

# Huimin Zhao

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

205 papers	11,599 citations	56 h-index	101 g-index
225 ext. papers	14,025 ext. citations	9.5 avg, IF	7.04 L-index

#	Paper	IF	Citations
205	Size and chirality dependent elastic properties of graphene nanoribbons under uniaxial tension. <i>Nano Letters</i> , <b>2009</b> , 9, 3012-5	11.5	653
204	Molecular evolution by staggered extension process (StEP) in vitro recombination. <i>Nature Biotechnology</i> , <b>1998</b> , 16, 258-61	44.5	605
203	DNA assembler, an in vivo genetic method for rapid construction of biochemical pathways. <i>Nucleic Acids Research</i> , <b>2009</b> , 37, e16	20.1	489
202	High-efficiency multiplex genome editing of <i>Streptomyces</i> species using an engineered CRISPR/Cas system. <i>ACS Synthetic Biology</i> , <b>2015</b> , 4, 723-8	5.7	355
201	Recent developments in pyridine nucleotide regeneration. <i>Current Opinion in Biotechnology</i> , <b>2003</b> , 14, 421-6	11.4	327
200	Temperature and strain-rate dependent fracture strength of graphene. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 064321	2.5	258
199	Directed evolution converts subtilisin E into a functional equivalent of thermitase. <i>Protein Engineering, Design and Selection</i> , <b>1999</b> , 12, 47-53	1.9	241
198	Homology-integrated CRISPR-Cas (HI-CRISPR) system for one-step multigene disruption in <i>Saccharomyces cerevisiae</i> . <i>ACS Synthetic Biology</i> , <b>2015</b> , 4, 585-94	5.7	231
197	Improving and repurposing biocatalysts via directed evolution. <i>Current Opinion in Chemical Biology</i> , <b>2015</b> , 25, 55-64	9.7	199
196	Customized optimization of metabolic pathways by combinatorial transcriptional engineering. <i>Nucleic Acids Research</i> , <b>2012</b> , 40, e142	20.1	193
195	Multistep One-Pot Reactions Combining Biocatalysts and Chemical Catalysts for Asymmetric Synthesis. <i>ACS Catalysis</i> , <b>2013</b> , 3, 2856-2864	13.1	177
194	Engineering microbial factories for synthesis of value-added products. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2011</b> , 38, 873-90	4.2	169
193	Transcription activator-like effector nucleases (TALENs): a highly efficient and versatile tool for genome editing. <i>Biotechnology and Bioengineering</i> , <b>2013</b> , 110, 1811-21	4.9	167
192	Optimization of DNA shuffling for high fidelity recombination. <i>Nucleic Acids Research</i> , <b>1997</b> , 25, 1307-8	20.1	167
191	Activation and characterization of a cryptic polycyclic tetramate macrolactam biosynthetic gene cluster. <i>Nature Communications</i> , <b>2013</b> , 4, 2894	17.4	165
190	CRISPR-Cas9 strategy for activation of silent <i>Streptomyces</i> biosynthetic gene clusters. <i>Nature Chemical Biology</i> , <b>2017</b> ,	11.7	164
189	Combinatorial metabolic engineering using an orthogonal tri-functional CRISPR system. <i>Nature Communications</i> , <b>2017</b> , 8, 1688	17.4	164

188	Design and construction of acetyl-CoA overproducing <i>Saccharomyces cerevisiae</i> strains. <i>Metabolic Engineering</i> , <b>2014</b> , 24, 139-49	9.7	154
187	Random-priming in vitro recombination: an effective tool for directed evolution. <i>Nucleic Acids Research</i> , <b>1998</b> , 26, 681-3	20.1	149
186	Recent advances in metabolic engineering of <i>Saccharomyces cerevisiae</i> : New tools and their applications. <i>Metabolic Engineering</i> , <b>2018</b> , 50, 85-108	9.7	147
185	Cooperative asymmetric reactions combining photocatalysis and enzymatic catalysis. <i>Nature</i> , <b>2018</b> , 560, 355-359	50.4	140
184	Cloning and characterization of a panel of constitutive promoters for applications in pathway engineering in <i>Saccharomyces cerevisiae</i> . <i>Biotechnology and Bioengineering</i> , <b>2012</b> , 109, 2082-92	4.9	140
183	Directed evolution of enzymes and pathways for industrial biocatalysis. <i>Current Opinion in Biotechnology</i> , <b>2002</b> , 13, 104-10	11.4	140
182	CRISPR/Cas9 mediated targeted mutagenesis of the fast growing cyanobacterium <i>Synechococcus elongatus</i> UTEX 2973. <i>Microbial Cell Factories</i> , <b>2016</b> , 15, 115	6.4	136
181	A highly efficient single-step, markerless strategy for multi-copy chromosomal integration of large biochemical pathways in <i>Saccharomyces cerevisiae</i> . <i>Metabolic Engineering</i> , <b>2016</b> , 33, 19-27	9.7	134
180	A Rewritable, Random-Access DNA-Based Storage System. <i>Scientific Reports</i> , <b>2015</b> , 5, 14138	4.9	123
179	Refactoring the silent spectinabilin gene cluster using a plug-and-play scaffold. <i>ACS Synthetic Biology</i> , <b>2013</b> , 2, 662-9	5.7	120
178	Biocatalysis for the synthesis of pharmaceuticals and pharmaceutical intermediates. <i>Bioorganic and Medicinal Chemistry</i> , <b>2018</b> , 26, 1275-1284	3.4	115
177	Cooperative tandem catalysis by an organometallic complex and a metalloenzyme. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 465-9	16.4	115
176	Automated multiplex genome-scale engineering in yeast. <i>Nature Communications</i> , <b>2017</b> , 8, 15187	17.4	114
175	Optimized TAL effector nucleases (TALENs) for use in treatment of sickle cell disease. <i>Molecular BioSystems</i> , <b>2012</b> , 8, 1255-63		112
174	High Throughput Screening and Selection Methods for Directed Enzyme Evolution. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2015</b> , 54, 4011-4020	3.9	109
173	Development of a Synthetic Malonyl-CoA Sensor in <i>Saccharomyces cerevisiae</i> for Intracellular Metabolite Monitoring and Genetic Screening. <i>ACS Synthetic Biology</i> , <b>2015</b> , 4, 1308-15	5.7	106
172	Biocatalyst development by directed evolution. <i>Bioresource Technology</i> , <b>2012</b> , 115, 117-25	11	102
171	Engineering biological systems using automated biofoundries. <i>Metabolic Engineering</i> , <b>2017</b> , 42, 98-108	9.7	97

170	Genome-scale engineering of <i>Saccharomyces cerevisiae</i> with single-nucleotide precision. <i>Nature Biotechnology</i> , <b>2018</b> , 36, 505-508	44.5	97
169	Engineering microbial hosts for production of bacterial natural products. <i>Natural Product Reports</i> , <b>2016</b> , 33, 963-87	15.1	95
168	DNA-Based Storage: Trends and Methods. <i>IEEE Transactions on Molecular, Biological, and Multi-Scale Communications</i> , <b>2015</b> , 1, 230-248	2.3	93
167	Directed Evolution: Past, Present and Future. <i>AIChE Journal</i> , <b>2013</b> , 59, 1432-1440	3.6	93
166	Building a global alliance of biofoundries. <i>Nature Communications</i> , <b>2019</b> , 10, 2040	17.4	91
165	Directed evolution of the nonribosomal peptide synthetase AdmK generates new andrimid derivatives in vivo. <i>Chemistry and Biology</i> , <b>2011</b> , 18, 601-7		91
164	Recent advances in DNA assembly technologies. <i>FEMS Yeast Research</i> , <b>2015</b> , 15, 1-9	3.1	85
163	Directed evolution as a powerful synthetic biology tool. <i>Methods</i> , <b>2013</b> , 60, 81-90	4.6	85
162	Tandem Catalytic Conversion of Glucose to 5-Hydroxymethylfurfural with an Immobilized Enzyme and a Solid Acid. <i>ACS Catalysis</i> , <b>2014</b> , 4, 2165-2168	13.1	84
161	Directed evolution of specific receptor-ligand pairs for use in the creation of gene switches. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2005</b> , 102, 5691-6	11.5	82
160	Breaking the silence: new strategies for discovering novel natural products. <i>Current Opinion in Biotechnology</i> , <b>2017</b> , 48, 21-27	11.4	76
159	Metabolic engineering of a <i>Saccharomyces cerevisiae</i> strain capable of simultaneously utilizing glucose and galactose to produce enantiopure (2R,3R)-butanediol. <i>Metabolic Engineering</i> , <b>2014</b> , 23, 92-99	9.7	76
158	Rapid characterization and engineering of natural product biosynthetic pathways via DNA assembler. <i>Molecular BioSystems</i> , <b>2011</b> , 7, 1056-9		76
157	Photoenzymatic enantioselective intermolecular radical hydroalkylation. <i>Nature</i> , <b>2020</b> , 584, 69-74	50.4	72
156	Combinatorial design of a highly efficient xylose-utilizing pathway in <i>Saccharomyces cerevisiae</i> for the production of cellulosic biofuels. <i>Applied and Environmental Microbiology</i> , <b>2013</b> , 79, 931-41	4.8	70
155	Cloning, expression, and biochemical characterization of <i>Streptomyces rubellomurinus</i> genes required for biosynthesis of antimalarial compound FR900098. <i>Chemistry and Biology</i> , <b>2008</b> , 15, 765-70		70
154	Reversal of the TCA cycle in <i>Saccharomyces cerevisiae</i> for production of fuels and chemicals. <i>ACS Synthetic Biology</i> , <b>2015</b> , 4, 332-41	5.7	64
153	RNAi-assisted genome evolution in <i>Saccharomyces cerevisiae</i> for complex phenotype engineering. <i>ACS Synthetic Biology</i> , <b>2015</b> , 4, 283-91	5.7	63

152	Using natural products for drug discovery: the impact of the genomics era. <i>Expert Opinion on Drug Discovery</i> , <b>2017</b> , 12, 475-487	6.2	58
151	Multi-functional genome-wide CRISPR system for high throughput genotype-phenotype mapping. <i>Nature Communications</i> , <b>2019</b> , 10, 5794	17.4	57
150	Direct observation of TALE protein dynamics reveals a two-state search mechanism. <i>Nature Communications</i> , <b>2015</b> , 6, 7277	17.4	56
149	Functional and nonfunctional mutations distinguished by random recombination of homologous genes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1997</b> , 94, 7997-8000	11.5	56
148	Development of a One-Pot Tandem Reaction Combining Ruthenium-Catalyzed Alkene Metathesis and Enantioselective Enzymatic Oxidation To Produce Aryl Epoxides. <i>ACS Catalysis</i> , <b>2015</b> , 5, 3817-3822	13.1	54
147	Insights into Cell-Free Conversion of CO <sub>2</sub> to Chemicals by a Multienzyme Cascade Reaction. <i>ACS Catalysis</i> , <b>2018</b> , 8, 11085-11093	13.1	54
146	Design and engineering of intracellular-metabolite-sensing/regulation gene circuits in <i>Saccharomyces cerevisiae</i> . <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 206-15	4.9	52
145	Activation of silent biosynthetic gene clusters using transcription factor decoys. <i>Nature Chemical Biology</i> , <b>2019</b> , 15, 111-114	11.7	51
144	Programmable DNA-Guided Artificial Restriction Enzymes. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 752-757	5.7	50
143	DNA assembly techniques for next-generation combinatorial biosynthesis of natural products. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2014</b> , 41, 469-77	4.2	47
142	Exploiting <i>Issatchenkia orientalis</i> SD108 for succinic acid production. <i>Microbial Cell Factories</i> , <b>2014</b> , 13, 121	6.4	46
141	Evolution in reverse: engineering a D-xylose-specific xylose reductase. <i>ChemBioChem</i> , <b>2008</b> , 9, 1213-5	3.8	46
140	Towards a fully automated algorithm driven platform for biosystems design. <i>Nature Communications</i> , <b>2019</b> , 10, 5150	17.4	45
139	Directed evolution of a cellobiose utilization pathway in <i>Saccharomyces cerevisiae</i> by simultaneously engineering multiple proteins. <i>Microbial Cell Factories</i> , <b>2013</b> , 12, 61	6.4	45
138	Integrating biocatalysis with chemocatalysis for selective transformations. <i>Current Opinion in Chemical Biology</i> , <b>2020</b> , 55, 161-170	9.7	44
137	Promoter-proximal CTCF binding promotes distal enhancer-dependent gene activation. <i>Nature Structural and Molecular Biology</i> , <b>2021</b> , 28, 152-161	17.6	43
136	In vivo biosensors: mechanisms, development, and applications. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2018</b> , 45, 491-516	4.2	41
135	Investigating xylose metabolism in recombinant <i>Saccharomyces cerevisiae</i> via <sup>13</sup> C metabolic flux analysis. <i>Microbial Cell Factories</i> , <b>2013</b> , 12, 114	6.4	41

134	Recent advances in targeted genome engineering in mammalian systems. <i>Biotechnology Journal</i> , <b>2012</b> , 7, 1074-87	5.6	41
133	Rapid creation of a novel protein function by in vitro coevolution. <i>Journal of Molecular Biology</i> , <b>2005</b> , 348, 1273-82	6.5	41
132	Recent advances in combinatorial biosynthesis for drug discovery. <i>Drug Design, Development and Therapy</i> , <b>2015</b> , 9, 823-33	4.4	40
131	Modular assembly of designer PUF proteins for specific post-transcriptional regulation of endogenous RNA. <i>Journal of Biological Engineering</i> , <b>2014</b> , 8, 7	6.3	40
130	Construction of plasmids with tunable copy numbers in <i>Saccharomyces cerevisiae</i> and their applications in pathway optimization and multiplex genome integration. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 2462-73	4.9	40
129	Metabolic engineering of a synergistic pathway for n-butanol production in <i>Saccharomyces cerevisiae</i> . <i>Scientific Reports</i> , <b>2016</b> , 6, 25675	4.9	38
128	Production of Adipic Acid from Sugar Beet Residue by Combined Biological and Chemical Catalysis. <i>ChemCatChem</i> , <b>2016</b> , 8, 1500-1506	5.2	38
127	Synthetic biology advances and applications in the biotechnology industry: a perspective. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2018</b> , 45, 449-461	4.2	38
126	Cooperative Tandem Catalysis by an Organometallic Complex and a Metalloenzyme. <i>Angewandte Chemie</i> , <b>2014</b> , 126, 475-479	3.6	38
125	TALE proteins search DNA using a rotationally decoupled mechanism. <i>Nature Chemical Biology</i> , <b>2016</b> , 12, 831-7	11.7	37
124	Directed Evolution: Methodologies and Applications. <i>Chemical Reviews</i> , <b>2021</b> , 121, 12384-12444	68.1	37
123	Profiling of Microbial Colonies for High-Throughput Engineering of Multistep Enzymatic Reactions via Optically Guided Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 12466-12473	16.4	35
122	Advancing Metabolic Engineering of <i>Saccharomyces cerevisiae</i> Using the CRISPR/Cas System. <i>Biotechnology Journal</i> , <b>2018</b> , 13, e1700601	5.6	34
121	Tandem Reactions Combining Biocatalysts and Chemical Catalysts for Asymmetric Synthesis. <i>Catalysts</i> , <b>2016</b> , 6, 194	4	34
120	Twin-primer non-enzymatic DNA assembly: an efficient and accurate multi-part DNA assembly method. <i>Nucleic Acids Research</i> , <b>2017</b> , 45, e94	20.1	33
119	FairyTALE: a high-throughput TAL effector synthesis platform. <i>ACS Synthetic Biology</i> , <b>2014</b> , 3, 67-73	5.7	33
118	DNA punch cards for storing data on native DNA sequences via enzymatic nicking. <i>Nature Communications</i> , <b>2020</b> , 11, 1742	17.4	32
117	Engineered CRISPR/Cas9 system for multiplex genome engineering of polyploid industrial yeast strains. <i>Biotechnology and Bioengineering</i> , <b>2018</b> , 115, 1630-1635	4.9	32

116	Directed evolution of a cellodextrin transporter for improved biofuel production under anaerobic conditions in <i>Saccharomyces cerevisiae</i> . <i>Biotechnology and Bioengineering</i> , <b>2014</b> , 111, 1521-31	4.9	32
115	Recent advances in biosynthesis of fatty acids derived products in <i>Saccharomyces cerevisiae</i> via enhanced supply of precursor metabolites. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2015</b> , 42, 437-51	4.2	31
114	Directed evolution of a highly efficient cellobiose utilizing pathway in an industrial <i>Saccharomyces cerevisiae</i> strain. <i>Biotechnology and Bioengineering</i> , <b>2013</b> , 110, 2874-81	4.9	31
113	Discovery and engineering of a 1-butanol biosensor in <i>Saccharomyces cerevisiae</i> . <i>Bioresource Technology</i> , <b>2017</b> , 245, 1343-1351	11	31
112	Rapid prototyping of microbial cell factories via genome-scale engineering. <i>Biotechnology Advances</i> , <b>2015</b> , 33, 1420-32	17.8	30
111	Orthogonal Fatty Acid Biosynthetic Pathway Improves Fatty Acid Ethyl Ester Production in <i>Saccharomyces cerevisiae</i> . <i>ACS Synthetic Biology</i> , <b>2015</b> , 4, 808-14	5.7	30
110	Orthogonal Genetic Regulation in Human Cells Using Chemically Induced CRISPR/Cas9 Activators. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 686-693	5.7	29
109	Biosystems Design by Machine Learning. <i>ACS Synthetic Biology</i> , <b>2020</b> , 9, 1514-1533	5.7	29
108	CRISPR/Cas9-mediated knock-in of an optimized TetO repeat for live cell imaging of endogenous loci. <i>Nucleic Acids Research</i> , <b>2018</b> , 46, e100	20.1	29
107	Genome-wide RNAi screen reveals the E3 SUMO-protein ligase gene SIZ1 as a novel determinant of furfural tolerance in <i>Saccharomyces cerevisiae</i> . <i>Biotechnology for Biofuels</i> , <b>2014</b> , 7, 78	7.8	29
106	Directed Evolution of a Fluorinase for Improved Fluorination Efficiency with a Non-native Substrate. <i>Angewandte Chemie - International Edition</i> , <b>2016</b> , 55, 14277-14280	16.4	29
105	A New Era of Genome Integration-Simply Cut and Paste!. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 601-609	5.7	28
104	Expanding the boundary of biocatalysis: design and optimization of in vitro tandem catalytic reactions for biochemical production. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , <b>2018</b> , 53, 115-129	8.7	28
103	Auroramycin: A Potent Antibiotic from <i>Streptomyces roseosporus</i> by CRISPR-Cas9 Activation. <i>ChemBioChem</i> , <b>2018</b> , 19, 1716	3.8	28
102	Fully Automated One-Step Synthesis of Single-Transcript TALEN Pairs Using a Biological Foundry. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 678-685	5.7	27
101	Combining Rh-Catalyzed Diazocoupling and Enzymatic Reduction To Efficiently Synthesize Enantioenriched 2-Substituted Succinate Derivatives. <i>ACS Catalysis</i> , <b>2017</b> , 7, 2548-2552	13.1	27
100	DNA assembler: a synthetic biology tool for characterizing and engineering natural product gene clusters. <i>Methods in Enzymology</i> , <b>2012</b> , 517, 203-24	1.7	27
99	Deciphering the late biosynthetic steps of antimalarial compound FR-900098. <i>Chemistry and Biology</i> , <b>2010</b> , 17, 57-64		27



98	A comprehensive genome-scale model for IFO0880 accounting for functional genomics and phenotypic data. <i>Metabolic Engineering Communications</i> , <b>2019</b> , 9, e00101	6.5	26
97	Directed evolution of mesophilic enzymes into their thermophilic counterparts. <i>Annals of the New York Academy of Sciences</i> , <b>1999</b> , 870, 400-3	6.5	26
96	Genome-wide identification of natural RNA aptamers in prokaryotes and eukaryotes. <i>Nature Communications</i> , <b>2018</b> , 9, 1289	17.4	24
95	Emerging molecular biology tools and strategies for engineering natural product biosynthesis. <i>Metabolic Engineering Communications</i> , <b>2020</b> , 10, e00108	6.5	24
94	Replication timing maintains the global epigenetic state in human cells. <i>Science</i> , <b>2021</b> , 372, 371-378	33.3	24
93	TALEN outperforms Cas9 in editing heterochromatin target sites. <i>Nature Communications</i> , <b>2021</b> , 12, 6061	17.4	23
92	A plug-and-play pathway refactoring workflow for natural product research in <i>Escherichia coli</i> and <i>Saccharomyces cerevisiae</i> . <i>Biotechnology and Bioengineering</i> , <b>2017</b> , 114, 1847-1854	4.9	22
91	Development of a CRISPR/Cas9 system for high efficiency multiplexed gene deletion in <i>Rhodospiridium toruloides</i> . <i>Biotechnology and Bioengineering</i> , <b>2019</b> , 116, 2103-2109	4.9	22
90	Radical-mediated C-S bond cleavage in C2 sulfonate degradation by anaerobic bacteria. <i>Nature Communications</i> , <b>2019</b> , 10, 1609	17.4	22
89	An efficient gene knock-in strategy using 5Smodified double-stranded DNA donors with short homology arms. <i>Nature Chemical Biology</i> , <b>2020</b> , 16, 387-390	11.7	22
88	Characterization of <i>Bacillus subtilis</i> Colony Biofilms via Mass Spectrometry and Fluorescence Imaging. <i>Journal of Proteome Research</i> , <b>2016</b> , 15, 1955-62	5.6	22
87	Computational Tools for Discovering and Engineering Natural Product Biosynthetic Pathways. <i>IScience</i> , <b>2020</b> , 23, 100795	6.1	21
86	A widespread pathway for substitution of adenine by diaminopurine in phage genomes. <i>Science</i> , <b>2021</b> , 372, 512-516	33.3	21
85	Indoleacetate decarboxylase is a glycol radical enzyme catalysing the formation of malodorous skatole. <i>Nature Communications</i> , <b>2018</b> , 9, 4224	17.4	21
84	SunnyTALEN: a second-generation TALEN system for human genome editing. <i>Biotechnology and Bioengineering</i> , <b>2014</b> , 111, 683-91	4.9	20
83	Rapid Discovery of Glycocins through Pathway Refactoring in <i>Escherichia coli</i> . <i>ACS Chemical Biology</i> , <b>2018</b> , 13, 2966-2972	4.9	19
82	A brief overview of synthetic biology research programs and roadmap studies in the United States. <i>Synthetic and Systems Biotechnology</i> , <b>2016</b> , 1, 258-264	4.2	18
81	A rapid, accurate, scalable, and portable testing system for COVID-19 diagnosis. <i>Nature Communications</i> , <b>2021</b> , 12, 2905	17.4	18



80	Quantifying the effects of pollen nutrition on honey bee queen egg laying with a new laboratory system. <i>PLoS ONE</i> , <b>2018</b> , 13, e0203444	3.7	18
79	A Continuing Career in Biocatalysis: Frances H. Arnold. <i>ACS Catalysis</i> , <b>2019</b> , 9, 9775-9788	13.1	17
78	Highly Efficient Single-Pot Scarless Golden Gate Assembly. <i>ACS Synthetic Biology</i> , <b>2019</b> , 8, 1047-1054	5.7	17
77	Biosystems design by directed evolution. <i>AIChE Journal</i> , <b>2020</b> , 66, e16716	3.6	17
76	Probing the molecular determinants of fluorinase specificity. <i>Chemical Communications</i> , <b>2017</b> , 53, 2559-2562	5.6	16
75	Characterization of Cas proteins for CRISPR-Cas editing in streptomyces. <i>Biotechnology and Bioengineering</i> , <b>2019</b> , 116, 2330-2338	4.9	16
74	Regulatory RNA-assisted genome engineering in microorganisms. <i>Current Opinion in Biotechnology</i> , <b>2015</b> , 36, 85-90	11.4	16
73	High-Efficiency Genome Editing of Streptomyces Species by an Engineered CRISPR/Cas System. <i>Methods in Enzymology</i> , <b>2016</b> , 575, 271-84	1.7	16
72	Development of a CRISPR/Cas9-Based Tool for Gene Deletion in. <i>MSphere</i> , <b>2019</b> , 4,	5	16
71	Building biological foundries for next-generation synthetic biology. <i>Science China Life Sciences</i> , <b>2015</b> , 58, 658-65	8.5	16
70	Discovery of a Phosphonoacetic Acid Derived Natural Product by Pathway Refactoring. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 217-223	5.7	15
69	Unraveling the iterative type I polyketide synthases hidden in. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 8449-8454	11.5	15
68	Targeting Specificity of the CRISPR/Cas9 System. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 1609-1613	5.7	15
67	Accelerated genome engineering through multiplexing. <i>Wiley Interdisciplinary Reviews: Systems Biology and Medicine</i> , <b>2016</b> , 8, 5-21	6.6	15
66	Two radical-dependent mechanisms for anaerobic degradation of the globally abundant organosulfur compound dihydroxypropanesulfonate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 15599-15608	11.5	14
65	A genetic toolbox for metabolic engineering of <i>Issatchenkia orientalis</i> . <i>Metabolic Engineering</i> , <b>2020</b> , 59, 87-97	9.7	14
64	Functional Reconstitution of a Pyruvate Dehydrogenase in the Cytosol of <i>Saccharomyces cerevisiae</i> through Lipoylation Machinery Engineering. <i>ACS Synthetic Biology</i> , <b>2016</b> , 5, 689-97	5.7	14
63	Combinatorial pathway engineering for optimized production of the anti-malarial FR900098. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 384-92	4.9	14

62	Flexible and Versatile Strategy for the Construction of Large Biochemical Pathways. <i>ACS Synthetic Biology</i> , <b>2016</b> , 5, 46-52	5.7	13
61	Fine-tuning the regulation of Cas9 expression levels for efficient CRISPR-Cas9 mediated recombination in <i>Streptomyces</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2020</b> , 47, 413-423	4.2	13
60	A mass spectrometry-based high-throughput screening method for engineering fatty acid synthases with improved production of medium-chain fatty acids. <i>Biotechnology and Bioengineering</i> , <b>2020</b> , 117, 2131-2138	4.9	13
59	Directed Evolution of a Fluorinase for Improved Fluorination Efficiency with a Non-native Substrate. <i>Angewandte Chemie</i> , <b>2016</b> , 128, 14489-14492	3.6	13
58	Identification of an important motif that controls the activity and specificity of sugar transporters. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 1460-7	4.9	13
57	Unlocking nature's biosynthetic potential by directed genome evolution. <i>Current Opinion in Biotechnology</i> , <b>2020</b> , 66, 95-104	11.4	13
56	Rapid Screening of Lanthipeptide Analogs via In-Colony Removal of Leader Peptides in <i>Escherichia coli</i> . <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 11884-11888	16.4	13
55	A Scalable Epitope Tagging Approach for High Throughput ChIP-Seq Analysis. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 1034-1042	5.7	12
54	Size and surface orientation effects on thermal expansion coefficient of one-dimensional silicon nanostructures. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 104309	2.5	12
53	Outrunning Nature: Directed Evolution of Superior Biocatalysts. <i>Journal of Chemical Education</i> , <b>2004</b> , 81, 126	2.4	11
52	Discovery and Characterization of a Class IV Lanthipeptide with a Nonoverlapping Ring Pattern. <i>ACS Chemical Biology</i> , <b>2020</b> , 15, 1642-1649	4.9	10
51	Recent advances in domesticating non-model microorganisms. <i>Biotechnology Progress</i> , <b>2020</b> , 36, e3008	2.8	10
50	RNAi assisted genome evolution unveils yeast mutants with improved xylose utilization. <i>Biotechnology and Bioengineering</i> , <b>2018</b> , 115, 1552-1560	4.9	10
49	A coupled chlorinase-fluorinase system with a high efficiency of trans-halogenation and a shared substrate tolerance. <i>Chemical Communications</i> , <b>2018</b> , 54, 9458-9461	5.8	10
48	Customized optimization of metabolic pathways by combinatorial transcriptional engineering. <i>Methods in Molecular Biology</i> , <b>2013</b> , 985, 177-209	1.4	10
47	A transaldolase-dependent sulfoglycolysis pathway in <i>Bacillus megaterium</i> DSM 1804. <i>Biochemical and Biophysical Research Communications</i> , <b>2020</b> , 533, 1109-1114	3.4	10
46	A New Biosensor for Stilbenes and a Cannabinoid Enabled by Genome Mining of a Transcriptional Regulator. <i>ACS Synthetic Biology</i> , <b>2020</b> , 9, 698-705	5.7	9
45	Biochemical and structural investigation of sulfoacetaldehyde reductase from. <i>Biochemical Journal</i> , <b>2019</b> , 476, 733-746	3.8	8

44	High-throughput Screening Methods Developed for Oxidoreductases <b>2006</b> , 77-93		8
43	A pH-indicator-based screen for hydrolytic haloalkane dehalogenase. <i>Methods in Molecular Biology</i> , <b>2003</b> , 230, 213-21	1.4	8
42	Evolutionary context-integrated deep sequence modeling for protein engineering		8
41	Stereoconvergent Reduction of Activated Alkenes by a Nicotinamide Free Synergistic Photobiocatalytic System. <i>ACS Catalysis</i> , <b>2020</b> , 10, 9431-9437	13.1	8
40	Engineering oleaginous yeast <i>Rhodotorula toruloides</i> for overproduction of fatty acid ethyl esters. <i>Biotechnology for Biofuels</i> , <b>2021</b> , 14, 115	7.8	8
39	Cas12a-assisted precise targeted cloning using in vivo Cre-lox recombination. <i>Nature Communications</i> , <b>2021</b> , 12, 1171	17.4	8
38	Inducible Control of mRNA Transport Using Reprogrammable RNA-Binding Proteins. <i>ACS Synthetic Biology</i> , <b>2017</b> , 6, 950-956	5.7	7
37	An extended bacterial reductive pyrimidine degradation pathway that enables nitrogen release from Alanine. <i>Journal of Biological Chemistry</i> , <b>2019</b> , 294, 15662-15671	5.4	7
36	Pathway Design, Engineering, and Optimization. <i>Advances in Biochemical Engineering/Biotechnology</i> , <b>2018</b> , 162, 77-116	1.7	7
35	A gene cluster for taurine sulfur assimilation in an anaerobic human gut bacterium. <i>Biochemical Journal</i> , <b>2019</b> , 476, 2271-2279	3.8	6
34	A Pathway for Degradation of Uracil to Acetyl Coenzyme A in <i>Bacillus megaterium</i> . <i>Applied and Environmental Microbiology</i> , <b>2020</b> , 86,	4.8	6
33	Visualizing Spatiotemporal Dynamics of Intercellular Mechanotransmission upon Wounding. <i>ACS Photonics</i> , <b>2018</b> , 5, 3565-3574	6.3	6
32	Sustainable Production of Acrylic Acid via 3-Hydroxypropionic Acid from Lignocellulosic Biomass. <i>ACS Sustainable Chemistry and Engineering</i> ,	8.3	6
31	ECNet is an evolutionary context-integrated deep learning framework for protein engineering. <i>Nature Communications</i> , <b>2021</b> , 12, 5743	17.4	6
30	Identification and characterization of a new sulfoacetaldehyde reductase from the human gut bacterium. <i>Bioscience Reports</i> , <b>2019</b> , 39,	4.1	5
29	Biochemical and structural investigation of taurine:2-oxoglutarate aminotransferase from. <i>Biochemical Journal</i> , <b>2019</b> , 476, 1605-1619	3.8	5
28	Genome-scale metabolic reconstruction of the non-model yeast SD108 and its application to organic acids production. <i>Metabolic Engineering Communications</i> , <b>2020</b> , 11, e00148	6.5	5
27	A Pathway for Isethionate Dissimilation in <i>Bacillus krulwichiae</i> . <i>Applied and Environmental Microbiology</i> , <b>2019</b> , 85,	4.8	4

26	Mechanistically Diverse Pathways for Sulfoquinovose Degradation in Bacteria. <i>ACS Catalysis</i> , 2020, 10, 14740-14750	3.1	4
25	Identification and Characterization of Citrus Peel Uronic Acid Oxidase. <i>ChemBioChem</i> , 2020, 21, 797-800	3.8	3
24	Precise Regulation of Cas9-Mediated Genome Engineering by Anti-CRISPR-Based Inducible CRISPR Controllers. <i>ACS Synthetic Biology</i> , 2021, 10, 1320-1327	5.7	3
23	Identification of novel metabolic engineering targets for S-adenosyl-L-methionine production in <i>Saccharomyces cerevisiae</i> via genome-scale engineering. <i>Metabolic Engineering</i> , 2021, 66, 319-327	9.7	3
22	Development of Host-Orthogonal Genetic Systems for Synthetic Biology. <i>Advanced Biology</i> , 2021, 5, e2000252		3
21	Biosynthetic engineering of the antifungal, anti-MRSA auroramycin. <i>Microbial Cell Factories</i> , 2020, 19, 3	6.4	2
20	macroMS: Image-Guided Analysis of Random Objects by Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2021, 32, 1180-1188	3.5	2
19	Metabolic Engineering of <i>Saccharomyces cerevisiae</i> Using a Trifunctional CRISPR/Cas System for Simultaneous Gene Activation, Interference, and Deletion. <i>Methods in Enzymology</i> , 2018, 608, 265-276	1.7	2
18	Unleashing the power of energy storage: Engineering oxidation pathways for polyketide production. <i>Synthetic and Systems Biotechnology</i> , 2020, 5, 21-22	4.2	1
17	Reconstruction of Lead Acid Battery Negative Electrodes after Hard Sulfation Using Controlled Chelation Chemistry. <i>Journal of the Electrochemical Society</i> , 2020, 167, 120537	3.9	1
16	DNA Punch Cards: Storing Data on Native DNA Sequences via Nicking		1
15	CRISPR/Cas9-mediated Knock-in of an Optimized TetO Repeat for Live Cell Imaging of Endogenous Loci		1
14	Two-Color Imaging of Nonrepetitive Endogenous Loci in Human Cells. <i>ACS Synthetic Biology</i> , 2020, 9, 2502-2514	5.7	1
13	Structural and Biochemical Investigation of UTP Cyclohydrolase. <i>ACS Catalysis</i> , 2021, 11, 8895-8901	13.1	1
12	Can Deep Learning Solve the Cas9 Dilemma?. <i>CRISPR Journal</i> , 2021, 4, 13-15	2.5	1
11	Expanding the Potential of Mammalian Genome Engineering Targeted DNA Integration. <i>ACS Synthetic Biology</i> , 2021, 10, 429-446	5.7	1
10	Metabolic engineering of <i>Rhodotorula toruloides</i> IFO0880 improves C16 and C18 fatty alcohol production from synthetic media.. <i>Microbial Cell Factories</i> , 2022, 21, 26	6.4	1
9	Activation of Silent Natural Product Biosynthetic Gene Clusters Using Synthetic Biology Tools	2020, 113-135	0

8	The Glycyl Radical Enzyme Arylacetate Decarboxylase from <i>Olsenella scatoligenes</i> . <i>ACS Catalysis</i> , <b>2021</b> , 11, 5789-5794	13.1	o
7	Cloning and characterization of a panel of mitochondrial targeting sequences for compartmentalization engineering in <i>Saccharomyces cerevisiae</i> . <i>Biotechnology and Bioengineering</i> , <b>2021</b> , 118, 4269-4277	4.9	o
6	High-Throughput Mass Spectrometry Complements Protein Engineering <b>2021</b> , 57-79		o
5	PlasmidMaker is a versatile, automated, and high throughput end-to-end platform for plasmid construction.. <i>Nature Communications</i> , <b>2022</b> , 13, 2697	17.4	o
4	Optically guided mass spectrometry to screen microbial colonies for directed enzyme evolution. <i>Methods in Enzymology</i> , <b>2020</b> , 644, 255-273	1.7	
3	Metabolic Engineering Strategies for Production of Commodity and Fine Chemicals: <i>Escherichia coli</i> as a Platform Organism <b>2014</b> , 591-604		
2	In Vivo Biosensors for Directed Protein Evolution29-55		
1	Biochemical Investigation of 3-Sulfopropionaldehyde Reductase HpFD. <i>ChemBioChem</i> , <b>2021</b> , 22, 2862-2868		