Xian Zhang

List of Publications by Year in descending order

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97 papers	2,255 citations	218381 26 h-index	276539 41 g-index
110 all docs	110 docs citations	110 times ranked	2327 citing authors

#	Article	IF	Citations
1	The role of H₃PO₄in the preparation of activated carbon from NaOH-treated rice husk residue. RSC Advances, 2015, 5, 32626-32636.	1.7	125
2	Phosphate chemical conversion coatings on metallic substrates for biomedical application: A review. Materials Science and Engineering C, 2015, 47, 97-104.	3.8	115
3	The rebalanced pathway significantly enhances acetoin production by disruption of acetoin reductase gene and moderate-expression of a new water-forming NADH oxidase in Bacillus subtilis. Metabolic Engineering, 2014, 23, 34-41.	3.6	98
4	Metabolic engineering strategies for acetoin and 2,3-butanediol production: advances and prospects. Critical Reviews in Biotechnology, 2017, 37, 990-1005.	5.1	77
5	Systems pathway engineering of Corynebacterium crenatum for improved L-arginine production. Scientific Reports, 2016, 6, 28629.	1.6	52
6	Isolation and identification of an acetoin high production bacterium that can reverse transform 2,3-butanediol to acetoin at the decline phase of fermentation. World Journal of Microbiology and Biotechnology, 2011, 27, 2785-2790.	1.7	49
7	Efficient Whole-Cell Biocatalyst for Acetoin Production with NAD+ Regeneration System through Homologous Co-Expression of 2,3-Butanediol Dehydrogenase and NADH Oxidase in Engineered Bacillus subtilis. PLoS ONE, 2014, 9, e102951.	1.1	48
8	Preparation of Fe/activated carbon directly from rice husk pyrolytic carbon and its application in catalytic hydroxylation of phenol. RSC Advances, 2015, 5, 4984-4992.	1.7	48
9	Improvement of the intracellular environment for enhancing l-arginine production of Corynebacterium glutamicum by inactivation of H2O2-forming flavin reductases and optimization of ATP supply. Metabolic Engineering, 2016, 38, 310-321.	3.6	48
10	Enhanced 2,3-butanediol production from biodiesel-derived glycerol by engineering of cofactor regeneration and manipulating carbon flux in Bacillus amyloliquefaciens. Microbial Cell Factories, 2015, 14, 122.	1.9	47
11	Regulation of the NADH pool and NADH/NADPH ratio redistributes acetoin and 2,3â€butanediol proportion in Bacillus subtilis. Biotechnology Journal, 2015, 10, 1298-1306.	1.8	45
12	Moderate expression of the transcriptional regulator ALsR enhances acetoin production by Bacillus subtilis. Journal of Industrial Microbiology and Biotechnology, 2013, 40, 1067-1076.	1.4	43
13	Efficient testosterone production by engineered Pichia pastoris co-expressing human 17Î²-hydroxysteroid dehydrogenase type 3 and Saccharomyces cerevisiae glucose 6-phosphate dehydrogenase with NADPH regeneration. Green Chemistry, 2016, 18, 1774-1784.	4.6	43
14	Ultrasonic Induced Rapid Formation and Crystal Refinement of Chemical Conversed Hopeite Coating on Titanium. Journal of Physical Chemistry C, 2014, 118, 1910-1918.	1.5	42
15	Elimination of a Free Cysteine by Creation of a Disulfide Bond Increases the Activity and Stability of Candida boidinii Formate Dehydrogenase. Applied and Environmental Microbiology, 2017, 83, .	1.4	37
16	Amino acid residues adjacent to the catalytic cavity of tetramer l-asparaginase II contribute significantly to its catalytic efficiency and thermostability. Enzyme and Microbial Technology, 2016, 82, 15-22.	1.6	35
17	Enhanced Production of Androst-1,4-Diene-3,17-Dione by Mycobacterium neoaurum JC-12 Using Three-Stage Fermentation Strategy. PLoS ONE, 2015, 10, e0137658.	1.1	35
18	eTrain: Making Wasted Energy Useful by Utilizing Heartbeats for Mobile Data Transmissions. , 2015, , .		34

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19	Designing of a Cofactor Self-Sufficient Whole-Cell Biocatalyst System for Production of 1,2-Amino Alcohols from Epoxides. ACS Synthetic Biology, 2019, 8, 734-743.	1.9	34
20	Discovery of the programmed cell death-1/programmed cell death-ligand 1 interaction inhibitors bearing an indoline scaffold. European Journal of Medicinal Chemistry, 2020, 186, 111856.	2.6	34
21	Metabolic engineering of Bacillus subtilis for redistributing the carbon flux to 2,3-butanediol by manipulating NADH levels. Biotechnology for Biofuels, 2015, 8, 129.	6.2	32
22	Efficient one-step preparation of Î³-aminobutyric acid from glucose without an exogenous cofactor by the designed Corynebacterium glutamicum. Green Chemistry, 2014, 16, 4190-4197.	4.6	31
23	LysR-Type Transcriptional Regulator MetR Controls Prodigiosin Production, Methionine Biosynthesis, Cell Motility, H ₂ O ₂ Tolerance, Heat Tolerance, and Exopolysaccharide Synthesis in Serratia marcescens. Applied and Environmental Microbiology, 2020, 86, .	1.4	31
24	Mutation breeding of acetoin high producing Bacillus subtilis blocked in 2,3-butanediol dehydrogenase. World Journal of Microbiology and Biotechnology, 2013, 29, 1783-1789.	1.7	30
25	Significantly enhancing production of trans -4-hydroxy- <scp>l</scp> -proline by integrated system engineering in Escherichia coli. Science Advances, 2020, 6, eaba2383.	4.7	30
26	Two-Stage pH Control Strategy Based on the pH Preference of Acetoin Reductase Regulates Acetoin and 2,3-Butanediol Distribution in Bacillus subtilis. PLoS ONE, 2014, 9, e91187.	1.1	30
27	Formation and corrosion resistance of a phosphate chemical conversion coating on medium carbon low alloy steel. New Journal of Chemistry, 2016, 40, 1347-1353.	1.4	28
28	Rational Engineering ofBacillus cereusLeucine Dehydrogenase Towards Î±-keto Acid Reduction for Improving Unnatural Amino Acid Production. Biotechnology Journal, 2019, 14, 1800253.	1.8	28
29	Removal of dyes from aqueous solutions using activated carbon prepared from rice husk residue. Water Science and Technology, 2016, 73, 1122-1128.	1.2	27
30	Effect of Polyhydroxybutyrate (PHB) storage on l-arginine production in recombinant Corynebacterium crenatum using coenzyme regulation. Microbial Cell Factories, 2016, 15, 15.	1.9	27
31	Simultaneous cell disruption and semi-quantitative activity assays for high-throughput screening of thermostable L-asparaginases. Scientific Reports, 2018, 8, 7915.	1.6	27
32	Insight into the thermostability of thermophilic L-asparaginase and non-thermophilic L-asparaginase II through bioinformatics and structural analysis. Applied Microbiology and Biotechnology, 2019, 103, 7055-7070.	1.7	26
33	Enhancement of the thermostability of Streptomyces kathirae SC-1 tyrosinase by rational design and empirical mutation. Enzyme and Microbial Technology, 2015, 77, 54-60.	1.6	25
34	A mutant form of 3-ketosteroid-Î”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. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 691-701.	1.4	23
35	Efficient biosynthesis of l-phenylglycine by an engineered Escherichia coli with a tunable multi-enzyme-coordinate expression system. Applied Microbiology and Biotechnology, 2018, 102, 2129-2141.	1.7	23
36	Directed Evolution of Ornithine Cyclodeaminase Using an EvolvR-Based Growth-Coupling Strategy for Efficient Biosynthesis of <scp>l</scp>-Proline. ACS Synthetic Biology, 2020, 9, 1855-1863.	1.9	23

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37	Cloning and identification of a novel tyrosinase and its overexpression in Streptomyces kathirae SC-1 for enhancing melanin production. FEMS Microbiology Letters, 2015, 362, fnv041.	0.7	22
38	Identification of steroid C27 monooxygenase isoenzymes involved in sterol catabolism and stepwise pathway engineering of Mycobacterium neoaurum for improved androst-1,4-diene-3,17-dione production. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 635-647.	1.4	21
39	Microbial production of riboflavin: Biotechnological advances and perspectives. Metabolic Engineering, 2021, 68, 46-58.	3.6	20
40	Improvement of the ammonia assimilation for enhancing <scp>l</scp>-arginine production of Corynebacterium crenatum. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 443-451.	1.4	19
41	Enhanced extracellular gamma glutamyl transpeptidase production by overexpressing of PrsA lipoproteins and improving its mRNA stability in Bacillus subtilis and application in biosynthesis of L-theanine. Journal of Biotechnology, 2019, 302, 85-91.	1.9	19
42	Surface charge-based rational design of aspartase modifies the optimal pH for efficient Î²-aminobutyric acid production. International Journal of Biological Macromolecules, 2020, 164, 4165-4172.	3.6	19
43	Efficient single whole-cell biotransformation for L-2-aminobutyric acid production through engineering of leucine dehydrogenase combined with expression regulation. Bioresource Technology, 2021, 326, 124665.	4.8	18
44	Influence of processing time on the phase, microstructure and electrochemical properties of hopeite coating on stainless steel by chemical conversion method. New Journal of Chemistry, 2015, 39, 5813-5822.	1.4	17
45	Bioconversion of cholesterol to 4â€cholestenâ€3â€one by recombinant Bacillus subtilis expressing <scp>choM</scp> gene encoding cholesterol oxidase from Mycobacterium neoaurum<scp>JC</scp>â€12. Journal of Chemical Technology and Biotechnology, 2015, 90, 1811-1820.	1.6	16
46	Joint resource allocation and caching placement for network slicing in fog radio access networks. , 2017, , .		16
47	Reengineering of the feedback-inhibition enzyme N-acetyl-l-glutamate kinase to enhance l-arginine production in Corynebacterium crenatum. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 271-283.	1.4	15
48	Design, synthesis and biological evaluation of novel thieno[3,2-d]pyrimidine and quinazoline derivatives as potent antitumor agents. Bioorganic Chemistry, 2019, 90, 103086.	2.0	15
49	Thallium isotopic compositions as tracers in environmental studies: A review. Environment International, 2022, 162, 107148.	4.8	15
50	Construction of a highly efficient Bacillus subtilis 168 whole-cell biocatalyst and its application in the production of <scp>l</scp>-ornithine. Journal of Industrial Microbiology and Biotechnology, 2015, 42, 1427-1437.	1.4	14
51	Improved <scp>l</scp>-ornithine production in Corynebacterium crenatum by introducing an artificial linear transacetylation pathway. Journal of Industrial Microbiology and Biotechnology, 2018, 45, 393-404.	1.4	14
52	Asp305Gly mutation improved the activity and stability of the styrene monooxygenase for efficient epoxide production in Pseudomonas putida KT2440. Microbial Cell Factories, 2019, 18, 12.	1.9	14
53	Engineering of microbial cells for L-valine production: challenges and opportunities. Microbial Cell Factories, 2021, 20, 172.	1.9	13
54	MarR-type transcription factor RosR regulates glutamate metabolism network and promotes accumulation of L-glutamate in Corynebacterium glutamicum G01. Bioresource Technology, 2021, 342, 125945.	4.8	13

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55	Development of a multi-enzymatic desymmetrization and its application for the biosynthesis of l -norvaline from dl -norvaline. Process Biochemistry, 2017, 55, 104-109.	1.8	12
56	Relieving Allosteric Inhibition by Designing Active Inclusion Bodies and Coating of the Inclusion Bodies with Fe₃O₄ Nanomaterials for Sustainable 2-Oxobutyric Acid Production. ACS Catalysis, 2018, 8, 8889-8901.	5.5	12
57	Intracellular Environment Improvement of Mycobacterium neoaurum for Enhancing Androst-1,4-Diene-3,17-Dione Production by Manipulating NADH and Reactive Oxygen Species Levels. Molecules, 2019, 24, 3841.	1.7	12
58	Development of a Novel Biosensor-Driven Mutation and Selection System via in situ Growth of Corynebacterium crenatum for the Production of L-Arginine. Frontiers in Bioengineering and Biotechnology, 2020, 8, 175.	2.0	12
59	Efficient 9Î±-hydroxy-4-androstene-3,17-dione production by engineered Bacillus subtilis co-expressing Mycobacterium neoaurum 3-ketosteroid 9Î±-hydroxylase and B. subtilis glucose 1-dehydrogenase with NADH regeneration. SpringerPlus, 2016, 5, 1207.	1.2	11
60	Optimized whole cell biocatalyst from acetoin to 2,3â€butanediol through coexpression of acetoin reductase with <scp>NADH</scp> regeneration systems in engineered Bacillus subtilis. Journal of Chemical Technology and Biotechnology, 2017, 92, 2477-2487.	1.6	11
61	Lysâ€“Arg mutation improved the thermostability of Bacillus cereus neutral protease through increased residue interactions. World Journal of Microbiology and Biotechnology, 2019, 35, 173.	1.7	11
62	PII Signal Transduction Protein GlnK Alleviates Feedback Inhibition of N -Acetyl- <scp>l</scp> -Glutamate Kinase by <scp>l</scp> -Arginine in Corynebacterium glutamicum. Applied and Environmental Microbiology, 2020, 86, .	1.4	11
63	Development of Janus Cellulose Acetate Fiber (CA) Membranes for Highly Efficient Oilâ€“Water Separation. Materials, 2021, 14, 5916.	1.3	11
64	Heterologous Expression and Rational Design of l-asparaginase from Rhizomucor miehei to Improve Thermostability. Biology, 2021, 10, 1346.	1.3	11
65	Controlling the transcription levels of argGH redistributed <scp>l</scp>-arginine metabolic flux in N-acetylglutamate kinase and ArgR-deregulated Corynebacterium crenatum. Journal of Industrial Microbiology and Biotechnology, 2016, 43, 55-66.	1.4	10
66	N,N,N-trimethylchitosan modified with well defined multifunctional polymer modules used as pDNA delivery vector. Carbohydrate Polymers, 2016, 137, 222-230.	5.1	10
67	Improving the Production of Salt-Tolerant Glutaminase by Integrating Multiple Copies of Mglu into the Protease and 16S rDNA Genes of Bacillus subtilis 168. Molecules, 2019, 24, 592.	1.7	10
68	Engineered disulfide bonds improve thermostability and activity of Lâ€isoleucine hydroxylase for efficient 4â€HIL production in Bacillus subtilis 168. Engineering in Life Sciences, 2020, 20, 7-16.	2.0	10
69	Sesame flavour baijiu: a review. Journal of the Institute of Brewing, 2020, 126, 224-232.	0.8	10
70	Semi-quantitative activity assays for high-throughput screening of higher activity gamma glutamyl transferase and enzyme immobilization to efficiently synthesize L-theanine. Journal of Biotechnology, 2021, 330, 9-16.	1.9	10
71	Biotechnological Innovations and Therapeutic Application of Pediococcus and Lactic Acid Bacteria: The Next-Generation Microorganism. Frontiers in Bioengineering and Biotechnology, 2021, 9, 802031.	2.0	10
72	Enhancement of l-arginine production by increasing ammonium uptake in an AmtR-deficient Corynebacterium crenatum mutant. Journal of Industrial Microbiology and Biotechnology, 2019, 46, 1155-1166.	1.4	9

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73	Integrated gene engineering synergistically improved substrate-product transport, cofactor generation and gene translation for cadaverine biosynthesis in E. coli. International Journal of Biological Macromolecules, 2021, 169, 8-17.	3.6	9
74	Enhanced production of L-arginine by improving carbamoyl phosphate supply in metabolically engineered Corynebacterium crenatum. Applied Microbiology and Biotechnology, 2021, 105, 3265-3276.	1.7	9
75	Enhanced intracellular soluble production of 3â€ketosteroidâ€<scp>Î”</sup>1</scp>â€dehydrogenase from Mycobacterium neoaurum in Escherichia coli and its application in the androstâ€1,4â€dieneâ€3,17â€dione production. Journal of Chemical Technology and Biotechnology, 2017, 92, 350-357.	1.6	8
76	Redistribution of Intracellular Metabolic Flow in E. coli Improves Carbon Atom Economy for High-Yield 2,5-Dimethylpyrazine Production. Journal of Agricultural and Food Chemistry, 2021, 69, 2512-2521.	2.4	7
77	Improving the acidic stability of Staphylococcus aureus Î±-acetolactate decarboxylase in Bacillus subtilis by changing basic residues to acidic residues. Amino Acids, 2015, 47, 707-717.	1.2	6
78	Efficient production of d-amino acid oxidase in Escherichia coli by a trade-off between its expression and biomass using N-terminal modification. Bioresource Technology, 2017, 243, 716-723.	4.8	6
79	Palladium-Catalyzed Cyclization Reaction of Oxime Acetates and Aryl Iodides: Syntheses of 2-Imidazolines. Organic Letters, 2018, 20, 2116-2119.	2.4	6
80	Improved thermostability and catalytic efficiency of overexpressed catalase from B. pumilus ML 413 (KatX2) by introducing disulfide bond C286-C289. Enzyme and Microbial Technology, 2018, 119, 10-16.	1.6	6
81	Synthetic engineering of Corynebacterium crenatum to selectively produce acetoin or 2,3-butanediol by one step bioconversion method. Microbial Cell Factories, 2019, 18, 128.	1.9	6
82	A Novel 3-Phytosterone-9Î±-Hydroxylase Oxygenation Component and Its Application in Bioconversion of 4-Androstene-3,17-Dione to 9Î±-Hydroxy-4-Androstene-3,17-Dione Coupling with A NADH Regeneration Formate Dehydrogenase. Molecules, 2019, 24, 2534.	1.7	6
83	Production of d-Tagatose by Whole-Cell Conversion of Recombinant Bacillus subtilis in the Absence of Antibiotics. Biology, 2021, 10, 1343.	1.3	6
84	Optimization of <scp>l</scp>â€arginine purification from Corynebacterium crenatum fermentation broth. Journal of Separation Science, 2020, 43, 2936-2948.	1.3	5
85	Cascade biocatalysis for production of enantiopure (S)-2-hydroxybutyric acid using recombinant Escherichia coli with a tunable multi-enzyme-coordinate expression system. Systems Microbiology and Biomanufacturing, 2021, 1, 234-244.	1.5	5
86	Rational engineering of the Plasmodium falciparum l-lactate dehydrogenase loop involved in catalytic proton transfer to improve chiral 2-hydroxybutyric acid production. International Journal of Biological Macromolecules, 2021, 179, 71-79.	3.6	5
87	Isolation and Identification of an Efficient Aerobic Denitrifying Pseudomonas stutzeri Strain and Characterization of Its Nitrite Degradation. Catalysts, 2021, 11, 1214.	1.6	5
88	Characterization of Bacillus subtilis Ab03 for efficient ammonia nitrogen removal. Systems Microbiology and Biomanufacturing, 2022, 2, 580-588.	1.5	5
89	Efficient D-allulose synthesis under acidic conditions by auto-inducing expression of the tandem D-allulose 3-epimerase genes in Bacillus subtilis. Microbial Cell Factories, 2022, 21, 63.	1.9	5
90	Rapid early formation and crystal refinement of chemical conversion hopeite coatings induced by substrate sandblasting. New Journal of Chemistry, 2015, 39, 7942-7947.	1.4	4

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91	Multifunctional oligomer immobilized on quartz crystal microbalance: a facile and stabilized molecular imprinting strategy for glycoprotein detection. Analytical and Bioanalytical Chemistry, 2019, 411, 3941-3949.	1.9	4
92	Increased Production of Riboflavin by Coordinated Expression of Multiple Genes in Operons in Bacillus subtilis. ACS Synthetic Biology, 2022, , .	1.9	4
93	Biochemical Characterization and Structural Insight into Interaction and Conformation Mechanisms of Serratia marcescens Lysine Decarboxylase (SmcadA). Molecules, 2021, 26, 697.	1.7	3
94	Hepatoprotective ability of tetramethylpyrazine produced by Bacillus amyloliquefaciens. Systems Microbiology and Biomanufacturing, 2021, 1, 223-233.	1.5	2
95	Citrulline deiminase pathway provides ATP and boosts growth of Clostridium carboxidivorans P7. Biotechnology for Biofuels, 2021, 14, 204.	6.2	1
96	Application of Ant Colony Clustering Algorithm in Discrimination the Origin of Longjing Tea. , 2010, , .		0
97	Simulation and design of injection locking oscillator. , 2017, , .		0