

# Guang Zhao

## List of Publications by Citations

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109  
papers

3,286  
citations

34  
h-index

53  
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112  
ext. papers

4,004  
ext. citations

6.6  
avg, IF

5.34  
L-index

#	Paper	IF	Citations
109	Genome and proteome of long-chain alkane degrading <i>Geobacillus thermodenitrificans</i> NG80-2 isolated from a deep-subsurface oil reservoir. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 5602-7	11.5	269
108	Biosynthesis of isoprene in <i>Escherichia coli</i> via methylerythritol phosphate (MEP) pathway. <i>Applied Microbiology and Biotechnology</i> , <b>2011</b> , 90, 1915-22	5.7	120
107	Electricigens in the anode of microbial fuel cells: pure cultures versus mixed communities. <i>Microbial Cell Factories</i> , <b>2019</b> , 18, 39	6.4	117
106	Biosynthetic pathways for 3-hydroxypropionic acid production. <i>Applied Microbiology and Biotechnology</i> , <b>2009</b> , 82, 995-1003	5.7	111
105	Enhancing production of bio-isoprene using hybrid MVA pathway and isoprene synthase in <i>E. coli</i> . <i>PLoS ONE</i> , <b>2012</b> , 7, e33509	3.7	110
104	Metabolic engineering of <i>Escherichia coli</i> for the biosynthesis of alpha-pinene. <i>Biotechnology for Biofuels</i> , <b>2013</b> , 6, 60	7.8	107
103	Metabolic engineering of <i>Escherichia coli</i> for high-specificity production of isoprenol and prenol as next generation of biofuels. <i>Biotechnology for Biofuels</i> , <b>2013</b> , 6, 57	7.8	92
102	Microbial production of sabinene--a new terpene-based precursor of advanced biofuel. <i>Microbial Cell Factories</i> , <b>2014</b> , 13, 20	6.4	88
101	Imidazolium-based ionic liquids for cellulose pretreatment: recent progresses and future perspectives. <i>Applied Microbiology and Biotechnology</i> , <b>2017</b> , 101, 521-532	5.7	80
100	Structural and genetic characterization of the <i>Shigella boydii</i> type 13 O antigen. <i>Journal of Bacteriology</i> , <b>2004</b> , 186, 383-92	3.5	76
99	Optimization of fatty alcohol biosynthesis pathway for selectively enhanced production of C12/14 and C16/18 fatty alcohols in engineered <i>Escherichia coli</i> . <i>Microbial Cell Factories</i> , <b>2012</b> , 11, 65	6.4	75
98	Bio-isoprene production using exogenous MVA pathway and isoprene synthase in <i>Escherichia coli</i> . <i>Bioresource Technology</i> , <b>2012</b> , 104, 642-7	11	67
97	The CpxR/CpxA two-component system up-regulates two Tat-dependent peptidoglycan amidases to confer bacterial resistance to antimicrobial peptide. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 5529-39 <sup>4</sup>	5.4	66
96	Production of extracellular fatty acid using engineered <i>Escherichia coli</i> . <i>Microbial Cell Factories</i> , <b>2012</b> , 11, 41	6.4	59
95	Encapsulated in silica: genome, proteome and physiology of the thermophilic bacterium <i>Anoxybacillus flavithermus</i> WK1. <i>Genome Biology</i> , <b>2008</b> , 9, R161	18.3	58
94	Increasing unsaturated fatty acid contents in <i>Escherichia coli</i> by coexpression of three different genes. <i>Applied Microbiology and Biotechnology</i> , <b>2010</b> , 87, 271-80	5.7	54
93	Production of free monounsaturated fatty acids by metabolically engineered <i>Escherichia coli</i> . <i>Biotechnology for Biofuels</i> , <b>2014</b> , 7, 59	7.8	52

92	Biosynthesis of poly(3-hydroxypropionate) from glycerol by recombinant Escherichia coli. <i>Bioresource Technology</i> , <b>2013</b> , 131, 548-51	11	52
91	Functional balance between enzymes in malonyl-CoA pathway for 3-hydroxypropionate biosynthesis. <i>Metabolic Engineering</i> , <b>2016</b> , 34, 104-111	9.7	51
90	Increasing fatty acid production in E. coli by simulating the lipid accumulation of oleaginous microorganisms. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2011</b> , 38, 919-25	4.2	47
89	Recent advances of metabolic engineering strategies in natural isoprenoid production using cell factories. <i>Natural Product Reports</i> , <b>2020</b> , 37, 80-99	15.1	46
88	A novel MVA-mediated pathway for isoprene production in engineered E. coli. <i>BMC Biotechnology</i> , <b>2016</b> , 16, 5	3.5	44
87	The metabolism and biotechnological application of betaine in microorganism. <i>Applied Microbiology and Biotechnology</i> , <b>2016</b> , 100, 3865-76	5.7	40
86	Boosting the free fatty acid synthesis of Escherichia coli by expression of a cytosolic Acinetobacter baylyi thioesterase. <i>Biotechnology for Biofuels</i> , <b>2012</b> , 5, 76	7.8	40
85	Biochemical routes for uptake and conversion of xylose by microorganisms. <i>Biotechnology for Biofuels</i> , <b>2020</b> , 13, 21	7.8	39
84	Engineering Escherichia coli for high-yield geraniol production with biotransformation of geranyl acetate to geraniol under fed-batch culture. <i>Biotechnology for Biofuels</i> , <b>2016</b> , 9, 58	7.8	39
83	Improved phloroglucinol production by metabolically engineered Escherichia coli. <i>Applied Microbiology and Biotechnology</i> , <b>2011</b> , 91, 1545-52	5.7	37
82	An acid-tolerance response system protecting exponentially growing Escherichia coli. <i>Nature Communications</i> , <b>2020</b> , 11, 1496	17.4	36
81	Fermentative succinate production: an emerging technology to replace the traditional petrochemical processes. <i>BioMed Research International</i> , <b>2013</b> , 2013, 723412	3	36
80	A dual-signal regulatory circuit activates transcription of a set of divergent operons in Salmonella typhimurium. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 20924-9	11.5	36
79	Fatty acid from the renewable sources: a promising feedstock for the production of biofuels and biobased chemicals. <i>Biotechnology Advances</i> , <b>2014</b> , 32, 382-9	17.8	35
78	Biosynthesis of Natural Rubber: Current State and Perspectives. <i>International Journal of Molecular Sciences</i> , <b>2018</b> , 20,	6.3	35
77	Production of Block Copolymer Poly(3-hydroxybutyrate)-poly(3-hydroxypropionate) with Adjustable Structure from an Inexpensive Carbon Source.. <i>ACS Macro Letters</i> , <b>2013</b> , 2, 996-1000	6.6	34
76	Structural and genetic evidence that the Escherichia coli O148 O antigen is the precursor of the Shigella dysenteriae type 1 O antigen and identification of a glucosyltransferase gene. <i>Microbiology (United Kingdom)</i> , <b>2007</b> , 153, 139-147	2.9	34
75	Natural and engineered polyhydroxyalkanoate (PHA) synthase: key enzyme in biopolyester production. <i>Applied Microbiology and Biotechnology</i> , <b>2017</b> , 101, 7417-7426	5.7	33

74	Efficient production of 3-hydroxypropionate from fatty acids feedstock in <i>Escherichia coli</i> . <i>Metabolic Engineering</i> , <b>2019</b> , 51, 121-130	9.7	33
73	Biotechnological production of 1,2,4-butanetriol: An efficient process to synthesize energetic material precursor from renewable biomass. <i>Scientific Reports</i> , <b>2015</b> , 5, 18149	4.9	32
72	Biosynthetic pathway for poly(3-hydroxypropionate) in recombinant <i>Escherichia coli</i> . <i>Journal of Microbiology</i> , <b>2012</b> , 50, 693-7	3	32
71	Metabolic engineering for the production of isoprene and isopentenol by <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , <b>2018</b> , 102, 7725-7738	5.7	31
70	Inducible cell lysis systems in microbial production of bio-based chemicals. <i>Applied Microbiology and Biotechnology</i> , <b>2013</b> , 97, 7121-9	5.7	31
69	Omics-based analyses revealed metabolic responses of to lignocellulose-derived inhibitors furfural, formic acid and phenol stress for butanol fermentation. <i>Biotechnology for Biofuels</i> , <b>2019</b> , 12, 101	7.8	29
68	Metabolic engineering of <i>Escherichia coli</i> for the production of xylonate. <i>PLoS ONE</i> , <b>2013</b> , 8, e67305	3.7	28
67	A systematic optimization of styrene biosynthesis in BL21(DE3). <i>Biotechnology for Biofuels</i> , <b>2018</b> , 11, 14	7.8	27
66	Mg <sup>2+</sup> facilitates leader peptide translation to induce riboswitch-mediated transcription termination. <i>EMBO Journal</i> , <b>2011</b> , 30, 1485-96	13	27
65	Development of genetically stable <i>Escherichia coli</i> strains for poly(3-hydroxypropionate) production. <i>PLoS ONE</i> , <b>2014</b> , 9, e97845	3.7	27
64	Metabolic engineering of <i>Escherichia coli</i> to improve recombinant protein production. <i>Applied Microbiology and Biotechnology</i> , <b>2015</b> , 99, 10367-77	5.7	26
63	Production of optically pure d-lactate from glycerol by engineered <i>Klebsiella pneumoniae</i> strain. <i>Bioresource Technology</i> , <b>2014</b> , 172, 269-275	11	25
62	Malonyl-CoA pathway: a promising route for 3-hydroxypropionate biosynthesis. <i>Critical Reviews in Biotechnology</i> , <b>2017</b> , 37, 933-941	9.4	22
61	Dissection of malonyl-coenzyme A reductase of <i>Chloroflexus aurantiacus</i> results in enzyme activity improvement. <i>PLoS ONE</i> , <b>2013</b> , 8, e75554	3.7	22
60	Common problems associated with the microbial productions of aromatic compounds and corresponding metabolic engineering strategies. <i>Biotechnology Advances</i> , <b>2020</b> , 41, 107548	17.8	21
59	Biosynthesis and production of sabinene: current state and perspectives. <i>Applied Microbiology and Biotechnology</i> , <b>2018</b> , 102, 1535-1544	5.7	21
58	Enhancement of the catalytic activity of Isopentenyl diphosphate isomerase (IDI) from <i>Saccharomyces cerevisiae</i> through random and site-directed mutagenesis. <i>Microbial Cell Factories</i> , <b>2018</b> , 17, 65	6.4	21
57	A novel autolysis system controlled by magnesium and its application to poly(3-hydroxypropionate) production in engineered <i>Escherichia coli</i> . <i>Bioengineered</i> , <b>2017</b> , 8, 594-599	5.7	20

56	Improving the production of acetyl-CoA-derived chemicals in Escherichia coli BL21(DE3) through iclR and arcA deletion. <i>BMC Microbiology</i> , <b>2017</b> , 17, 10	4.5	20
55	Genetic analysis of riboswitch-mediated transcriptional regulation responding to Mn <sup>2+</sup> in Salmonella. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 11353-11366	5.4	19
54	Biosynthesis of ethylene glycol from d-xylose in recombinant Escherichia coli. <i>Bioengineered</i> , <b>2018</b> , 9, 233-241	5.7	18
53	Not only osmoprotectant: betaine increased lactate dehydrogenase activity and L-lactate production in lactobacilli. <i>Bioresource Technology</i> , <b>2013</b> , 148, 591-5	11	18
52	Biosynthesis of poly(3-hydroxypropionate-co-3-hydroxybutyrate) with fully controllable structures from glycerol. <i>Bioresource Technology</i> , <b>2013</b> , 142, 741-4	11	18
51	Heterologous expression of stearyl-acyl carrier protein desaturase (S-ACP-DES) from Arabidopsis thaliana in Escherichia coli. <i>Protein Expression and Purification</i> , <b>2010</b> , 69, 209-14	2	18
50	Metabolic engineering of Escherichia coli for poly(3-hydroxypropionate) production from glycerol and glucose. <i>Biotechnology Letters</i> , <b>2014</b> , 36, 2257-62	3	17
49	In vitro assembly of multiple DNA fragments using successive hybridization. <i>PLoS ONE</i> , <b>2012</b> , 7, e30267	3.7	17
48	Structural relation of the antigenic polysaccharides of Escherichia coli O40, Shigella dysenteriae type 9, and E. coli K47. <i>Carbohydrate Research</i> , <b>2007</b> , 342, 1275-9	2.9	16
47	Structure of a teichoic acid-like O-polysaccharide of Escherichia coli O29. <i>Carbohydrate Research</i> , <b>2006</b> , 341, 2176-80	2.9	16
46	Metabolic engineering of Escherichia coli for the production of hydroxy fatty acids from glucose. <i>BMC Biotechnology</i> , <b>2016</b> , 16, 26	3.5	16
45	Biosynthesis of long chain hydroxyfatty acids from glucose by engineered Escherichia coli. <i>Bioresource Technology</i> , <b>2012</b> , 114, 561-6	11	15
44	Manipulation of the precursor supply for high-level production of longifolene by metabolically engineered Escherichia coli. <i>Scientific Reports</i> , <b>2019</b> , 9, 95	4.9	15
43	Enzymatic process optimization for the in vitro production of isoprene from mevalonate. <i>Microbial Cell Factories</i> , <b>2017</b> , 16, 8	6.4	14
42	Microbial production of mevalonate by recombinant Escherichia coli using acetic acid as a carbon source. <i>Bioengineered</i> , <b>2018</b> , 9, 116-123	5.7	14
41	Improvement of isoprene production in Escherichia coli by rational optimization of RBSs and key enzymes screening. <i>Microbial Cell Factories</i> , <b>2019</b> , 18, 4	6.4	13
40	Metabolic engineering of a xylose pathway for biotechnological production of glycolate in Escherichia coli. <i>Microbial Cell Factories</i> , <b>2018</b> , 17, 51	6.4	13
39	Improving the production of isoprene and 1,3-propanediol by metabolically engineered Escherichia coli through recycling redox cofactor between the dual pathways. <i>Applied Microbiology and Biotechnology</i> , <b>2019</b> , 103, 2597-2608	5.7	12

38	Metabolic engineering of for the utilization of ethanol. <i>Journal of Biological Research</i> , <b>2020</b> , 27, 1	2.4	12
37	Biosynthetic pathway for acrylic acid from glycerol in recombinant <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , <b>2016</b> , 100, 4901-7	5.7	12
36	High titer mevalonate fermentation and its feeding as a building block for isoprenoids (isoprene and sabinene) production in engineered <i>Escherichia coli</i> . <i>Process Biochemistry</i> , <b>2017</b> , 62, 1-9	4.8	12
35	Directed evolution of mevalonate kinase in by random mutagenesis for improved lycopene.. <i>RSC Advances</i> , <b>2018</b> , 8, 15021-15028	3.7	11
34	Deletion of <i>arcA</i> increased the production of acetyl-CoA-derived chemicals in recombinant <i>Escherichia coli</i> . <i>Biotechnology Letters</i> , <b>2016</b> , 38, 97-101	3	10
33	Efficient conversion of acetate into phloroglucinol by recombinant <i>Escherichia coli</i> . <i>RSC Advances</i> , <b>2017</b> , 7, 50942-50948	3.7	10
32	Sustainable utilization of lignocellulose: Preparation of furan derivatives from carbohydrate biomass by bifunctional lignosulfonate-based catalysts. <i>Catalysis Communications</i> , <b>2016</b> , 84, 159-162	3.2	10
31	Induction of gene expression in bacteria at optimal growth temperatures. <i>Applied Microbiology and Biotechnology</i> , <b>2013</b> , 97, 5423-31	5.7	9
30	Biodegradation-inspired bioproduction of methylacetoin and 2-methyl-2,3-butanediol. <i>Scientific Reports</i> , <b>2013</b> , 3, 2445	4.9	9
29	Gene coexpression network analysis reveals a novel metabolic mechanism of responding to phenolic inhibitors from lignocellulosic hydrolysates. <i>Biotechnology for Biofuels</i> , <b>2020</b> , 13, 163	7.8	9
28	Biosynthesis of poly(3-hydroxypropionate) from glycerol using engineered <i>Klebsiella pneumoniae</i> strain without vitamin B12. <i>Bioengineered</i> , <b>2015</b> , 6, 77-81	5.7	8
27	Generation of <i>Streptomyces hygroscopicus</i> cell factories with enhanced ascomycin production by combined elicitation and pathway-engineering strategies. <i>Biotechnology and Bioengineering</i> , <b>2019</b> , 116, 3382-3395	4.9	8
26	Production of isoprene, one of the high-density fuel precursors, from peanut hull using the high-efficient lignin-removal pretreatment method. <i>Biotechnology for Biofuels</i> , <b>2017</b> , 10, 297	7.8	7
25	Development of a 3-hydroxypropionate resistant <i>Escherichia coli</i> strain. <i>Bioengineered</i> , <b>2016</b> , 7, 21-7	5.7	7
24	Enhanced poly(3-hydroxypropionate) production via Alanine pathway in recombinant <i>Escherichia coli</i> . <i>PLoS ONE</i> , <b>2017</b> , 12, e0173150	3.7	7
23	Comparison of Glucose, Acetate and Ethanol as Carbon Resource for Production of Poly(3-Hydroxybutyrate) and Other Acetyl-CoA Derivatives. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 833	5.8	7
22	Highly Efficient Biosynthesis of Hypoxanthine in and Transcriptome-Based Analysis of the Purine Metabolism. <i>ACS Synthetic Biology</i> , <b>2020</b> , 9, 525-535	5.7	6
21	Production of D-lactate from glucose using <i>Klebsiella pneumoniae</i> mutants. <i>Microbial Cell Factories</i> , <b>2017</b> , 16, 209	6.4	6

20	Characterization and directed evolution of propionyl-CoA carboxylase and its application in succinate biosynthetic pathway with two CO fixation reactions. <i>Metabolic Engineering</i> , <b>2020</b> , 62, 42-50	9.7	6
19	In depth understanding the molecular response to the enhanced secretion of fatty acids in <i>Saccharomyces cerevisiae</i> due to one-step gene deletion of acyl-CoA synthetases. <i>Process Biochemistry</i> , <b>2016</b> , 51, 1162-1174	4.8	5
18	Biosynthesis of acetylacetone inspired by its biodegradation. <i>Biotechnology for Biofuels</i> , <b>2020</b> , 13, 88	7.8	4
17	High-specificity synthesis of novel monomers by remodeled alcohol hydroxylase. <i>BMC Biotechnology</i> , <b>2016</b> , 16, 61	3.5	4
16	An in vitro synthetic biosystem based on acetate for production of phloroglucinol. <i>BMC Biotechnology</i> , <b>2017</b> , 17, 66	3.5	4
15	Improved cis-Abienol production through increasing precursor supply in <i>Escherichia coli</i> . <i>Scientific Reports</i> , <b>2020</b> , 10, 16791	4.9	4
14	Study on the isoprene-producing co-culture system of <i>Synechococcus elongates</i> - <i>Escherichia coli</i> through omics analysis. <i>Microbial Cell Factories</i> , <b>2021</b> , 20, 6	6.4	4
13	Efficient and Low-Cost Error Removal in DNA Synthesis by a High-Durability MutS. <i>ACS Synthetic Biology</i> , <b>2020</b> , 9, 940-952	5.7	2
12	Bacterial protein acetylation and its role in cellular physiology and metabolic regulation. <i>Biotechnology Advances</i> , <b>2021</b> , 53, 107842	17.8	2
11	Microbial Production of Isoprene: Opportunities and Challenges <b>2016</b> , 473-504		2
10	Coupled biosynthesis and esterification of 1,2,4-butanetriol to simplify its separation from fermentation broth. <i>Engineering in Life Sciences</i> , <b>2019</b> , 19, 444-451	3.4	2
9	Biochemical characterization of isoprene synthase from <i>Ipomoea batatas</i> . <i>Journal of Bioscience and Bioengineering</i> , <b>2019</b> , 127, 138-144	3.3	2
8	Efficient recovery of bio-based 1,2,4-butanetriol by using boronic acid anionic reactive extraction. <i>Separation and Purification Technology</i> , <b>2021</b> , 255, 117728	8.3	2
7	A fast and robust iterative genome-editing method based on a Rock-Paper-Scissors strategy. <i>Nucleic Acids Research</i> , <b>2021</b> , 49, e12	20.1	1
6	Biosynthetic Pathway and Metabolic Engineering of Succinic Acid.. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2022</b> , 10, 843887	5.8	1
5	Self-sufficient whole-cell biocatalysis for 3-(aminomethyl) pyridine synthesis. <i>Biochemical Engineering Journal</i> , <b>2022</b> , 183, 108457	4.2	1
4	Hop bitter acids: resources, biosynthesis, and applications. <i>Applied Microbiology and Biotechnology</i> , <b>2021</b> , 105, 4343-4356	5.7	0
3	Metabolic Engineering of for Xylose Production from Glucose as the Sole Carbon Source. <i>ACS Synthetic Biology</i> , <b>2021</b> , 10, 2266-2275	5.7	0

2 Highly efficient biosynthesis of  $\beta$ -caryophyllene with a new sesquiterpene synthase from tobacco. **2022**, 15, 39

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1 Bulk Chemical Production: Chemo- and Bio-integrated Strategies **2016**, 1-18