Huimin Zhao

List of Publications by Year
in descending order

214 papers	16,234 citations	15504 65 h-index	19749 117 g-index
225 all docs	225 docs citations	225 times ranked	13891 citing authors

#	Article	IF	Citations
1	Size and Chirality Dependent Elastic Properties of Graphene Nanoribbons under Uniaxial Tension. Nano Letters, 2009, 9, 3012-3015.	9.1	757
2	Molecular evolution by staggered extension process (StEP) in vitro recombination. Nature Biotechnology, 1998, 16, 258-261.	17.5	690
3	DNA assembler, an in vivo genetic method for rapid construction of biochemical pathways. Nucleic Acids Research, 2009, 37, e16-e16.	14.5	568
4	High-Efficiency Multiplex Genome Editing of <i>Streptomyces</i> Species Using an Engineered CRISPR/Cas System. ACS Synthetic Biology, 2015, 4, 723-728.	3.8	473
5	Recent developments in pyridine nucleotide regeneration. Current Opinion in Biotechnology, 2003, 14, 421-426.	6.6	346
6	Temperature and strain-rate dependent fracture strength of graphene. Journal of Applied Physics, 2010, 108, .	2.5	309
7	Homology-Integrated CRISPRâ€“Cas (HI-CRISPR) System for One-Step Multigene Disruption in <i>Saccharomyces cerevisiae</i>. ACS Synthetic Biology, 2015, 4, 585-594.	3.8	308
8	Directed evolution converts subtilisin E into a functional equivalent of thermitase. Protein Engineering, Design and Selection, 1999, 12, 47-53.	2.1	290
9	Combinatorial metabolic engineering using an orthogonal tri-functional CRISPR system. Nature Communications, 2017, 8, 1688.	12.8	244
10	Cooperative asymmetric reactions combining photocatalysis and enzymatic catalysis. Nature, 2018, 560, 355-359.	27.8	230
11	Recent advances in metabolic engineering of Saccharomyces cerevisiae: New tools and their applications. Metabolic Engineering, 2018, 50, 85-108.	7.0	228
12	CRISPRâ€“Cas9 strategy for activation of silent Streptomyces biosynthetic gene clusters. Nature Chemical Biology, 2017, 13, 607-609.	8.0	227
13	Directed Evolution: Methodologies and Applications. Chemical Reviews, 2021, 121, 12384-12444.	47.7	220
14	Improving and repurposing biocatalysts via directed evolution. Current Opinion in Chemical Biology, 2015, 25, 55-64.	6.1	219
15	A Rewritable, Random-Access DNA-Based Storage System. Scientific Reports, 2015, 5, 14138.	3.3	214
16	Engineering microbial factories for synthesis of value-added products. Journal of Industrial Microbiology and Biotechnology, 2011, 38, 873-890.	3.0	210
17	Transcription activatorâ€like effector nucleases (TALENs): A highly efficient and versatile tool for genome editing. Biotechnology and Bioengineering, 2013, 110, 1811-1821.	3.3	210
18	Customized optimization of metabolic pathways by combinatorial transcriptional engineering. Nucleic Acids Research, 2012, 40, e142-e142.	14.5	207

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19	Multistep One-Pot Reactions Combining Biocatalysts and Chemical Catalysts for Asymmetric Synthesis. ACS Catalysis, 2013, 3, 2856-2864.	11.2	207
20	Activation and characterization of a cryptic polycyclic tetramate macrolactam biosynthetic gene cluster. Nature Communications, 2013, 4, 2894.	12.8	206
21	Design and construction of acetyl-CoA overproducing Saccharomyces cerevisiae strains. Metabolic Engineering, 2014, 24, 139-149.	7.0	199
22	Optimization of DNA shuffling for high fidelity recombination. Nucleic Acids Research, 1997, 25, 1307-1308.	14.5	198
23	CRISPR/Cas9 mediated targeted mutagenesis of the fast growing cyanobacterium Synechococcus elongatus UTEX 2973. Microbial Cell Factories, 2016, 15, 115.	4.0	181
24	A highly efficient single-step, markerless strategy for multi-copy chromosomal integration of large biochemical pathways in Saccharomyces cerevisiae. Metabolic Engineering, 2016, 33, 19-27.	7.0	177
25	Random-priming in vitro recombination: An effective tool for directed evolution. Nucleic Acids Research, 1998, 26, 681-683.	14.5	172
26	Promoter-proximal CTCF binding promotes distal enhancer-dependent gene activation. Nature Structural and Molecular Biology, 2021, 28, 152-161.	8.2	172
27	Photoenzymatic enantioselective intermolecular radical hydroalkylation. Nature, 2020, 584, 69-74.	27.8	171
28	Building a global alliance of biofoundries. Nature Communications, 2019, 10, 2040.	12.8	167
29	Cloning and characterization of a panel of constitutive promoters for applications in pathway engineering in <i>Saccharomyces cerevisiae</i>. Biotechnology and Bioengineering, 2012, 109, 2082-2092.	3.3	166
30	Automated multiplex genome-scale engineering in yeast. Nature Communications, 2017, 8, 15187.	12.8	162
31	High Throughput Screening and Selection Methods for Directed Enzyme Evolution. Industrial & Engineering Chemistry Research, 2015, 54, 4011-4020.	3.7	160
32	Biocatalysis for the synthesis of pharmaceuticals and pharmaceutical intermediates. Bioorganic and Medicinal Chemistry, 2018, 26, 1275-1284.	3.0	158
33	DNA-Based Storage: Trends and Methods. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2015, 1, 230-248.	2.1	157
34	Directed evolution of enzymes and pathways for industrial biocatalysis. Current Opinion in Biotechnology, 2002, 13, 104-110.	6.6	152
35	Genome-scale engineering of Saccharomyces cerevisiae with single-nucleotide precision. Nature Biotechnology, 2018, 36, 505-508.	17.5	149
36	Refactoring the Silent Spectinabilin Gene Cluster Using a Plug-and-Play Scaffold. ACS Synthetic Biology, 2013, 2, 662-669.	3.8	146

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37	Directed evolution: Past, present, and future. AIChE Journal, 2013, 59, 1432-1440.	3.6	144
38	Recent advances in DNA assembly technologies. FEMS Yeast Research, 2014, 15, n/a-n/a.	2.3	142
39	Engineering biological systems using automated biofoundries. Metabolic Engineering, 2017, 42, 98-108.	7.0	140
40	Development of a Synthetic Malonyl-CoA Sensor in <i>Saccharomyces cerevisiae</i> for Intracellular Metabolite Monitoring and Genetic Screening. ACS Synthetic Biology, 2015, 4, 1308-1315.	3.8	136
41	Cooperative Tandem Catalysis by an Organometallic Complex and a Metalloenzyme. Angewandte Chemie - International Edition, 2014, 53, 465-469.	13.8	132
42	Biocatalyst development by directed evolution. Bioresource Technology, 2012, 115, 117-125.	9.6	121
43	Optimized TAL effector nucleases (TALENs) for use in treatment of sickle cell disease. Molecular BioSystems, 2012, 8, 1255.	2.9	120
44	Directed Evolution of the Nonribosomal Peptide Synthetase AdmK Generates New Andrimid Derivatives InÂVivo. Chemistry and Biology, 2011, 18, 601-607.	6.0	119
45	Engineering microbial hosts for production of bacterial natural products. Natural Product Reports, 2016, 33, 963-987.	10.3	117
46	Multi-functional genome-wide CRISPR system for high throughput genotypeâ€“phenotype mapping. Nature Communications, 2019, 10, 5794.	12.8	104
47	Replication timing maintains the global epigenetic state in human cells. Science, 2021, 372, 371-378.	12.6	103
48	Tandem Catalytic Conversion of Glucose to 5-Hydroxymethylfurfural with an Immobilized Enzyme and a Solid Acid. ACS Catalysis, 2014, 4, 2165-2168.	11.2	102
49	Breaking the silence: new strategies for discovering novel natural products. Current Opinion in Biotechnology, 2017, 48, 21-27.	6.6	97
50	Directed evolution of specific receptor-ligand pairs for use in the creation of gene switches. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5691-5696.	7.1	96
51	A rapid, accurate, scalable, and portable testing system for COVID-19 diagnosis. Nature Communications, 2021, 12, 2905.	12.8	96
52	Towards a fully automated algorithm driven platform for biosystems design. Nature Communications, 2019, 10, 5150.	12.8	95
53	Programmable DNA-Guided Artificial Restriction Enzymes. ACS Synthetic Biology, 2017, 6, 752-757.	3.8	93
54	Directed evolution as a powerful synthetic biology tool. Methods, 2013, 60, 81-90.	3.8	92

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55	Metabolic engineering of a Saccharomyces cerevisiae strain capable of simultaneously utilizing glucose and galactose to produce enantiopure (2R,3R)-butanediol. Metabolic Engineering, 2014, 23, 92-99.	7.0	91
56	Cloning, Expression, and Biochemical Characterization of Streptomyces rubellomurinus Genes Required for Biosynthesis of Antimalarial Compound FR900098. Chemistry and Biology, 2008, 15, 765-770.	6.0	88
57	Insights into Cell-Free Conversion of CO₂ to Chemicals by a Multienzyme Cascade Reaction. ACS Catalysis, 2018, 8, 11085-11093.	11.2	87
58	Reversal of the Î²-Oxidation Cycle in <i>Saccharomyces cerevisiae</i> for Production of Fuels and Chemicals. ACS Synthetic Biology, 2015, 4, 332-341.	3.8	82
59	Rapid characterization and engineering of natural product biosynthetic pathways via DNA assembler. Molecular BioSystems, 2011, 7, 1056.	2.9	79
60	Activation of silent biosynthetic gene clusters using transcription factor decoys. Nature Chemical Biology, 2019, 15, 111-114.	8.0	77
61	Combinatorial Design of a Highly Efficient Xylose-Utilizing Pathway in Saccharomyces cerevisiae for the Production of Cellulosic Biofuels. Applied and Environmental Microbiology, 2013, 79, 931-941.	3.1	76
62	Biosystems Design by Machine Learning. ACS Synthetic Biology, 2020, 9, 1514-1533.	3.8	76
63	Exploiting Issatchenkia orientalis SD108 for succinic acid production. Microbial Cell Factories, 2014, 13, 121.	4.0	74
64	Using natural products for drug discovery: the impact of the genomics era. Expert Opinion on Drug Discovery, 2017, 12, 475-487.	5.0	74
65	Photobiocatalysis for Abiological Transformations. Accounts of Chemical Research, 2022, 55, 1087-1096.	15.6	73
66	RNAi-Assisted Genome Evolution in Saccharomyces cerevisiae for Complex Phenotype Engineering. ACS Synthetic Biology, 2015, 4, 283-291.	3.8	71
67	DNA punch cards for storing data on native DNA sequences via enzymatic nicking. Nature Communications, 2020, 11, 1742.	12.8	70
68	TALEN outperforms Cas9 in editing heterochromatin target sites. Nature Communications, 2021, 12, 606.	12.8	69
69	ECNet is an evolutionary context-integrated deep learning framework for protein engineering. Nature Communications, 2021, 12, 5743.	12.8	66
70	Functional and nonfunctional mutations distinguished by random recombination of homologous genes. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 7997-8000.	7.1	65
71	Direct observation of TALE protein dynamics reveals a two-state search mechanism. Nature Communications, 2015, 6, 7277.	12.8	63
72	Design and engineering of intracellularâ€metaboliteâ€sensing/regulation gene circuits in <i>Saccharomyces cerevisiae</i>. Biotechnology and Bioengineering, 2016, 113, 206-215.	3.3	63

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73	Integrating biocatalysis with chemocatalysis for selective transformations. Current Opinion in Chemical Biology, 2020, 55, 161-170.	6.1	62
74	Development of a One-Pot Tandem Reaction Combining Ruthenium-Catalyzed Alkene Metathesis and Enantioselective Enzymatic Oxidation To Produce Aryl Epoxides. ACS Catalysis, 2015, 5, 3817-3822.	11.2	61
75	Construction of plasmids with tunable copy numbers in <i>Saccharomyces cerevisiae</i> and their applications in pathway optimization and multiplex genome integration. Biotechnology and Bioengineering, 2016, 113, 2462-2473.	3.3	61
76	Profiling of Microbial Colonies for High-Throughput Engineering of Multistep Enzymatic Reactions via Optically Guided Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry. Journal of the American Chemical Society, 2017, 139, 12466-12473.	13.7	57
77	In vivo biosensors: mechanisms, development, and applications. Journal of Industrial Microbiology and Biotechnology, 2018, 45, 491-516.	3.0	57
78	Synthetic biology advances and applications in the biotechnology industry: a perspective. Journal of Industrial Microbiology and Biotechnology, 2018, 45, 449-461.	3.0	57
79	A comprehensive genome-scale model for Rhodosporidium toruloides IFO0880 accounting for functional genomics and phenotypic data. Metabolic Engineering Communications, 2019, 9, e00101.	3.6	55
80	A widespread pathway for substitution of adenine by diaminopurine in phage genomes. Science, 2021, 372, 512-516.	12.6	55
81	Directed evolution of a cellobiose utilization pathway in Saccharomyces cerevisiae by simultaneously engineering multiple proteins. Microbial Cell Factories, 2013, 12, 61.	4.0	54
82	Rapid Creation of a Novel Protein Function by in Vitro Coevolution. Journal of Molecular Biology, 2005, 348, 1273-1282.	4.2	52
83	Recent advances in combinatorial biosynthesis for drug discovery. Drug Design, Development and Therapy, 2015, 9, 823.	4.3	52
84	Engineered CRISPR/Cas9 system for multiplex genome engineering of polyploid industrial yeast strains. Biotechnology and Bioengineering, 2018, 115, 1630-1635.	3.3	52
85	DNA assembly techniques for next-generation combinatorial biosynthesis of natural products. Journal of Industrial Microbiology and Biotechnology, 2014, 41, 469-477.	3.0	51
86	Modular assembly of designer PUF proteins for specific post-transcriptional regulation of endogenous RNA. Journal of Biological Engineering, 2014, 8, 7.	4.7	51
87	Tandem Reactions Combining Biocatalysts and Chemical Catalysts for Asymmetric Synthesis. Catalysts, 2016, 6, 194.	3.5	51
88	Investigating xylose metabolism in recombinant Saccharomyces cerevisiae via 13C metabolic flux analysis. Microbial Cell Factories, 2013, 12, 114.	4.0	50
89	Metabolic engineering of a synergistic pathway for n-butanol production in Saccharomyces cerevisiae. Scientific Reports, 2016, 6, 25675.	3.3	50
90	Photoinduced chemomimetic biocatalysis for enantioselective intermolecular radical conjugate addition. Nature Catalysis, 2022, 5, 586-593.	34.4	50

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91	Evolution in Reverse: Engineering a <scp>D</scp>â€Xyloseâ€Specific Xylose Reductase. ChemBioChem, 2008, 9, 1213-1215.	2.6	49
92	Production of Adipic Acid from Sugar Beet Residue by Combined Biological and Chemical Catalysis. ChemCatChem, 2016, 8, 1500-1506.	3.7	49
93	Recent advances in targeted genome engineering in mammalian systems. Biotechnology Journal, 2012, 7, 1074-1087.	3.5	46
94	TALE proteins search DNA using a rotationally decoupled mechanism. Nature Chemical Biology, 2016, 12, 831-837.	8.0	46
95	Fully Automated One-Step Synthesis of Single-Transcript TALEN Pairs Using a Biological Foundry. ACS Synthetic Biology, 2017, 6, 678-685.	3.8	46
96	Radical-mediated C-S bond cleavage in C2 sulfonate degradation by anaerobic bacteria. Nature Communications, 2019, 10, 1609.	12.8	46
97	CRISPR/Cas9-mediated knock-in of an optimized TetO repeat for live cell imaging of endogenous loci. Nucleic Acids Research, 2018, 46, e100-e100.	14.5	45
98	Computational Tools for Discovering and Engineering Natural Product Biosynthetic Pathways. IScience, 2020, 23, 100795.	4.1	44
99	An efficient gene knock-in strategy using 5â€²-modified double-stranded DNA donors with short homology arms. Nature Chemical Biology, 2020, 16, 387-390.	8.0	43
100	Cas12a-assisted precise targeted cloning using in vivo Cre-lox recombination. Nature Communications, 2021, 12, 1171.	12.8	43
101	Advancing Metabolic Engineering of <i>Saccharomyces cerevisiae</i> Using the CRISPR/Cas System. Biotechnology Journal, 2018, 13, e1700601.	3.5	41
102	Auroramycin: A Potent Antibiotic from <i>Streptomyces roseosporus</i> by CRISPRâ€Cas9 Activation. ChemBioChem, 2018, 19, 1716-1719.	2.6	41
103	Directed evolution of a highly efficient cellobiose utilizing pathway in an industrial <i>Saccharomyces cerevisiae</i> strain. Biotechnology and Bioengineering, 2013, 110, 2874-2881.	3.3	40
104	Directed evolution of a cellodextrin transporter for improved biofuel production under anaerobic conditions in <i>Saccharomyces cerevisiae</i>. Biotechnology and Bioengineering, 2014, 111, 1521-1531.	3.3	40
105	A New Era of Genome Integrationâ€”Simply Cut and Paste!. ACS Synthetic Biology, 2017, 6, 601-609.	3.8	40
106	Twin-primer non-enzymatic DNA assembly: an efficient and accurate multi-part DNA assembly method. Nucleic Acids Research, 2017, 45, e94-e94.	14.5	40
107	Development of a CRISPR/Cas9 system for high efficiency multiplexed gene deletion in <i>Rhodosporidium toruloides</i>. Biotechnology and Bioengineering, 2019, 116, 2103-2109.	3.3	40
108	FairyTALE: A High-Throughput TAL Effector Synthesis Platform. ACS Synthetic Biology, 2014, 3, 67-73.	3.8	39

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109	Recent advances in biosynthesis of fatty acids derived products in <i>Saccharomyces cerevisiae</i> via enhanced supply of precursor metabolites. Journal of Industrial Microbiology and Biotechnology, 2015, 42, 437-451.	3.0	39
110	Rapid prototyping of microbial cell factories via genome-scale engineering. Biotechnology Advances, 2015, 33, 1420-1432.	11.7	39
111	Directed Evolution of a Fluorinase for Improved Fluorination Efficiency with a Nonâ€native Substrate. Angewandte Chemie - International Edition, 2016, 55, 14277-14280.	13.8	38
112	A brief overview of synthetic biology research programs and roadmap studies in the United States. Synthetic and Systems Biotechnology, 2016, 1, 258-264.	3.7	38
113	Orthogonal Genetic Regulation in Human Cells Using Chemically Induced CRISPR/Cas9 Activators. ACS Synthetic Biology, 2017, 6, 686-693.	3.8	37
114	Expanding the boundary of biocatalysis: design and optimization of <i>in vitro</i> tandem catalytic reactions for biochemical production. Critical Reviews in Biochemistry and Molecular Biology, 2018, 53, 115-129.	5.2	37
115	Genome-wide identification of natural RNA aptamers in prokaryotes and eukaryotes. Nature Communications, 2018, 9, 1289.	12.8	37
116	Indoleacetate decarboxylase is a glycyl radical enzyme catalysing the formation of malodorant skatole. Nature Communications, 2018, 9, 4224.	12.8	37
117	Characterization of <i>Bacillus subtilis</i> Colony Biofilms via Mass Spectrometry and Fluorescence Imaging. Journal of Proteome Research, 2016, 15, 1955-1962.	3.7	36
118	A plugâ€andâ€play pathway refactoring workflow for natural product research in <i>Escherichia coli</i> and <i>Saccharomyces cerevisiae</i>. Biotechnology and Bioengineering, 2017, 114, 1847-1854.	3.3	36
119	Discovery and engineering of a 1-butanol biosensor in Saccharomyces cerevisiae. Bioresource Technology, 2017, 245, 1343-1351.	9.6	36
120	Emerging molecular biology tools and strategies for engineering natural product biosynthesis. Metabolic Engineering Communications, 2020, 10, e00108.	3.6	36
121	Deciphering the Late Biosynthetic Steps of Antimalarial Compound FR-900098. Chemistry and Biology, 2010, 17, 57-64.	6.0	35
122	Orthogonal Fatty Acid Biosynthetic Pathway Improves Fatty Acid Ethyl Ester Production in <i>Saccharomyces cerevisiae</i>. ACS Synthetic Biology, 2015, 4, 808-814.	3.8	35
123	Rapid Discovery of Glycocins through Pathway Refactoring in <i>Escherichia coli</i>. ACS Chemical Biology, 2018, 13, 2966-2972.	3.4	35
124	Development of a CRISPR/Cas9-Based Tool for Gene Deletion in <i>Issatchenkia orientalis</i>. MSphere, 2019, 4, .	2.9	35
125	Fine-tuning the regulation of Cas9 expression levels for efficient CRISPR-Cas9 mediated recombination in <i>Streptomyces</i>. Journal of Industrial Microbiology and Biotechnology, 2020, 47, 413-423.	3.0	34
126	Unraveling the iterative type I polyketide synthases hidden in <i>Streptomyces</i>. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8449-8454.	7.1	34

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127	Nano-Apples and Orange-Zymes. ACS Catalysis, 2020, 10, 14315-14317.	11.2	33
128	Sustainable Production of Acrylic Acid via 3-Hydroxypropionic Acid from Lignocellulosic Biomass. ACS Sustainable Chemistry and Engineering, 2021, 9, 16659-16669.	6.7	33
129	Genome-wide RNAi screen reveals the E3 SUMO-protein ligase gene SIZ1 as a novel determinant of furfural tolerance in Saccharomyces cerevisiae. Biotechnology for Biofuels, 2014, 7, 78.	6.2	32
130	Combining Rh-Catalyzed Diazocoupling and Enzymatic Reduction To Efficiently Synthesize Enantioenriched 2-Substituted Succinate Derivatives. ACS Catalysis, 2017, 7, 2548-2552.	11.2	32
131	Recent advances in domesticating nonâ€model microorganisms. Biotechnology Progress, 2020, 36, e3008.	2.6	32
132	DNA Assembler. Methods in Enzymology, 2012, 517, 203-224.	1.0	30
133	Quantifying the effects of pollen nutrition on honey bee queen egg laying with a new laboratory system. PLoS ONE, 2018, 13, e0203444.	2.5	30
134	A genetic toolbox for metabolic engineering of Issatchenkia orientalis. Metabolic Engineering, 2020, 59, 87-97.	7.0	30
135	Directed Evolution of Mesophilic Enzymes into Their Thermophilic Counterparts. Annals of the New York Academy of Sciences, 1999, 870, 400-403.	3.8	29
136	Direct cloning of large genomic sequences. Nature Biotechnology, 2012, 30, 405-406.	17.5	29
137	Highly Efficient Single-Pot Scarless Golden Gate Assembly. ACS Synthetic Biology, 2019, 8, 1047-1054.	3.8	29
138	Two radical-dependent mechanisms for anaerobic degradation of the globally abundant organosulfur compound dihydroxypropanesulfonate. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15599-15608.	7.1	29
139	A New Biosensor for Stilbenes and a Cannabinoid Enabled by Genome Mining of a Transcriptional Regulator. ACS Synthetic Biology, 2020, 9, 698-705.	3.8	28
140	Characterization of Cas proteins for CRISPRâ€Cas editing in streptomycetes. Biotechnology and Bioengineering, 2019, 116, 2330-2338.	3.3	27
141	A Continuing Career in Biocatalysis: Frances H. Arnold. ACS Catalysis, 2019, 9, 9775-9788.	11.2	26
142	Discovery and Characterization of a Class IV Lanthipeptide with a Nonoverlapping Ring Pattern. ACS Chemical Biology, 2020, 15, 1642-1649.	3.4	26
143	PlasmidMaker is a versatile, automated, and high throughput end-to-end platform for plasmid construction. Nature Communications, 2022, 13, 2697.	12.8	26
144	Rapid Screening of Lanthipeptide Analogs via In-Colony Removal of Leader Peptides in <i>Escherichia coli</i>. Journal of the American Chemical Society, 2018, 140, 11884-11888.	13.7	25

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145	Unlocking natureâ€™s biosynthetic potential by directed genome evolution. Current Opinion in Biotechnology, 2020, 66, 95-104.	6.6	25
146	Engineering oleaginous yeast Rhodotorula toruloides for overproduction of fatty acid ethyl esters. Biotechnology for Biofuels, 2021, 14, 115.	6.2	25
147	High-Efficiency Genome Editing of Streptomyces Species by an Engineered CRISPR/Cas System. Methods in Enzymology, 2016, 575, 271-284.	1.0	24
148	Identification of an important motif that controls the activity and specificity of sugar transporters. Biotechnology and Bioengineering, 2016, 113, 1460-1467.	3.3	23
149	Biosystems design by directed evolution. AIChE Journal, 2020, 66, e16716.	3.6	23
150	SunnyTALEN: A secondâ€generation TALEN system for human genome editing. Biotechnology and Bioengineering, 2014, 111, 683-691.	3.3	22
151	A mass spectrometryâ€based highâ€throughput screening method for engineering fatty acid synthases with improved production of mediumâ€chain fatty acids. Biotechnology and Bioengineering, 2020, 117, 2131-2138.	3.3	22
152	Discovery of a Phosphonoacetic Acid Derived Natural Product by Pathway Refactoring. ACS Synthetic Biology, 2017, 6, 217-223.	3.8	21
153	Mechanistically Diverse Pathways for Sulfoquinovose Degradation in Bacteria. ACS Catalysis, 2021, 11, 14740-14750.	11.2	21
154	Building biological foundries for next-generation synthetic biology. Science China Life Sciences, 2015, 58, 658-665.	4.9	20
155	Combinatorial pathway engineering for optimized production of the antiâ€malarial FR900098. Biotechnology and Bioengineering, 2016, 113, 384-392.	3.3	20
156	Genome-scale metabolic reconstruction of the non-model yeast Issatchenkia orientalis SD108 and its application to organic acids production. Metabolic Engineering Communications, 2020, 11, e00148.	3.6	20
157	Metabolic engineering of oleaginous yeastÂ<i>Rhodotorula toruloides</i> for overproduction of triacetic acid lactone. Biotechnology and Bioengineering, 2022, 119, 2529-2540.	3.3	20
158	Regulatory RNA-assisted genome engineering in microorganisms. Current Opinion in Biotechnology, 2015, 36, 85-90.	6.6	19
159	Functional Reconstitution of a Pyruvate Dehydrogenase in the Cytosol of <i>Saccharomyces cerevisiae</i> through Lipoylation Machinery Engineering. ACS Synthetic Biology, 2016, 5, 689-697.	3.8	19
160	A Scalable Epitope Tagging Approach for High Throughput ChIP-Seq Analysis. ACS Synthetic Biology, 2017, 6, 1034-1042.	3.8	19
161	Targeting Specificity of the CRISPR/Cas9 System. ACS Synthetic Biology, 2017, 6, 1609-1613.	3.8	19
162	A transaldolase-dependent sulfoglycolysis pathway in Bacillus megaterium DSM 1804. Biochemical and Biophysical Research Communications, 2020, 533, 1109-1114.	2.1	19

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163	Probing the molecular determinants of fluorinase specificity. Chemical Communications, 2017, 53, 2559-2562.	4.1	18
164	Flexible and Versatile Strategy for the Construction of Large Biochemical Pathways. ACS Synthetic Biology, 2016, 5, 46-52.	3.8	17
165	RNAi assisted genome evolution unveils yeast mutants with improved xylose utilization. Biotechnology and Bioengineering, 2018, 115, 1552-1560.	3.3	17
166	Identification of novel metabolic engineering targets for S-adenosyl-L-methionine production in Saccharomyces cerevisiae via genome-scale engineering. Metabolic Engineering, 2021, 66, 319-327.	7.0	17
167	Accelerated genome engineering through multiplexing. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2016, 8, 5-21.	6.6	16
168	Outrunning Nature: Directed Evolution of Superior Biocatalysts. Journal of Chemical Education, 2004, 81, 126.	2.3	15
169	Metabolic engineering of Rhodotorula toruloides IFO0880 improves C16 and C18 fatty alcohol production from synthetic media. Microbial Cell Factories, 2022, 21, 26.	4.0	15
170	An extended bacterial reductive pyrimidine degradation pathway that enables nitrogen release from Î²-alanine. Journal of Biological Chemistry, 2019, 294, 15662-15671.	3.4	14
171	Size and surface orientation effects on thermal expansion coefficient of one-dimensional silicon nanostructures. Journal of Applied Physics, 2009, 105, 104309.	2.5	13
172	Directed Evolution of a Fluorinase for Improved Fluorination Efficiency with a Nonâ€native Substrate. Angewandte Chemie, 2016, 128, 14489-14492.	2.0	13
173	A coupled chlorinaseâ€“fluorinase system with a high efficiency of<i>trans</i>-halogenation and a shared substrate tolerance. Chemical Communications, 2018, 54, 9458-9461.	4.1	13
174	Stereoconvergent Reduction of Activated Alkenes by a Nicotinamide Free Synergistic Photobiocatalytic System. ACS Catalysis, 2020, 10, 9431-9437.	11.2	13
175	A Pathway for Degradation of Uracil to Acetyl Coenzyme A in Bacillus megaterium. Applied and Environmental Microbiology, 2020, 86, .	3.1	12
176	A pH-Indicator-Based Screen for Hydrolytic Haloalkane Dehalogenase. , 2003, 230, 213-222.		11
177	Inducible Control of mRNA Transport Using Reprogrammable RNA-Binding Proteins. ACS Synthetic Biology, 2017, 6, 950-956.	3.8	11
178	Biochemical and structural investigation of sulfoacetaldehyde reductase from Klebsiella oxytoca. Biochemical Journal, 2019, 476, 733-746.	3.7	11
179	Expanding the Potential of Mammalian Genome Engineering <i>via</i> Targeted DNA Integration. ACS Synthetic Biology, 2021, 10, 429-446.	3.8	11
180	High-throughput Screening Methods Developed for Oxidoreductases. , 2006, , 77-93.		10

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181	Customized Optimization of Metabolic Pathways by Combinatorial Transcriptional Engineering. Methods in Molecular Biology, 2013, 985, 177-209.	0.9	10
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