molecules Through Metabolic Engineering. Science, 2010, 330, 1355-1358.	6.0	725
9	Design of a dynamic sensor-regulator system for production of chemicals and fuels derived from fatty acids. Nature Biotechnology, 2012, 30, 354-359.	9.4	721
10	Precise and reliable gene expression via standard transcription and translation initiation elements. Nature Methods, 2013, 10, 354-360.	9.0	653
11	Production of amorphadiene in yeast, and its conversion to dihydroartemisinic acid, precursor to the antimalarial agent artemisinin. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E111-8.	3.3	616
12	Semi-synthetic artemisinin: a model for the use of synthetic biology in pharmaceutical development. Nature Reviews Microbiology, 2014, 12, 355-367.	13.6	556
13	Metabolic engineering of microorganisms for biofuels production: from bugs to synthetic biology to fuels. Current Opinion in Biotechnology, 2008, 19, 556-563.	3.3	535
14	Identification and microbial production of a terpene-based advanced biofuel. Nature Communications, 2011, 2, 483.	5.8	516
15	Combinatorial engineering of intergenic regions in operons tunes expression of multiple genes. Nature Biotechnology, 2006, 24, 1027-1032.	9.4	492
16	Complete biosynthesis of cannabinoids and their unnatural analogues in yeast. Nature, 2019, 567, 123-126.	13.7	473
17	Engineering microbial biofuel tolerance and export using efflux pumps. Molecular Systems Biology, 2011, 7, 487.	3.2	440
18	Biosynthesis of Plant Isoprenoids: Perspectives for Microbial Engineering. Annual Review of Plant Biology, 2009, 60, 335-355.	8.6	428

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19	Metabolic engineering of Saccharomyces cerevisiae for the production of n-butanol. Microbial Cell Factories, 2008, 7, 36.	1.9	417
20	Designed divergent evolution of enzyme function. Nature, 2006, 440, 1078-1082.	13.7	414
21	Engineering dynamic pathway regulation using stress-response promoters. Nature Biotechnology, 2013, 31, 1039-1046.	9.4	411
22	BglBrick vectors and datasheets: A synthetic biology platform for gene expression. Journal of Biological Engineering, 2011, 5, 12.	2.0	391
23	Balancing a heterologous mevalonate pathway for improved isoprenoid production in Escherichia coli. Metabolic Engineering, 2007, 9, 193-207.	3.6	388
24	Synthetic Biology for Synthetic Chemistry. ACS Chemical Biology, 2008, 3, 64-76.	1.6	383
25	Retrograde Signaling by the Plastidial Metabolite MEcPP Regulates Expression of Nuclear Stress-Response Genes. Cell, 2012, 149, 1525-1535.	13.5	368
26	Synthetic biology and the development of tools for metabolic engineering. Metabolic Engineering, 2012, 14, 189-195.	3.6	363
27	Production of isoprenoid pharmaceuticals by engineered microbes. Nature Chemical Biology, 2006, 2, 674-681.	3.9	361
28	Multiplex metabolic pathway engineering using CRISPR/Cas9 in Saccharomyces cerevisiae. Metabolic Engineering, 2015, 28, 213-222.	3.6	355
29	BglBricks: A flexible standard for biological part assembly. Journal of Biological Engineering, 2010, 4, 1.	2.0	348
30	Metabolic engineering of Escherichia coli for limonene and perillyl alcohol production. Metabolic Engineering, 2013, 19, 33-41.	3.6	343
31	Biofuel alternatives to ethanol: pumping the microbial well. Trends in Biotechnology, 2008, 26, 375-381.	4.9	338
32	Metabolic engineering of Saccharomyces cerevisiae for production of fatty acid-derived biofuels and chemicals. Metabolic Engineering, 2014, 21, 103-113.	3.6	338
33	Engineering Escherichia coli for production of functionalized terpenoids using plant P450s. Nature Chemical Biology, 2007, 3, 274-277.	3.9	334
34	Synthesis of three advanced biofuels from ionic liquid-pretreated switchgrass using engineered <i>Escherichia coli</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19949-19954.	3.3	333
35	Advanced biofuel production in microbes. Biotechnology Journal, 2010, 5, 147-162.	1.8	331
36	High-Level Production of Amorpha-4,11-Diene, a Precursor of the Antimalarial Agent Artemisinin, in Escherichia coli. PLoS ONE, 2009, 4, e4489.	1.1	318

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37	Metabolic engineering of microbial pathways for advanced biofuels production. Current Opinion in Biotechnology, 2011, 22, 775-783.	3.3	313
38	Engineering of the pyruvate dehydrogenase bypass in Saccharomyces cerevisiae for high-level production of isoprenoids. Metabolic Engineering, 2007, 9, 160-168.	3.6	302
39	High-Throughput Metabolic Engineering: Advances in Small-Molecule Screening and Selection. Annual Review of Biochemistry, 2010, 79, 563-590.	5.0	290
40	Computational protein design enables a novel one-carbon assimilation pathway. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 3704-3709.	3.3	286
41	Stoichiometric model ofEscherichia coli metabolism: Incorporation of growth-rate dependent biomass composition and mechanistic energy requirements. , 1997, 56, 398-421.		284
42	Metabolic engineering of the nonmevalonate isopentenyl diphosphate synthesis pathway inEscherichia coli enhances lycopene production. Biotechnology and Bioengineering, 2001, 72, 408-415.	1.7	283
43	j5 DNA Assembly Design Automation Software. ACS Synthetic Biology, 2012, 1, 14-21.	1.9	283
44	Homogeneous expression of the PBAD promoter in Escherichia coli by constitutive expression of the low-affinity high-capacity AraE transporter. Microbiology (United Kingdom), 2001, 147, 3241-3247.	0.7	262
45	Optimization of the mevalonate-based isoprenoid biosynthetic pathway in Escherichia coli for production of the anti-malarial drug precursor amorpha-4,11-diene. Metabolic Engineering, 2009, 11, 13-19.	3.6	259
46	Modular Engineering of <scp>l</scp> -Tyrosine Production in Escherichia coli. Applied and Environmental Microbiology, 2012, 78, 89-98.	1.4	240
47	High-level production of amorpha-4,11-diene in a two-phase partitioning bioreactor of metabolically engineeredEscherichia coli. Biotechnology and Bioengineering, 2006, 95, 684-691.	1.7	239
48	Low-Copy Plasmids can Perform as Well as or Better Than High-Copy Plasmids for Metabolic Engineering of Bacteria. Metabolic Engineering, 2000, 2, 328-338.	3.6	237
49	Developing Aspergillus as a host for heterologous expression. Biotechnology Advances, 2009, 27, 53-75.	6.0	235
50	Biosynthesis and engineering of isoprenoid small molecules. Applied Microbiology and Biotechnology, 2007, 73, 980-990.	1.7	234
51	A Cas9-based toolkit to program gene expression in<i>Saccharomyces cerevisiae</i>. Nucleic Acids Research, 2017, 45, 496-508.	6.5	215
52	Engineering Static and Dynamic Control of Synthetic Pathways. Cell, 2010, 140, 19-23.	13.5	213
53	Integrating Biological Redesign: Where Synthetic Biology Came From and Where It Needs to Go. Cell, 2014, 157, 151-161.	13.5	211
54	Microbial Synthesis of Pinene. ACS Synthetic Biology, 2014, 3, 466-475.	1.9	210

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55	Functional Genomic Study of Exogenous <i>n</i> -Butanol Stress in <i>Escherichia coli</i>. Applied and Environmental Microbiology, 2010, 76, 1935-1945.	1.4	209
56	EasyCloneâ€MarkerFree: A vector toolkit for markerâ€less integration of genes into <i>Saccharomyces cerevisiae</i> via CRISPRâ€Cas9. Biotechnology Journal, 2016, 11, 1110-1117.	1.8	206
57	XAX1 from glycosyltransferase family 61 mediates xylosyltransfer to rice xylan. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 17117-17122.	3.3	198
58	Process design for microbial plastic factories: metabolic engineering of polyhydroxyalkanoates. Current Opinion in Biotechnology, 2003, 14, 475-483.	3.3	197
59	Combinatorial expression of bacterial whole mevalonate pathway for the production of Î²-carotene in E. coli. Journal of Biotechnology, 2009, 140, 218-226.	1.9	194
60	Genomic Encyclopedia of Bacteria and Archaea: Sequencing a Myriad of Type Strains. PLoS Biology, 2014, 12, e1001920.	2.6	190
61	Metabolic engineering for drug discovery and development. Nature Reviews Drug Discovery, 2003, 2, 1019-1025.	21.5	187
62	Synthetic and systems biology for microbial production of commodity chemicals. Npj Systems Biology and Applications, 2016, 2, 16009.	1.4	187
63	A Novel Semi-biosynthetic Route for Artemisinin Production Using Engineered Substrate-Promiscuous P450_{BM3}. ACS Chemical Biology, 2009, 4, 261-267.	1.6	184
64	Biosensors and their applications in microbial metabolic engineering. Trends in Microbiology, 2011, 19, 323-329.	3.5	184
65	Lutein Accumulation in the Absence of Zeaxanthin Restores Nonphotochemical Quenching in the <i>Arabidopsis thaliana npq1</i> Mutant Â. Plant Cell, 2009, 21, 1798-1812.	3.1	183
66	Quantitative estimation of activity and quality for collections of functional genetic elements. Nature Methods, 2013, 10, 347-353.	9.0	183
67	Engineering prokaryotic transcriptional activators as metabolite biosensors in yeast. Nature Chemical Biology, 2016, 12, 951-958.	3.9	182
68	Model-Driven Engineering of RNA Devices to Quantitatively Program Gene Expression. Science, 2011, 334, 1716-1719.	6.0	180
69	CRISPR/Cas9 advances engineering of microbial cell factories. Metabolic Engineering, 2016, 34, 44-59.	3.6	179
70	De novo DNA synthesis using polymerase-nucleotide conjugates. Nature Biotechnology, 2018, 36, 645-650.	9.4	177
71	Transcription Factor-Based Screens and Synthetic Selections for Microbial Small-Molecule Biosynthesis. ACS Synthetic Biology, 2013, 2, 47-58.	1.9	176
72	Identification of Isopentenol Biosynthetic Genes from <i>Bacillus subtilis</i> by a Screening Method Based on Isoprenoid Precursor Toxicity. Applied and Environmental Microbiology, 2007, 73, 6277-6283.	1.4	174

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73	Enhancing fatty acid production by the expression of the regulatory transcription factor FadR. Metabolic Engineering, 2012, 14, 653-660.	3.6	173
74	Design, implementation and practice of JBEI-ICE: an open source biological part registry platform and tools. Nucleic Acids Research, 2012, 40, e141-e141.	6.5	172
75	Application of Functional Genomics to Pathway Optimization for Increased Isoprenoid Production. Applied and Environmental Microbiology, 2008, 74, 3229-3241.	1.4	171
76	Targeted proteomics for metabolic pathway optimization: Application to terpene production. Metabolic Engineering, 2011, 13, 194-203.	3.6	169
77	Charge-Associated Effects of Fullerene Derivatives on Microbial Structural Integrity and Central Metabolism. Nano Letters, 2007, 7, 754-760.	4.5	167
78	Viscous control of cellular respiration by membrane lipid composition. Science, 2018, 362, 1186-1189.	6.0	167
79	Building a global alliance of biofoundries. Nature Communications, 2019, 10, 2040.	5.8	167
80	Regulatable Arabinose-Inducible Gene Expression System with Consistent Control in All Cells of a Culture. Journal of Bacteriology, 2000, 182, 7029-7034.	1.0	164
81	Induction of multiple pleiotropic drug resistance genes in yeast engineered to produce an increased level of anti-malarial drug precursor, artemisinic acid. BMC Biotechnology, 2008, 8, 83.	1.7	164
82	Overexpression of a BAHD Acyltransferase, <i>OsAt10</i>, Alters Rice Cell Wall Hydroxycinnamic Acid Content and Saccharification Â Â Â. Plant Physiology, 2013, 161, 1615-1633.	2.3	164
83	Mathematical Model of the lac Operon: Inducer Exclusion, Catabolite Repression, and Diauxic Growth on Glucose and Lactose. Biotechnology Progress, 1997, 13, 132-143.	1.3	159
84	Carotenoid-based phenotypic screen of the yeast deletion collection reveals new genes with roles in isoprenoid production. Metabolic Engineering, 2013, 15, 174-183.	3.6	157
85	Biofuels for a sustainable future. Cell, 2021, 184, 1636-1647.	13.5	156
86	Salt Stress in Desulfovibrio vulgaris Hildenborough: an Integrated Genomics Approach. Journal of Bacteriology, 2006, 188, 4068-4078.	1.0	155
87	Programming adaptive control to evolve increased metabolite production. Nature Communications, 2013, 4, 2595.	5.8	153
88	Industrial brewing yeast engineered for the production of primary flavor determinants in hopped beer. Nature Communications, 2018, 9, 965.	5.8	152
89	Rhodosporidium toruloides: a new platform organism for conversion of lignocellulose into terpene biofuels and bioproducts. Biotechnology for Biofuels, 2017, 10, 241.	6.2	150
90	Development of biosensors and their application in metabolic engineering. Current Opinion in Chemical Biology, 2015, 28, 1-8.	2.8	149

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91	CasEMBLR: Cas9-Facilitated Multiloci Genomic Integration of <i>in Vivo</i> Assembled DNA Parts in <i>Saccharomyces cerevisiae</i>. ACS Synthetic Biology, 2015, 4, 1226-1234.	1.9	148
92	Engineering synergy in biotechnology. Nature Chemical Biology, 2014, 10, 319-322.	3.9	147
93	Enhanced lycopene production inEscherichia coli engineered to synthesize isopentenyl diphosphate and dimethylallyl diphosphate from mevalonate. Biotechnology and Bioengineering, 2006, 94, 1025-1032.	1.7	144
94	Metabolic engineering delivers next-generation biofuels. Nature Biotechnology, 2008, 26, 298-299.	9.4	144
95	Mono and diterpene production inEscherichia coli. Biotechnology and Bioengineering, 2004, 87, 200-212.	1.7	141
96	Optimization of a heterologous mevalonate pathway through the use of variant HMG-CoA reductases. Metabolic Engineering, 2011, 13, 588-597.	3.6	141
97	Biosynthesis and incorporation of sideâ€chainâ€truncated lignin monomers to reduce lignin polymerization and enhance saccharification. Plant Biotechnology Journal, 2012, 10, 609-620.	4.1	140
98	Principal component analysis of proteomics (PCAP) as a tool to direct metabolic engineering. Metabolic Engineering, 2015, 28, 123-133.	3.6	140
99	Impact of ionic liquid pretreated plant biomass on Saccharomyces cerevisiae growth and biofuel production. Green Chemistry, 2011, 13, 2743.	4.6	139
100	Genes Involved in Long-Chain Alkene Biosynthesis in <i>Micrococcus luteus</i>. Applied and Environmental Microbiology, 2010, 76, 1212-1223.	1.4	138
101	Advances in analysis of microbial metabolic fluxes via ¹³C isotopic labeling. Mass Spectrometry Reviews, 2009, 28, 362-375.	2.8	137
102	Combining mechanistic and machine learning models for predictive engineering and optimization of tryptophan metabolism. Nature Communications, 2020, 11, 4880.	5.8	137
103	Redirection of flux through the FPP branchâ€point in <i>Saccharomyces cerevisiae</i> by downâ€regulating squalene synthase. Biotechnology and Bioengineering, 2008, 100, 371-378.	1.7	134
104	The effect of ionic liquid cation and anion combinations on the macromolecular structure of lignins. Green Chemistry, 2011, 13, 3375.	4.6	134
105	CrEdit: CRISPR mediated multi-loci gene integration in Saccharomyces cerevisiae. Microbial Cell Factories, 2015, 14, 97.	1.9	134
106	Engineering of Bacterial Methyl Ketone Synthesis for Biofuels. Applied and Environmental Microbiology, 2012, 78, 70-80.	1.4	130
107	Synergies between synthetic biology and metabolic engineering. Nature Biotechnology, 2011, 29, 693-695.	9.4	128
108	Three Members of the Arabidopsis Glycosyltransferase Family 8 Are Xylan Glucuronosyltransferases Â Â. Plant Physiology, 2012, 159, 1408-1417.	2.3	128

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109	A model for improving microbial biofuel production using a synthetic feedback loop. Systems and Synthetic Biology, 2010, 4, 95-104.	1.0	127
110	Microbial production of advanced biofuels. Nature Reviews Microbiology, 2021, 19, 701-715.	13.6	126
111	Metabolic engineering for the high-yield production of isoprenoid-based C5 alcohols in E. coli. Scientific Reports, 2015, 5, 11128.	1.6	125
112	Design and Construction of a Double Inversion Recombination Switch for Heritable Sequential Genetic Memory. PLoS ONE, 2008, 3, e2815.	1.1	123
113	Polyphosphate Kinase from Activated Sludge Performing Enhanced Biological Phosphorus Removal. Applied and Environmental Microbiology, 2002, 68, 4971-4978.	1.4	121
114	Remodeling the isoprenoid pathway in tobacco by expressing the cytoplasmic mevalonate pathway in chloroplasts. Metabolic Engineering, 2012, 14, 19-28.	3.6	120
115	Importance of systems biology in engineering microbes for biofuel production. Current Opinion in Biotechnology, 2008, 19, 228-234.	3.3	119
116	Memory in Microbes: Quantifying History-Dependent Behavior in a Bacterium. PLoS ONE, 2008, 3, e1700.	1.1	115
117	Base-Catalyzed Depolymerization of Solid Lignin-Rich Streams Enables Microbial Conversion. ACS Sustainable Chemistry and Engineering, 2017, 5, 8171-8180.	3.2	115
118	Engineering triterpene production in <i>Saccharomyces cerevisiae</i>â€“Î²â€amyrin synthase from <i>Artemisiaâ€ƒannua</i>. FEBS Journal, 2008, 275, 1852-1859.	2.2	114
119	Improving Microbial Biogasoline Production in Escherichia coli Using Tolerance Engineering. MBio, 2014, 5, e01932.	1.8	113
120	Isoprenoid Drugs, Biofuels, and Chemicalsâ€"Artemisinin, Farnesene, and Beyond. Advances in Biochemical Engineering/Biotechnology, 2015, 148, 355-389.	0.6	113
121	Gene-expression tools for the metabolic engineering of bacteria. Trends in Biotechnology, 1999, 17, 452-460.	4.9	109
122	Rapid metabolic pathway assembly and modification using serine integrase site-specific recombination. Nucleic Acids Research, 2014, 42, e23-e23.	6.5	109
123	Uranyl Precipitation by Pseudomonas aeruginosa via Controlled Polyphosphate Metabolism. Applied and Environmental Microbiology, 2004, 70, 7404-7412.	1.4	106
124	Identification of the Intermediates of in Vivo Oxidation of 1,4-Dioxane by Monooxygenase-Containing Bacteria. Environmental Science & Technology, 2007, 41, 7330-7336.	4.6	106
125	Integrated analysis of isopentenyl pyrophosphate (IPP) toxicity in isoprenoid-producing Escherichia coli. Metabolic Engineering, 2018, 47, 60-72.	3.6	106
126	Microbially Derived Artemisinin: A Biotechnology Solution to the Global Problem of Access to Affordable Antimalarial Drugs. American Journal of Tropical Medicine and Hygiene, 2007, 77, 198-202.	0.6	105

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127	Microbioreactor arrays with parametric control for high-throughput experimentation. Biotechnology and Bioengineering, 2004, 85, 376-381.	1.7	104
128	Metabolic flux elucidation for large-scale models using 13C labeled isotopes. Metabolic Engineering, 2007, 9, 387-405.	3.6	104
129	Transcriptional reprogramming in yeast using dCas9 and combinatorial gRNA strategies. Microbial Cell Factories, 2017, 16, 46.	1.9	102
130	Farnesol production from <i>Escherichia coli</i> by harnessing the exogenous mevalonate pathway. Biotechnology and Bioengineering, 2010, 107, 421-429.	1.7	101
131	Evolved hexose transporter enhances xylose uptake and glucose/xylose co-utilization in Saccharomyces cerevisiae. Scientific Reports, 2016, 6, 19512.	1.6	100
132	Comprehensive <i>in Vitro</i> Analysis of Acyltransferase Domain Exchanges in Modular Polyketide Synthases and Its Application for Short-Chain Ketone Production. ACS Synthetic Biology, 2017, 6, 139-147.	1.9	100
133	Engineering of synthetic, stress-responsive yeast promoters. Nucleic Acids Research, 2016, 44, e136-e136.	6.5	99
134	Engineering the lycopene synthetic pathway in E. coli by comparison of the carotenoid genes of Pantoea agglomerans and Pantoea ananatis. Applied Microbiology and Biotechnology, 2007, 74, 131-139.	1.7	98
135	A Thermophilic Ionic Liquid-Tolerant Cellulase Cocktail for the Production of Cellulosic Biofuels. PLoS ONE, 2012, 7, e37010.	1.1	98
136	Library of Synthetic 5' Secondary Structures To Manipulate mRNA Stability in Escherichia coli. Biotechnology Progress, 1999, 15, 58-64.	1.3	97
137	Directed Evolution of AraC for Improved Compatibility of Arabinose- and Lactose-Inducible Promoters. Applied and Environmental Microbiology, 2007, 73, 5711-5715.	1.4	97
138	Isopentenyl diphosphate (IPP)-bypass mevalonate pathways for isopentenol production. Metabolic Engineering, 2016, 34, 25-35.	3.6	97
139	Engineering high-level production of fatty alcohols by Saccharomyces cerevisiae from lignocellulosic feedstocks. Metabolic Engineering, 2017, 42, 115-125.	3.6	97
140	The in vivo synthesis of plant sesquiterpenes byEscherichia coli. Biotechnology and Bioengineering, 2001, 75, 497-503.	1.7	96
141	Metabolic Engineering of a Novel Propionate-Independent Pathway for the Production of Poly(3-Hydroxybutyrate- co -3-Hydroxyvalerate) in Recombinant Salmonella enterica Serovar Typhimurium. Applied and Environmental Microbiology, 2002, 68, 3848-3854.	1.4	96
142	Membrane proteomics of phagosomes suggests a connection to autophagy. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 16952-16957.	3.3	96
143	Cell-Wide Responses to Low-Oxygen Exposure in Desulfovibrio vulgaris Hildenborough. Journal of Bacteriology, 2007, 189, 5996-6010.	1.0	94
144	Metabolic pathway optimization using ribosome binding site variants and combinatorial gene assembly. Applied Microbiology and Biotechnology, 2014, 98, 1567-1581.	1.7	94

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145	Nickel accumulation and nickel oxalate precipitation by Aspergillus niger. Applied Microbiology and Biotechnology, 2002, 59, 382-388.	1.7	92
146	Evolution-guided engineering of small-molecule biosensors. Nucleic Acids Research, 2020, 48, e3-e3.	6.5	92
147	Chemical synthesis using synthetic biology. Current Opinion in Biotechnology, 2009, 20, 498-503.	3.3	91
148	Cloning of casbene and neocembrene synthases from Euphorbiaceae plants and expression in Saccharomyces cerevisiae. Phytochemistry, 2010, 71, 1466-1473.	1.4	91
149	Pathway Confirmation and Flux Analysis of Central Metabolic Pathways in Desulfovibrio vulgaris Hildenborough using Gas Chromatography-Mass Spectrometry and Fourier Transform-Ion Cyclotron Resonance Mass Spectrometry. Journal of Bacteriology, 2007, 189, 940-949.	1.0	90
150	Separation and mass spectrometry in microbial metabolomics. Current Opinion in Microbiology, 2008, 11, 233-239.	2.3	90
151	Expression of a bacterial 3â€dehydroshikimate dehydratase reduces lignin content and improves biomass saccharification efficiency. Plant Biotechnology Journal, 2015, 13, 1241-1250.	4.1	90
152	Effect ofEscherichia coli biomass composition on central metabolic fluxes predicted by a stoichiometric model. , 1998, 60, 230-238.		89
153	Shewanella oneidensis MR-1 Fluxome under Various Oxygen Conditions. Applied and Environmental Microbiology, 2007, 73, 718-729.	1.4	89
154	Correlation analysis of targeted proteins and metabolites to assess and engineer microbial isopentenol production. Biotechnology and Bioengineering, 2014, 111, 1648-1658.	1.7	89
155	Regulation of Intracellular Toxic Metals and Other Cations by Hydrolysis of Polyphosphate. Annals of the New York Academy of Sciences, 1997, 829, 242-249.	1.8	87
156	Identification of genes affecting lycopene accumulation inEscherichia coli using a shot-gun method. Biotechnology and Bioengineering, 2005, 91, 636-642.	1.7	87
157	Arabidopsis<i>Deficient in Cutin Ferulate</i>Encodes a Transferase Required for Feruloylation of Ï‰-Hydroxy Fatty Acids in Cutin Polyester Â Â. Plant Physiology, 2012, 158, 654-665.	2.3	86
158	A constructive debate. Nature, 2012, 492, 188-189.	13.7	86
159	DeviceEditor visual biological CAD canvas. Journal of Biological Engineering, 2012, 6, 1.	2.0	86
160	Commensal Interactions in a Dual-Species Biofilm Exposed to Mixed Organic Compounds. Applied and Environmental Microbiology, 2000, 66, 4481-4485.	1.4	85
161	An auto-inducible mechanism for ionic liquid resistance in microbial biofuel production. Nature Communications, 2014, 5, 3490.	5.8	85
162	Metabolic Engineering of an Aerobic Sulfate Reduction Pathway and Its Application to Precipitation of Cadmium on the Cell Surface. Applied and Environmental Microbiology, 2000, 66, 4497-4502.	1.4	84

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163	A kinetic model describingShewanella oneidensis MR-1 growth, substrate consumption, and product secretion. Biotechnology and Bioengineering, 2007, 96, 125-133.	1.7	84
164	Metabolic engineering of microorganisms for isoprenoid production. Natural Product Reports, 2008, 25, 656.	5.2	84
165	HipA-Triggered Growth Arrest and Â-Lactam Tolerance in Escherichia coli Are Mediated by RelA-Dependent ppGpp Synthesis. Journal of Bacteriology, 2013, 195, 3173-3182.	1.0	84
166	Engineering Cotton (+)-Î´-Cadinene Synthase to an Altered Function: Germacrene D-4-ol Synthase. Chemistry and Biology, 2006, 13, 91-98.	6.2	83
167	Cyanobacterial carbon metabolism: Fluxome plasticity and oxygen dependence. Biotechnology and Bioengineering, 2017, 114, 1593-1602.	1.7	83
168	Increased Î²-Carotene Production in Recombinant Escherichia coli Harboring an Engineered Isoprenoid Precursor Pathway with Mevalonate Addition. Biotechnology Progress, 2008, 23, 599-605.	1.3	82
169	Plastid-produced interorgannellar stress signal MEcPP potentiates induction of the unfolded protein response in endoplasmic reticulum. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6212-6217.	3.3	82
170	A Versatile Microfluidic Device for Automating Synthetic Biology. ACS Synthetic Biology, 2015, 4, 1151-1164.	1.9	81
171	Production of jet fuel precursor monoterpenoids from engineered <i>Escherichia coli</i>. Biotechnology and Bioengineering, 2017, 114, 1703-1712.	1.7	81
172	Anaerobic Central Metabolic Pathways in Shewanella oneidensis MR-1 Reinterpreted in the Light of Isotopic Metabolite Labeling. Journal of Bacteriology, 2007, 189, 894-901.	1.0	80
173	Microbial sensors for small molecules: Development of a mevalonate biosensor. Metabolic Engineering, 2007, 9, 30-38.	3.6	80
174	Selecting RNA aptamers for synthetic biology: investigating magnesium dependence and predicting binding affinity. Nucleic Acids Research, 2010, 38, 2736-2747.	6.5	80
175	Controlling Messenger RNA Stability in Bacteria: Strategies for Engineering Gene Expression. Biotechnology Progress, 1997, 13, 699-708.	1.3	79
176	A Propionate-Inducible Expression System for Enteric Bacteria. Applied and Environmental Microbiology, 2005, 71, 6856-6862.	1.4	79
177	Polyphosphate kinase genes from full-scale activated sludge plants. Applied Microbiology and Biotechnology, 2007, 77, 167-173.	1.7	78
178	Exploiting the Substrate Promiscuity of Hydroxycinnamoyl-CoA:Shikimate Hydroxycinnamoyl Transferase to Reduce Lignin. Plant and Cell Physiology, 2016, 57, 568-579.	1.5	78
179	Autonomous control of metabolic state by a quorum sensing (QS)-mediated regulator for bisabolene production in engineered E. coli. Metabolic Engineering, 2017, 44, 325-336.	3.6	78
180	From Fields to Fuels: Recent Advances in the Microbial Production of Biofuels. ACS Synthetic Biology, 2012, 1, 498-513.	1.9	77

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