Sang Yup Lee

List of Publications by Year
in descending order

816 papers	62,319 citations	764 119 h-index	2027 205 g-index
886 all docs	886 docs citations	886 times ranked	41229 citing authors

#	Article	IF	Citations
1	antiSMASH 5.0: updates to the secondary metabolite genome mining pipeline. Nucleic Acids Research, 2019, 47, W81-W87.	6.5	2,410
2	antiSMASH 3.0â€"a comprehensive resource for the genome mining of biosynthetic gene clusters. Nucleic Acids Research, 2015, 43, W237-W243.	6.5	1,764
3	antiSMASH 4.0â€"improvements in chemistry prediction and gene cluster boundary identification. Nucleic Acids Research, 2017, 45, W36-W41.	6.5	1,196
4	Metabolic engineering of Escherichia coli for direct production of 1,4-butanediol. Nature Chemical Biology, 2011, 7, 445-452.	3.9	984
5	Fermentative butanol production by clostridia. Biotechnology and Bioengineering, 2008, 101, 209-228.	1.7	909
6	High cell-density culture of Escherichia coli. Trends in Biotechnology, 1996, 14, 98-105.	4.9	747
7	Bacterial polyhydroxyalkanoates. Biotechnology and Bioengineering, 2000, 49, 1-14.	1.7	699
8	Production of succinic acid by bacterial fermentation. Enzyme and Microbial Technology, 2006, 39, 352-361.	1.6	669
9	Systems metabolic engineering of microorganisms for natural and non-natural chemicals. Nature Chemical Biology, 2012, 8, 536-546.	3.9	639
10	Metabolic engineering of Escherichia coli using synthetic small regulatory RNAs. Nature Biotechnology, 2013, 31, 170-174.	9.4	551
11	Metabolic engineering of Escherichia coli for the production of L-valine based on transcriptome analysis and in silico gene knockout simulation. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 7797-7802.	3.3	514
12	Secretory and extracellular production of recombinant proteins using Escherichia coli. Applied Microbiology and Biotechnology, 2004, 64, 625-635.	1.7	512
13	Harnessing Yarrowia lipolytica lipogenesis to create a platform for lipid and biofuel production. Nature Communications, 2014, 5, 3131.	5.8	488
14	Native-sized recombinant spider silk protein produced in metabolically engineered <i>Escherichia coli</i> results in a strong fiber. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14059-14063.	3.3	485
15	Current status and applications of genome-scale metabolic models. Genome Biology, 2019, 20, 121.	3.8	463
16	Structural insight into molecular mechanism of poly(ethylene terephthalate) degradation. Nature Communications, 2018, 9, 382.	5.8	449
17	Microbial cell-surface display. Trends in Biotechnology, 2003, 21, 45-52.	4.9	445
18	Plastic bacteria? Progress and prospects for polyhydroxyalkanoate production in bacteria. Trends in Biotechnology, 1996, 14, 431-438.	4.9	437

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19	Optical Biosensors for the Detection of Pathogenic Microorganisms. Trends in Biotechnology, 2016, 34, 7-25.	4.9	434
20	Systems strategies for developing industrial microbial strains. Nature Biotechnology, 2015, 33, 1061-1072.	9.4	433
21	Bacterial polyhydroxyalkanoates. , 1996, 49, 1.		431
22	Biorefineries for the production of top building block chemicals and their derivatives. Metabolic Engineering, 2015, 28, 223-239.	3.6	425
23	Microbial production of short-chain alkanes. Nature, 2013, 502, 571-574.	13.7	408
24	Machine learning-aided engineering of hydrolases for PET depolymerization. Nature, 2022, 604, 662-667.	13.7	396
25	Process analysis and economic evaluation for Poly(3-hydroxybutyrate) production by fermentation. Bioprocess and Biosystems Engineering, 1997, 17, 335.	0.5	394
26	A comprehensive metabolic map for production of bio-based chemicals. Nature Catalysis, 2019, 2, 18-33.	16.1	394
27	Factors affecting the economics of polyhydroxyalkanoate production by bacterial fermentation. Applied Microbiology and Biotechnology, 1999, 51, 13-21.	1.7	391
28	Systems metabolic engineering of <i>Escherichia coli</i> for <scp>L</scp> â€threonine production. Molecular Systems Biology, 2007, 3, 149.	3.2	391
29	CRISPR-Cas9 Based Engineering of Actinomycetal Genomes. ACS Synthetic Biology, 2015, 4, 1020-1029.	1.9	365
30	Patterned Multiplex Pathogen DNA Detection by Au Particle-on-Wire SERS Sensor. Nano Letters, 2010, 10, 1189-1193.	4.5	351
31	Systems Metabolic Engineering Strategies: Integrating Systems and Synthetic Biology with Metabolic Engineering. Trends in Biotechnology, 2019, 37, 817-837.	4.9	345
32	Solution Chemistry of Self-Assembled Graphene Nanohybrids for High-Performance Flexible Biosensors. ACS Nano, 2010, 4, 2910-2918.	7.3	343
33	Bioâ€based production of C2â€“C6 platform chemicals. Biotechnology and Bioengineering, 2012, 109, 2437-2459.	1.7	329
34	Deep learning improves prediction of drugâ€“drug and drugâ€“food interactions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E4304-E4311.	3.3	325
35	MEMOTE for standardized genome-scale metabolic model testing. Nature Biotechnology, 2020, 38, 272-276.	9.4	314
36	Rational Protein Engineering of Thermo-Stable PETase from <i>Ideonella sakaiensis</i> for Highly Efficient PET Degradation. ACS Catalysis, 2019, 9, 3519-3526.	5.5	307

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37	Production of poly(3-hydroxybutyric acid) by fed-batch culture ofAlcaligenes eutrophus with glucose concentration control. Biotechnology and Bioengineering, 1994, 43, 892-898.	1.7	294
38	Dissemination of antibiotic resistance genes from antibiotic producers to pathogens. Nature Communications, 2017, 8, 15784.	5.8	287
39	Systems biotechnology for strain improvement. Trends in Biotechnology, 2005, 23, 349-358.	4.9	285
40	Metabolic Engineering of Escherichia coli for Enhanced Production of Succinic Acid, Based on Genome Comparison and In Silico Gene Knockout Simulation. Applied and Environmental Microbiology, 2005, 71, 7880-7887.	1.4	282
41	Promoter engineering: Recent advances in controlling transcription at the most fundamental level. Biotechnology Journal, 2013, 8, 46-58.	1.8	277
42	Metabolic engineering of <i>Escherichia coli</i> for the production of polylactic acid and its copolymers. Biotechnology and Bioengineering, 2010, 105, 161-171.	1.7	272
43	Isolation and characterization of a new succinic acid-producing bacterium, Mannheimia succiniciproducens MBEL55E, from bovine rumen. Applied Microbiology and Biotechnology, 2002, 58, 663-668.	1.7	270
44	Industrial scale production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate). Applied Microbiology and Biotechnology, 2001, 57, 50-55.	1.7	269
45	Production of recombinant proteins by high cell density culture of Escherichia coli. Chemical Engineering Science, 2006, 61, 876-885.	1.9	255
46	Succinic acid production with reduced by-product formation in the fermentation ofAnaerobiospirillum succiniciproducens using glycerol as a carbon source. Biotechnology and Bioengineering, 2001, 72, 41-48.	1.7	254
47	Metabolic engineering of muconic acid production in Saccharomyces cerevisiae. Metabolic Engineering, 2013, 15, 55-66.	3.6	251
48	<i>In Silico</i> Identification of Gene Amplification Targets for Improvement of Lycopene Production. Applied and Environmental Microbiology, 2010, 76, 3097-3105.	1.4	247
49	Tools and strategies of systems metabolic engineering for the development of microbial cell factories for chemical production. Chemical Society Reviews, 2020, 49, 4615-4636.	18.7	246
50	Genome-Based Metabolic Engineering of Mannheimia succiniciproducens for Succinic Acid Production. Applied and Environmental Microbiology, 2006, 72, 1939-1948.	1.4	241
51	Butanol production from renewable biomass by clostridia. Bioresource Technology, 2012, 123, 653-663.	4.8	240
52	Control of fed-batch fermentations. Biotechnology Advances, 1999, 17, 29-48.	6.0	236
53	Production of succinic acid by metabolically engineered microorganisms. Current Opinion in Biotechnology, 2016, 42, 54-66.	3.3	229
54	Enhanced Butanol Production Obtained by Reinforcing the Direct Butanol-Forming Route in Clostridium acetobutylicum. MBio, 2012, 3, .	1.8	220

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55	Metabolic Engineering of Escherichia coli for Natural Product Biosynthesis. Trends in Biotechnology, 2020, 38, 745-765.	4.9	219
56	Metabolic engineering of <i>Escherichia coli</i> for the production of putrescine: A four carbon diamine. Biotechnology and Bioengineering, 2009, 104, 651-662.	1.7	217
57	Metabolic Engineering of Clostridium acetobutylicum ATCC 824 for Isopropanol-Butanol-Ethanol Fermentation. Applied and Environmental Microbiology, 2012, 78, 1416-1423.	1.4	213
58	Metabolic engineering of Corynebacterium glutamicum for L-arginine production. Nature Communications, 2014, 5, 4618.	5.8	209
59	The antiSMASH database, a comprehensive database of microbial secondary metabolite biosynthetic gene clusters. Nucleic Acids Research, 2017, 45, D555-D559.	6.5	207
60	Micro total analysis system (ï¿½-TAS) in biotechnology. Applied Microbiology and Biotechnology, 2004, 64, 289-299.	1.7	206
61	Metabolic engineering of <i>Escherichia coli</i> for the production of cadaverine: A five carbon diamine. Biotechnology and Bioengineering, 2011, 108, 93-103.	1.7	202
62	Expanding the metabolic engineering toolbox: more options to engineer cells. Trends in Biotechnology, 2007, 25, 132-137.	4.9	200
63	Microbial production of building block chemicals and polymers. Current Opinion in Biotechnology, 2011, 22, 758-767.	3.3	199
64	Systems biology and biotechnology of Streptomyces species for the production of secondary metabolites. Biotechnology Advances, 2014, 32, 255-268.	6.0	199
65	Recent advances in systems metabolic engineering tools and strategies. Current Opinion in Biotechnology, 2017, 47, 67-82.	3.3	185
66	The genome sequence of the capnophilic rumen bacterium Mannheimia succiniciproducens. Nature Biotechnology, 2004, 22, 1275-1281.	9.4	184
67	One-step fermentative production of poly(lactate-co-glycolate) from carbohydrates in Escherichia coli. Nature Biotechnology, 2016, 34, 435-440.	9.4	182
68	Recent advances in reconstruction and applications of genome-scale metabolic models. Current Opinion in Biotechnology, 2012, 23, 617-623.	3.3	181
69	CRISPR/Cas9-coupled recombineering for metabolic engineering of Corynebacterium glutamicum. Metabolic Engineering, 2017, 42, 157-167.	3.6	181
70	Efficient and economical recovery of poly(3-hydroxybutyrate) from recombinantEscherichia coli by simple digestion with chemicals. , 1999, 62, 546-553.		178
71	Analysis of the mouse gut microbiome using full-length 16S rRNA amplicon sequencing. Scientific Reports, 2016, 6, 29681.	1.6	178
72	Production of Poly(3-Hydroxybutyrate) by Fed-Batch Culture of Recombinant Escherichia coli with a Highly Concentrated Whey Solution. Applied and Environmental Microbiology, 2000, 66, 3624-3627.	1.4	173

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73	Systems metabolic engineering for chemicals and materials. Trends in Biotechnology, 2011, 29, 370-378.	4.9	173
74	Use of expression-enhancing terminators in Saccharomyces cerevisiae to increase mRNA half-life and improve gene expression control for metabolic engineering applications. Metabolic Engineering, 2013, 19, 88-97.	3.6	171
75	Application of systems biology for bioprocess development. Trends in Biotechnology, 2008, 26, 404-412.	4.9	169
76	Synthetic biology and molecular genetics in non-conventional yeasts: Current tools and future advances. Fungal Genetics and Biology, 2016, 89, 126-136.	0.9	166
77	Towards systems metabolic engineering of microorganisms for amino acid production. Current Opinion in Biotechnology, 2008, 19, 454-460.	3.3	163
78	Double-Gate Nanowire Field Effect Transistor for a Biosensor. Nano Letters, 2010, 10, 2934-2938.	4.5	162
79	Combined transcriptome and proteome analysis ofEscherichia coli during high cell density culture. Biotechnology and Bioengineering, 2003, 81, 753-767.	1.7	161
80	Genome-scale reconstruction and in silico analysis of the Clostridium acetobutylicum ATCC 824 metabolic network. Applied Microbiology and Biotechnology, 2008, 80, 849-862.	1.7	161
81	Recent advances in polyhydroxyalkanoate production by bacterial fermentation: mini-review. International Journal of Biological Macromolecules, 1999, 25, 31-36.	3.6	160
82	Biosynthesis of polylactic acid and its copolymers using evolved propionate CoA transferase and PHA synthase. Biotechnology and Bioengineering, 2010, 105, 150-160.	1.7	159
83	The genome sequence of E. coli W (ATCC 9637): comparative genome analysis and an improved genome-scale reconstruction of E. coli. BMC Genomics, 2011, 12, 9.	1.2	159
84	Metabolic engineering of antibiotic factories: new tools for antibiotic production in actinomycetes. Trends in Biotechnology, 2015, 33, 15-26.	4.9	159
85	Batch and continuous fermentation of succinic acid from wood hydrolysate by Mannheimia succiniciproducens MBEL55E. Enzyme and Microbial Technology, 2004, 35, 648-653.	1.6	158
86	Integrative genomeâ€scale metabolic analysis of <i>Vibrio vulnificus</i> for drug targeting and discovery. Molecular Systems Biology, 2011, 7, 460.	3.2	157
87	Design and use of synthetic regulatory small RNAs to control gene expression in Escherichia coli. Nature Protocols, 2013, 8, 1694-1707.	5.5	157
88	Metabolic engineering in the host Yarrowia lipolytica. Metabolic Engineering, 2018, 50, 192-208.	3.6	157
89	Complete Genome Sequence of the Metabolically Versatile Plant Growth-Promoting Endophyte <i>Variovorax paradoxus</i> S110. Journal of Bacteriology, 2011, 193, 1183-1190.	1.0	156
90	Comparative multi-omics systems analysis of Escherichia coli strains B and K-12. Genome Biology, 2012, 13, R37.	13.9	155

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91	Family of the major cold-shock protein, CspA (CS7.4), of Escherichia coli, whose members show a high sequence similarity with the eukaryotic Y-box binding proteins. Molecular Microbiology, 1994, 11, 833-839.	1.2	152
92	Deep learning enables high-quality and high-throughput prediction of enzyme commission numbers. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 13996-14001.	3.3	151
93	Advanced bacterial polyhydroxyalkanoates: Towards a versatile and sustainable platform for unnatural tailor-made polyesters. Biotechnology Advances, 2012, 30, 1196-1206.	6.0	150
94	Metabolic engineering of microorganisms for production of aromatic compounds. Microbial Cell Factories, 2019, 18, 41.	1.9	150
95	The antiSMASH database version 2: a comprehensive resource on secondary metabolite biosynthetic gene clusters. Nucleic Acids Research, 2019, 47, D625-D630.	6.5	150
96	The Escherichia coli Proteome: Past, Present, and Future Prospects. Microbiology and Molecular Biology Reviews, 2006, 70, 362-439.	2.9	147
97	Engineering synergy in biotechnology. Nature Chemical Biology, 2014, 10, 319-322.	3.9	147
98	Advances in microbial biosynthesis of metal nanoparticles. Applied Microbiology and Biotechnology, 2016, 100, 521-534.	1.7	144
99	Rewiring <i>Yarrowia lipolytica</i> toward triacetic acid lactone for materials generation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2096-2101.	3.3	144
100	Engineering of microorganisms for the production of biofuels and perspectives based on systems metabolic engineering approaches. Biotechnology Advances, 2012, 30, 989-1000.	6.0	143
101	Holographic deep learning for rapid optical screening of anthrax spores. Science Advances, 2017, 3, e1700606.	4.7	143
102	Metabolic flux analysis and metabolic engineering of microorganisms. Molecular BioSystems, 2008, 4, 113-120.	2.9	141
103	Recovery and characterization of poly(3-hydroxybutyric acid) synthesized in Alcaligenes eutrophus and recombinant Escherichia coli. Applied and Environmental Microbiology, 1995, 61, 34-39.	1.4	141
104	Metabolic engineering of Escherichia coli for the production of 5-aminovalerate and glutarate as C5 platform chemicals. Metabolic Engineering, 2013, 16, 42-47.	3.6	140
105	Molecular mass of poly[(R â€Š)-3-hydroxybutyric acid] produced in a recombinant Escherichia coli. Applied Microbiology and Biotechnology, 1997, 47, 140-143.	1.7	139
106	In Vivo Synthesis of Diverse Metal Nanoparticles by Recombinant <i>Escherichia coli</i>. Angewandte Chemie - International Edition, 2010, 49, 7019-7024.	7.2	138
107	Butanol production from renewable biomass: Rediscovery of metabolic pathways and metabolic engineering. Biotechnology Journal, 2012, 7, 186-198.	1.8	138
108	Metabolic engineering for the synthesis of polyesters: A 100-year journey from polyhydroxyalkanoates to non-natural microbial polyesters. Metabolic Engineering, 2020, 58, 47-81.	3.6	138

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109	Succinic acid production by Anaerobiospirillum succiniciproducens: effects of the H2/CO2 supply and glucose concentration. Enzyme and Microbial Technology, 1999, 24, 549-554.	1.6	134
110	Compartmentalized microbes and co-cultures in hydrogels for on-demand bioproduction and preservation. Nature Communications, 2020, 11, 563.	5.8	134
111	Expanding the chemical palate of cells by combining systems biology and metabolic engineering. Metabolic Engineering, 2012, 14, 289-297.	3.6	131
112	Machine learning applications in systems metabolic engineering. Current Opinion in Biotechnology, 2020, 64, 1-9.	3.3	131
113	Comparison of recombinantEscherichia colistrains for synthesis and accumulation of poly-(3-hydroxybutyric acid) and morphological changes. Biotechnology and Bioengineering, 1994, 44, 1337-1347.	1.7	130
114	Model based engineering of Pichia pastoris central metabolism enhances recombinant protein production. Metabolic Engineering, 2014, 24, 129-138.	3.6	130
115	Development of gold nanoparticle-aptamer-based LSPR sensing chips for the rapid detection of Salmonella typhimurium in pork meat. Scientific Reports, 2017, 7, 10130.	1.6	130
116	Continuous butanol production with reduced byproducts formation from glycerol by a hyper producing mutant of Clostridium pasteurianum. Applied Microbiology and Biotechnology, 2012, 93, 1485-1494.	1.7	129
117	Organizational and Mutational Analysis of a Complete FR-008/Candicidin Gene Cluster Encoding a Structurally Related Polyene Complex. Chemistry and Biology, 2003, 10, 1065-1076.	6.2	127
118	Bio-based production of monomers and polymers by metabolically engineered microorganisms. Current Opinion in Biotechnology, 2015, 36, 73-84.	3.3	126
119	Cloning of the<i>Alcaligenes latus</i>Polyhydroxyalkanoate Biosynthesis Genes and Use of These Genes for Enhanced Production of Poly(3-hydroxybutyrate) in<i>Escherichia coli</i>. Applied and Environmental Microbiology, 1998, 64, 4897-4903.	1.4	125
120	Nonlinear partial differential equations and applications: Gaussian curvature and the equilibrium among bilayer cylinders, spheres, and discs. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 15318-15322.	3.3	125
121	Production of medium-chain-length polyhydroxyalkanoates by high-cell-density cultivation ofPseudomonas putida under phosphorus limitation. , 2000, 68, 466-470.		124
122	CRISPR technologies for bacterial systems: Current achievements and future directions. Biotechnology Advances, 2016, 34, 1180-1209.	6.0	124
123	Metabolic engineering of Escherichia coli for high-level astaxanthin production with high productivity. Metabolic Engineering, 2018, 49, 105-115.	3.6	124
124	Metabolite essentiality elucidates robustness of <i>Escherichia coli</i> metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13638-13642.	3.3	122
125	MetaFluxNet: the management of metabolic reaction information and quantitative metabolic flux analysis. Bioinformatics, 2003, 19, 2144-2146.	1.8	121
126	Metabolic engineering of microorganisms: general strategies and drug production. Drug Discovery Today, 2009, 14, 78-88.	3.2	121

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127	Nanogap Fieldâ€Effect Transistor Biosensors for Electrical Detection of Avian Influenza. Small, 2009, 5, 2407-2412.	5.2	121
128	Prediction of novel synthetic pathways for the production of desired chemicals. BMC Systems Biology, 2010, 4, 35.	3.0	121
129	Drugs repurposed for COVID-19 by virtual screening of 6,218 drugs and cell-based assay. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	121
130	Construction of plasmids, estimation of plasmid stability, and use of stable plasmids for the production of poly(3-hydroxybutyric acid) by recombinant Escherichia coli. Journal of Biotechnology, 1994, 32, 203-211.	1.9	120
131	Proteome Analysis of Metabolically Engineered Escherichia coli Producing Poly(3-Hydroxybutyrate). Journal of Bacteriology, 2001, 183, 301-308.	1.0	120
132	Aptamer-functionalized localized surface plasmon resonance sensor for the multiplexed detection of different bacterial species. Talanta, 2015, 132, 112-117.	2.9	120
133	Metabolic engineering of <i>Escherichia coli</i> for the production of fumaric acid. Biotechnology and Bioengineering, 2013, 110, 2025-2034.	1.7	119
134	Metabolic engineering of Yarrowia lipolytica for itaconic acid production. Metabolic Engineering, 2015, 32, 66-73.	3.6	119
135	Highly efficient DSB-free base editing for streptomycetes with CRISPR-BEST. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 20366-20375.	3.3	119
136	Chiral compounds from bacterial polyesters: Sugars to plastics to fine chemicals. , 1999, 65, 363-368.		118
137	Protein Nanopatterns and Biosensors Using Gold Binding Polypeptide as a Fusion Partner. Analytical Chemistry, 2006, 78, 7197-7205.	3.2	117
138	Metabolic engineering of <i>Clostridium acetobutylicum</i> M5 for highly selective butanol production. Biotechnology Journal, 2009, 4, 1432-1440.	1.8	117
139	CRISPy-web: An online resource to design sgRNAs for CRISPR applications. Synthetic and Systems Biotechnology, 2016, 1, 118-121.	1.8	117
140	Metabolic engineering of Escherichia coli for the production of malic acid. Biochemical Engineering Journal, 2008, 40, 312-320.	1.8	115
141	Fermentative production of branched chain amino acids: a focus on metabolic engineering. Applied Microbiology and Biotechnology, 2010, 85, 491-506.	1.7	115
142	Engineering 4-coumaroyl-CoA derived polyketide production in Yarrowia lipolytica through a Î²-oxidation mediated strategy. Metabolic Engineering, 2020, 57, 174-181.	3.6	115
143	Recent Trends in Nanomaterialsâ€Based Colorimetric Detection of Pathogenic Bacteria and Viruses. Small Methods, 2018, 2, 1700351.	4.6	114
144	Poly-(3-hydroxybutyrate) production from whey by high-density cultivation of recombinant Escherichia coli. Applied Microbiology and Biotechnology, 1998, 50, 30-33.	1.7	112

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145	Biosynthesis of polyhydroxyalkanoates containing 2-hydroxybutyrate from unrelated carbon source by metabolically engineered Escherichia coli. Applied Microbiology and Biotechnology, 2012, 93, 273-283.	1.7	112
146	Genomeâ€scale metabolic model of methylotrophic yeast <i>Pichia pastoris</i> and its use for <i>in silico</i> analysis of heterologous protein production. Biotechnology Journal, 2010, 5, 705-715.	1.8	111
147	Production of poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) by high-cell-density cultivation ofAeromonas hydrophila. Biotechnology and Bioengineering, 2000, 67, 240-244.	1.7	110
148	Systems biology as a foundation for genome-scale synthetic biology. Current Opinion in Biotechnology, 2006, 17, 488-492.	3.3	109
149	Synthetic biology and metabolic engineering of actinomycetes for natural product discovery. Biotechnology Advances, 2019, 37, 107366.	6.0	109
150	Biological conversion of wood hydrolysate to succinic acid by Anaerobiospirillum succiniciproducens. Biotechnology Letters, 2003, 25, 111-114.	1.1	108
151	High cell density cultivation of Escherichia coli W using sucrose as a carbon source. Biotechnology Letters, 1993, 15, 971-974.	1.1	107
152	Generalizing a hybrid synthetic promoter approach in Yarrowia lipolytica. Applied Microbiology and Biotechnology, 2013, 97, 3037-3052.	1.7	107
153	Repurposing type III polyketide synthase as a malonyl-CoA biosensor for metabolic engineering in bacteria. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9835-9844.	3.3	107
154	Synthetic Biology Expands the Industrial Potential of Yarrowia lipolytica. Trends in Biotechnology, 2018, 36, 1085-1095.	4.9	107
155	Microbial production of 2,3-butanediol for industrial applications. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 1583-1601.	1.4	107
156	High-Level Production of Poly(3-Hydroxybutyrate-co-3-Hydroxyvalerate) by Fed-Batch Culture of Recombinant Escherichia coli. Applied and Environmental Microbiology, 1999, 65, 4363-4368.	1.4	107
157	Title is missing!. Biotechnology Letters, 2001, 23, 235-240.	1.1	106
158	In vivo continuous evolution of genes and pathways in yeast. Nature Communications, 2016, 7, 13051.	5.8	106
159	Display of Polyhistidine Peptides on the <i>Escherichia coli</i> Cell Surface by Using Outer Membrane Protein C as an Anchoring Motif. Applied and Environmental Microbiology, 1999, 65, 5142-5147.	1.4	106
160	Constraints-based genome-scale metabolic simulation for systems metabolic engineering. Biotechnology Advances, 2009, 27, 979-988.	6.0	105
161	Effects of dissolved CO2 levels on the growth ofMannheimia succiniciproducens and succinic acid production. Biotechnology and Bioengineering, 2007, 98, 1296-1304.	1.7	104
162	Recent advances in production of recombinant spider silk proteins. Current Opinion in Biotechnology, 2012, 23, 957-964.	3.3	104

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163	Metabolic engineering for the production of dicarboxylic acids and diamines. Metabolic Engineering, 2020, 58, 2-16.	3.6	104
164	Metabolic engineering of<i>Escherichia coli</i>for the production of phenol from glucose. Biotechnology Journal, 2014, 9, 621-629.	1.8	103
165	Recombinant <i>Escherichia coli</i> as a biofactory for various single- and multi-element nanomaterials. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5944-5949.	3.3	103
166	Novel gene members in the Pho regulon ofEscherichia coli. FEMS Microbiology Letters, 2006, 264, 104-109.	0.7	100
167	High cell density fed-batch cultivation of Escherichia coli using exponential feeding combined with pH-stat. Bioprocess and Biosystems Engineering, 2004, 26, 147-150.	1.7	99
168	The urgent need for microbiology literacy in society. Environmental Microbiology, 2019, 21, 1513-1528.	1.8	99
169	Frontiers of yeast metabolic engineering: diversifying beyond ethanol and Saccharomyces. Current Opinion in Biotechnology, 2013, 24, 1023-1030.	3.3	98
170	Biosensorâ€Enabled Directed Evolution to Improve Muconic Acid Production in <i>Saccharomyces cerevisiae</i>. Biotechnology Journal, 2017, 12, 1600687.	1.8	98
171	Removal of Endotoxin during Purification of Poly(3-Hydroxybutyrate) from Gram-Negative Bacteria. Applied and Environmental Microbiology, 1999, 65, 2762-2764.	1.4	97
172	Construction and optimization of synthetic pathways in metabolic engineering. Current Opinion in Microbiology, 2010, 13, 363-370.	2.3	97
173	Graphene-based electrochemical biosensor for pathogenic virus detection. Biochip Journal, 2011, 5, 123-128.	2.5	97
174	Enabling tools for high-throughput detection of metabolites: Metabolic engineering and directed evolution applications. Biotechnology Advances, 2017, 35, 950-970.	6.0	97
175	Assimilation of formic acid and CO ₂ by engineered <i>Escherichia coli</i> equipped with reconstructed one-carbon assimilation pathways. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9271-E9279.	3.3	97
176	Covalent Attachment and Hybridization of DNA Oligonucleotides on Patterned Single-Walled Carbon Nanotube Films. Langmuir, 2004, 20, 8886-8891.	1.6	96
177	Metabolic engineering of Corynebacterium glutamicum for enhanced production of 5-aminovaleric acid. Microbial Cell Factories, 2016, 15, 174.	1.9	96
178	Biosynthesis of inorganic nanomaterials using microbial cells and bacteriophages. Nature Reviews Chemistry, 2020, 4, 638-656.	13.8	96
179	Effective purification of succinic acid from fermentation broth produced by Mannheimia succiniciproducens. Process Biochemistry, 2006, 41, 1461-1465.	1.8	95
180	Heterologous production of pentane in the oleaginous yeast Yarrowia lipolytica. Journal of Biotechnology, 2013, 165, 184-194.	1.9	95

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181	Metabolic engineering of Escherichia coli for the production of 3-aminopropionic acid. Metabolic Engineering, 2015, 30, 121-129.	3.6	95
182	Advances in CRISPR-Cas systems for RNA targeting, tracking and editing. Biotechnology Advances, 2019, 37, 708-729.	6.0	95
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