

# Xian Zhang

## List of Publications by Year in Descending Order

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**Version:** 2024-04-24

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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.

92  
papers

1,523  
citations

23  
h-index

35  
g-index

110  
ext. papers

1,883  
ext. citations

5  
avg, IF

4.71  
L-index

#	Paper	IF	Citations
92	Thallium isotopic compositions as tracers in environmental studies: A review.. <i>Environment International</i> , <b>2022</b> , 162, 107148	12.9	0
91	Efficient D-allulose synthesis under acidic conditions by auto-inducing expression of the tandem D-allulose 3-epimerase genes in <i>Bacillus subtilis</i> .. <i>Microbial Cell Factories</i> , <b>2022</b> , 21, 63	6.4	1
90	Citrulline deiminase pathway provides ATP and boosts growth of <i>Clostridium carboxidivorans</i> P7. <i>Biotechnology for Biofuels</i> , <b>2021</b> , 14, 204	7.8	1
89	Isolation and Identification of an Efficient Aerobic Denitrifying <i>Pseudomonas stutzeri</i> Strain and Characterization of Its Nitrite Degradation. <i>Catalysts</i> , <b>2021</b> , 11, 1214	4	1
88	Semi-quantitative activity assays for high-throughput screening of higher activity gamma glutamyl transferase and enzyme immobilization to efficiently synthesize L-theanine. <i>Journal of Biotechnology</i> , <b>2021</b> , 330, 9-16	3.7	3
87	Efficient single whole-cell biotransformation for L-2-aminobutyric acid production through engineering of leucine dehydrogenase combined with expression regulation. <i>Bioresource Technology</i> , <b>2021</b> , 326, 124665	11	3
86	Enhanced production of L-arginine by improving carbamoyl phosphate supply in metabolically engineered <i>Corynebacterium crenatum</i> . <i>Applied Microbiology and Biotechnology</i> , <b>2021</b> , 105, 3265-3276	5.7	1
85	Rational engineering of the <i>Plasmodium falciparum</i> -lactate dehydrogenase loop involved in catalytic proton transfer to improve chiral 2-hydroxybutyric acid production. <i>International Journal of Biological Macromolecules</i> , <b>2021</b> , 179, 71-79	7.9	1
84	Integrated gene engineering synergistically improved substrate-product transport, cofactor generation and gene translation for cadaverine biosynthesis in <i>E. coli</i> . <i>International Journal of Biological Macromolecules</i> , <b>2021</b> , 169, 8-17	7.9	3
83	Hepatoprotective ability of tetramethylpyrazine produced by <i>Bacillus amyloliquefaciens</i> . <i>Systems Microbiology and Biomanufacturing</i> , <b>2021</b> , 1, 223-233		2
82	Cascade biocatalysis for production of enantiopure (S)-2-hydroxybutyric acid using recombinant <i>Escherichia coli</i> with a tunable multi-enzyme-coordinate expression system. <i>Systems Microbiology and Biomanufacturing</i> , <b>2021</b> , 1, 234-244		3
81	Redistribution of Intracellular Metabolic Flow in Improves Carbon Atom Economy for High-Yield 2,5-Dimethylpyrazine Production. <i>Journal of Agricultural and Food Chemistry</i> , <b>2021</b> , 69, 2512-2521	5.7	1
80	Engineering of microbial cells for L-valine production: challenges and opportunities. <i>Microbial Cell Factories</i> , <b>2021</b> , 20, 172	6.4	2
79	Microbial production of riboflavin: Biotechnological advances and perspectives. <i>Metabolic Engineering</i> , <b>2021</b> , 68, 46-58	9.7	1
78	MarR-type transcription factor RosR regulates glutamate metabolism network and promotes accumulation of L-glutamate in <i>Corynebacterium glutamicum</i> G01. <i>Bioresource Technology</i> , <b>2021</b> , 342, 125945	11	0
77	Biotechnological Innovations and Therapeutic Application of <i>Pediococcus</i> and Lactic Acid Bacteria: The Next-Generation Microorganism.. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 802031	5.8	1
76	Production of d-Tagatose by Whole-Cell Conversion of Recombinant in the Absence of Antibiotics.. <i>Biology</i> , <b>2021</b> , 10,	4.9	2

75	Optimization of l-arginine purification from <i>Corynebacterium crenatum</i> fermentation broth. <i>Journal of Separation Science</i> , <b>2020</b> , 43, 2936-2948	3.4	2
74	Directed Evolution of Ornithine Cyclodeaminase Using an EvolvR-Based Growth-Coupling Strategy for Efficient Biosynthesis of l-Proline. <i>ACS Synthetic Biology</i> , <b>2020</b> , 9, 1855-1863	5.7	9
73	Development of a Novel Biosensor-Driven Mutation and Selection System via Growth of for the Production of L-Arginine. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2020</b> , 8, 175	5.8	6
72	Sesame flavour baijiu: a review. <i>Journal of the Institute of Brewing</i> , <b>2020</b> , 126, 224-232	2	5
71	LysR-Type Transcriptional Regulator MetR Controls Prodigiosin Production, Methionine Biosynthesis, Cell Motility, HO Tolerance, Heat Tolerance, and Exopolysaccharide Synthesis in <i>Serratia marcescens</i> . <i>Applied and Environmental Microbiology</i> , <b>2020</b> , 86,	4.8	18
70	PII Signal Transduction Protein GlnK Alleviates Feedback Inhibition of $\gamma$ -Acetyl-l-Glutamate Kinase by l-Arginine in <i>Corynebacterium glutamicum</i> . <i>Applied and Environmental Microbiology</i> , <b>2020</b> , 86,	4.8	6
69	Significantly enhancing production of $\gamma$ -4-hydroxy-l-proline by integrated system engineering in. <i>Science Advances</i> , <b>2020</b> , 6, eaba2383	14.3	15
68	Discovery of the programmed cell death-1/programmed cell death-ligand 1 interaction inhibitors bearing an indoline scaffold. <i>European Journal of Medicinal Chemistry</i> , <b>2020</b> , 186, 111856	6.8	23
67	Surface charge-based rational design of aspartase modifies the optimal pH for efficient $\beta$ -aminobutyric acid production. <i>International Journal of Biological Macromolecules</i> , <b>2020</b> , 164, 4165-4172	7.9	5
66	Engineered disulfide bonds improve thermostability and activity of L-isoleucine hydroxylase for efficient 4-HIL production in 168. <i>Engineering in Life Sciences</i> , <b>2020</b> , 20, 7-16	3.4	6
65	Asp305Gly mutation improved the activity and stability of the styrene monooxygenase for efficient epoxide production in <i>Pseudomonas putida</i> KT2440. <i>Microbial Cell Factories</i> , <b>2019</b> , 18, 12	6.4	10
64	Multifunctional oligomer immobilized on quartz crystal microbalance: a facile and stabilized molecular imprinting strategy for glycoprotein detection. <i>Analytical and Bioanalytical Chemistry</i> , <b>2019</b> , 411, 3941-3949	4.4	4
63	Design, synthesis and biological evaluation of novel thieno[3,2-d]pyrimidine and quinazoline derivatives as potent antitumor agents. <i>Bioorganic Chemistry</i> , <b>2019</b> , 90, 103086	5.1	9
62	Enhancement of L-arginine production by increasing ammonium uptake in an AmtR-deficient <i>Corynebacterium crenatum</i> mutant. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2019</b> , 46, 1155-1166	4.7	5
61	Designing of a Cofactor Self-Sufficient Whole-Cell Biocatalyst System for Production of 1,2-Amino Alcohols from Epoxides. <i>ACS Synthetic Biology</i> , <b>2019</b> , 8, 734-743	5.7	21
60	Improving the Production of Salt-Tolerant Glutaminase by Integrating Multiple Copies of into the Protease and Genes of 168. <i>Molecules</i> , <b>2019</b> , 24,	4.8	5
59	Rational Engineering of <i>Bacillus cereus</i> Leucine Dehydrogenase Towards $\beta$ -keto Acid Reduction for Improving Unnatural Amino Acid Production. <i>Biotechnology Journal</i> , <b>2019</b> , 14, e1800253	5.6	14
58	Synthetic engineering of <i>Corynebacterium crenatum</i> to selectively produce acetoin or 2,3-butanediol by one step bioconversion method. <i>Microbial Cell Factories</i> , <b>2019</b> , 18, 128	6.4	3

57	A Novel 3-Phytosterone-9 $\beta$ -Hydroxylase Oxygenation Component and Its Application in Bioconversion of 4-Androstene-3,17-Dione to 9 $\beta$ -Hydroxy-4-Androstene-3,17-Dione Coupling with A NADH Regeneration Formate Dehydrogenase. <i>Molecules</i> , <b>2019</b> , 24,	4.8	3
56	Enhanced extracellular gamma glutamyl transpeptidase production by overexpressing of PrsA lipoproteins and improving its mRNA stability in <i>Bacillus subtilis</i> and application in biosynthesis of L-theanine. <i>Journal of Biotechnology</i> , <b>2019</b> , 302, 85-91	3.7	12
55	Insight into the thermostability of thermophilic L-asparaginase and non-thermophilic L-asparaginase II through bioinformatics and structural analysis. <i>Applied Microbiology and Biotechnology</i> , <b>2019</b> , 103, 7055-7070	5.7	9
54	Lys-Arg mutation improved the thermostability of <i>Bacillus cereus</i> neutral protease through increased residue interactions. <i>World Journal of Microbiology and Biotechnology</i> , <b>2019</b> , 35, 173	4.4	5
53	Identification of steroid C27 monooxygenase isoenzymes involved in sterol catabolism and stepwise pathway engineering of <i>Mycobacterium neoaurum</i> for improved androst-1,4-diene-3,17-dione production. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2019</b> , 46, 635-647	4.2	8
52	Intracellular Environment Improvement of for Enhancing Androst-1,4-Diene-3,17-Dione Production by Manipulating NADH and Reactive Oxygen Species Levels. <i>Molecules</i> , <b>2019</b> , 24,	4.8	6
51	Efficient biosynthesis of L-phenylglycine by an engineered <i>Escherichia coli</i> with a tunable multi-enzyme-coordinate expression system. <i>Applied Microbiology and Biotechnology</i> , <b>2018</b> , 102, 2129-2141	5.7	17
50	Improved L-ornithine production in <i>Corynebacterium crenatum</i> by introducing an artificial linear transacetylation pathway. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2018</b> , 45, 393-404	4.2	11
49	Palladium-Catalyzed Cyclization Reaction of Oxime Acetates and Aryl Iodides: Syntheses of 2-Imidazolines. <i>Organic Letters</i> , <b>2018</b> , 20, 2116-2119	6.2	5
48	Improved thermostability and catalytic efficiency of overexpressed catalase from <i>B. pumilus</i> ML 413 (KatX2) by introducing disulfide bond C286-C289. <i>Enzyme and Microbial Technology</i> , <b>2018</b> , 119, 10-16	3.8	5
47	Relieving Allosteric Inhibition by Designing Active Inclusion Bodies and Coating of the Inclusion Bodies with Fe <sub>3</sub> O <sub>4</sub> Nanomaterials for Sustainable 2-Oxobutyric Acid Production. <i>ACS Catalysis</i> , <b>2018</b> , 8, 8889-8901	13.1	7
46	Simultaneous cell disruption and semi-quantitative activity assays for high-throughput screening of thermostable L-asparaginases. <i>Scientific Reports</i> , <b>2018</b> , 8, 7915	4.9	20
45	Enhanced intracellular soluble production of 3-ketosteroid- $\beta$ -dehydrogenase from <i>Mycobacterium neoaurum</i> in <i>Escherichia coli</i> and its application in the androst-1,4-diene-3,17-dione production. <i>Journal of Chemical Technology and Biotechnology</i> , <b>2017</b> , 92, 350-357	3.5	8
44	Development of a multi-enzymatic desymmetrization and its application for the biosynthesis of l-norvaline from dl-norvaline. <i>Process Biochemistry</i> , <b>2017</b> , 55, 104-109	4.8	9
43	Improvement of the ammonia assimilation for enhancing L-arginine production of <i>Corynebacterium crenatum</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2017</b> , 44, 443-451	4.2	14
42	Optimized whole cell biocatalyst from acetoin to 2,3-butanediol through coexpression of acetoin reductase with NADH regeneration systems in engineered <i>Bacillus subtilis</i> . <i>Journal of Chemical Technology and Biotechnology</i> , <b>2017</b> , 92, 2477-2487	3.5	11
41	Metabolic engineering strategies for acetoin and 2,3-butanediol production: advances and prospects. <i>Critical Reviews in Biotechnology</i> , <b>2017</b> , 37, 990-1005	9.4	51
40	Reengineering of the feedback-inhibition enzyme N-acetyl-L-glutamate kinase to enhance L-arginine production in <i>Corynebacterium crenatum</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2017</b> , 44, 271-283	4.2	11

39	Efficient production of d-amino acid oxidase in Escherichia coli by a trade-off between its expression and biomass using N-terminal modification. <i>Bioresource Technology</i> , <b>2017</b> , 243, 716-723	11	3
38	Elimination of a Free Cysteine by Creation of a Disulfide Bond Increases the Activity and Stability of Candida boidinii Formate Dehydrogenase. <i>Applied and Environmental Microbiology</i> , <b>2017</b> , 83,	4.8	27
37	Joint resource allocation and caching placement for network slicing in fog radio access networks <b>2017</b> ,		13
36	Amino acid residues adjacent to the catalytic cavity of tetramer L-asparaginase II contribute significantly to its catalytic efficiency and thermostability. <i>Enzyme and Microbial Technology</i> , <b>2016</b> , 82, 15-22	3.8	22
35	Efficient 9 $\beta$ -hydroxy-4-androstene-3,17-dione production by engineered Bacillus subtilis co-expressing Mycobacterium neoaurum 3-ketosteroid 9 $\beta$ -hydroxylase and B. subtilis glucose 1-dehydrogenase with NADH regeneration. <i>SpringerPlus</i> , <b>2016</b> , 5, 1207		5
34	Systems pathway engineering of Corynebacterium crenatum for improved L-arginine production. <i>Scientific Reports</i> , <b>2016</b> , 6, 28629	4.9	40
33	Removal of dyes from aqueous solutions using activated carbon prepared from rice husk residue. <i>Water Science and Technology</i> , <b>2016</b> , 73, 1122-8	2.2	19
32	Controlling the transcription levels of argGH redistributed L-arginine metabolic flux in N-acetylglutamate kinase and ArgR-deregulated Corynebacterium crenatum. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2016</b> , 43, 55-66	4.2	9
31	N,N,N-trimethylchitosan modified with well defined multifunctional polymer modules used as pDNA delivery vector. <i>Carbohydrate Polymers</i> , <b>2016</b> , 137, 222-230	10.3	10
30	A mutant form of 3-ketosteroid-(1)-dehydrogenase gives altered androst-1,4-diene-3, 17-dione/androst-4-ene-3,17-dione molar ratios in steroid biotransformations by Mycobacterium neoaurum ST-095. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2016</b> , 43, 691-701	4.2	20
29	Formation and corrosion resistance of a phosphate chemical conversion coating on medium carbon low alloy steel. <i>New Journal of Chemistry</i> , <b>2016</b> , 40, 1347-1353	3.6	22
28	Effect of Polyhydroxybutyrate (PHB) storage on L-arginine production in recombinant Corynebacterium crenatum using coenzyme regulation. <i>Microbial Cell Factories</i> , <b>2016</b> , 15, 15	6.4	23
27	Efficient testosterone production by engineered Pichia pastoris co-expressing human 17 $\beta$ -hydroxysteroid dehydrogenase type 3 and Saccharomyces cerevisiae glucose 6-phosphate dehydrogenase with NADPH regeneration. <i>Green Chemistry</i> , <b>2016</b> , 18, 1774-1784	10	40
26	Improvement of the intracellular environment for enhancing L-arginine production of Corynebacterium glutamicum by inactivation of HO-forming flavin reductases and optimization of ATP supply. <i>Metabolic Engineering</i> , <b>2016</b> , 38, 310-321	9.7	35
25	Cloning and identification of a novel tyrosinase and its overexpression in Streptomyces kathirae SC-1 for enhancing melanin production. <i>FEMS Microbiology Letters</i> , <b>2015</b> , 362, fmv041	2.9	14
24	The role of H <sub>3</sub> PO <sub>4</sub> in the preparation of activated carbon from NaOH-treated rice husk residue. <i>RSC Advances</i> , <b>2015</b> , 5, 32626-32636	3.7	75
23	Metabolic engineering of Bacillus subtilis for redistributing the carbon flux to 2,3-butanediol by manipulating NADH levels. <i>Biotechnology for Biofuels</i> , <b>2015</b> , 8, 129	7.8	24
22	Construction of a highly efficient Bacillus subtilis 168 whole-cell biocatalyst and its application in the production of L-ornithine. <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2015</b> , 42, 1427-37	4.2	14

21	eTrain: Making Wasted Energy Useful by Utilizing Heartbeats for Mobile Data Transmissions <b>2015</b> ,		25
20	Enhanced 2,3-butanediol production from biodiesel-derived glycerol by engineering of cofactor regeneration and manipulating carbon flux in <i>Bacillus amyloliquefaciens</i> . <i>Microbial Cell Factories</i> , <b>2015</b> , 14, 122	6.4	39
19	Enhancement of the thermostability of <i>Streptomyces kathirae</i> SC-1 tyrosinase by rational design and empirical mutation. <i>Enzyme and Microbial Technology</i> , <b>2015</b> , 77, 54-60	3.8	16
18	Bioconversion of cholesterol to 4-cholesten-3-one by recombinant <i>Bacillus subtilis</i> expressing choM gene encoding cholesterol oxidase from <i>Mycobacterium neoaurum</i> JC-12. <i>Journal of Chemical Technology and Biotechnology</i> , <b>2015</b> , 90, 1811-1820	3.5	13
17	Preparation of Fe/activated carbon directly from rice husk pyrolytic carbon and its application in catalytic hydroxylation of phenol. <i>RSC Advances</i> , <b>2015</b> , 5, 4984-4992	3.7	42
16	Phosphate chemical conversion coatings on metallic substrates for biomedical application: a review. <i>Materials Science and Engineering C</i> , <b>2015</b> , 47, 97-104	8.3	82
15	Regulation of the NADH pool and NADH/NADPH ratio redistributes acetoin and 2,3-butanediol proportion in <i>Bacillus subtilis</i> . <i>Biotechnology Journal</i> , <b>2015</b> , 10, 1298-306	5.6	31
14	Influence of processing time on the phase, microstructure and electrochemical properties of hopeite coating on stainless steel by chemical conversion method. <i>New Journal of Chemistry</i> , <b>2015</b> , 39, 5813-5822	3.6	14
13	Rapid early formation and crystal refinement of chemical conversion hopeite coatings induced by substrate sandblasting. <i>New Journal of Chemistry</i> , <b>2015</b> , 39, 7942-7947	3.6	4
12	Improving the acidic stability of <i>Staphylococcus aureus</i> $\beta$ -acetolactate decarboxylase in <i>Bacillus subtilis</i> by changing basic residues to acidic residues. <i>Amino Acids</i> , <b>2015</b> , 47, 707-17	3.5	6
11	Enhanced Production of Androst-1,4-Diene-3,17-Dione by <i>Mycobacterium neoaurum</i> JC-12 Using Three-Stage Fermentation Strategy. <i>PLoS ONE</i> , <b>2015</b> , 10, e0137658	3.7	26
10	Efficient one-step preparation of $\beta$ -aminobutyric acid from glucose without an exogenous cofactor by the designed <i>Corynebacterium glutamicum</i> . <i>Green Chemistry</i> , <b>2014</b> , 16, 4190-4197	10	22
9	Ultrasonic Induced Rapid Formation and Crystal Refinement of Chemical Converted Hopeite Coating on Titanium. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 1910-1918	3.8	40
8	The rebalanced pathway significantly enhances acetoin production by disruption of acetoin reductase gene and moderate-expression of a new water-forming NADH oxidase in <i>Bacillus subtilis</i> . <i>Metabolic Engineering</i> , <b>2014</b> , 23, 34-41	9.7	81
7	Efficient whole-cell biocatalyst for acetoin production with NAD <sup>+</sup> regeneration system through homologous co-expression of 2,3-butanediol dehydrogenase and NADH oxidase in engineered <i>Bacillus subtilis</i> . <i>PLoS ONE</i> , <b>2014</b> , 9, e102951	3.7	37
6	Two-stage pH control strategy based on the pH preference of acetoin reductase regulates acetoin and 2,3-butanediol distribution in <i>Bacillus subtilis</i> . <i>PLoS ONE</i> , <b>2014</b> , 9, e91187	3.7	25
5	Moderate expression of the transcriptional regulator ALSR enhances acetoin production by <i>Bacillus subtilis</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , <b>2013</b> , 40, 1067-76	4.2	31
4	Mutation breeding of acetoin high producing <i>Bacillus subtilis</i> blocked in 2,3-butanediol dehydrogenase. <i>World Journal of Microbiology and Biotechnology</i> , <b>2013</b> , 29, 1783-9	4.4	28

3	Isolation and identification of an acetoin high production bacterium that can reverse transform 2,3-butanediol to acetoin at the decline phase of fermentation. <i>World Journal of Microbiology and Biotechnology</i> , <b>2011</b> , 27, 2785-2790	4.4	44
2	Highly Sensitive Determination of microRNA Using Target-Primed and Branched Rolling-Circle Amplification. <i>Angewandte Chemie</i> , <b>2009</b> , 121, 3318-3322	3.6	93
1	Characterization of Bacillus subtilis Ab03 for efficient ammonia nitrogen removal. <i>Systems Microbiology and Biomanufacturing</i> , 1		1