Chao Gao

List of Publications by Year
in descending order

92 papers	3,001 citations	159525 30 h-index	189801 50 g-index
99 all docs	99 docs citations	99 times ranked	2947 citing authors

#	Article	IF	Citations
1	Biotechnological routes based on lactic acid production from biomass. Biotechnology Advances, 2011, 29, 930-939.	6.0	248
2	Growing Multihydroxyl Hyperbranched Polymers on the Surfaces of Carbon Nanotubes by in Situ Ring-Opening Polymerization. Macromolecules, 2004, 37, 8846-8853.	2.2	159
3	Systematic metabolic engineering of Escherichia coli for high-yield production of fuel bio-chemical 2,3-butanediol. Metabolic Engineering, 2014, 23, 22-33.	3.6	132
4	A Novel Whole-Cell Biocatalyst with NAD+ Regeneration for Production of Chiral Chemicals. PLoS ONE, 2010, 5, e8860.	1.1	124
5	Metabolic engineering of Enterobacter cloacae for high-yield production of enantiopure (2 R ,3 R) Tj ETQq1 1 0.784314 rgBT /Overloc	3.6	117
6	A newly isolated Bacillus licheniformisstrain thermophilically produces 2,3-butanediol, a platform and fuel bio-chemical. Biotechnology for Biofuels, 2013, 6, 123.	6.2	87
7	Biotechnological routes to pyruvate production. Journal of Bioscience and Bioengineering, 2008, 105, 169-175.	1.1	86
8	Efficient Conversion of Phenylpyruvic Acid to Phenyllactic Acid by Using Whole Cells of Bacillus coagulans SDM. PLoS ONE, 2011, 6, e19030.	1.1	71
9	Contracted but effective: production of enantiopure 2,3-butanediol by thermophilic and GRAS Bacillus licheniformis. Green Chemistry, 2016, 18, 4693-4703.	4.6	66
10	Production of (2S,3S)-2,3-butanediol and (3S)-acetoin from glucose using resting cells of Klebsiella pneumonia and Bacillus subtilis. Bioresource Technology, 2011, 102, 10741-10744.	4.8	63
11	Engineering of cofactor regeneration enhances (2S,3S)-2,3-butanediol production from diacetyl. Scientific Reports, 2013, 3, 2643.	1.6	63
12	Efficient utilization of hemicellulose hydrolysate for propionic acid production using Propionibacterium acidipropionici. Bioresource Technology, 2012, 114, 711-714.	4.8	61
13	Efficient production of 2,3-butanediol from corn stover hydrolysate by using a thermophilic Bacillus licheniformis strain. Bioresource Technology, 2014, 170, 256-261.	4.8	60
14	Microbial lactate utilization: enzymes, pathogenesis, and regulation. Trends in Microbiology, 2014, 22, 589-599.	3.5	59
15	An artificial enzymatic reaction cascade for a cell-free bio-system based on glycerol. Green Chemistry, 2015, 17, 804-807.	4.6	51
16	Lactate Utilization Is Regulated by the FadR-Type Regulator LldR in Pseudomonas aeruginosa. Journal of Bacteriology, 2012, 194, 2687-2692.	1.0	50
17	Efficient Simultaneous Saccharification and Fermentation of Inulin to 2,3-Butanediol by Thermophilic Bacillus licheniformis ATCC 14580. Applied and Environmental Microbiology, 2014, 80, 6458-6464.	1.4	48
18	Enzymatic production of 5-aminovalerate from l-lysine using l-lysine monooxygenase and 5-aminovaleramide amidohydrolase. Scientific Reports, 2014, 4, 5657.	1.6	48

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19	Increased glutarate production by blocking the glutaryl-CoA dehydrogenation pathway and a catabolic pathway involving l-2-hydroxyglutarate. Nature Communications, 2018, 9, 2114.	5.8	48
20	Membrane-bound l- and d-lactate dehydrogenase activities of a newly isolated Pseudomonas stutzeri strain. Applied Microbiology and Biotechnology, 2007, 77, 91-98.	1.7	46
21	Production of <i>N</i> -Acetyl- <scp>d</scp> -Neuraminic Acid by Use of an Efficient Spore Surface Display System. Applied and Environmental Microbiology, 2011, 77, 3197-3201.	1.4	46
22	Production of (3S)-acetoin from diacetyl by using stereoselective NADPH-dependent carbonyl reductase and glucose dehydrogenase. Bioresource Technology, 2013, 137, 111-115.	4.8	46
23	Biotechnological production of acetoin, a bio-based platform chemical, from a lignocellulosic resource by metabolically engineered Enterobacter cloacae. Green Chemistry, 2016, 18, 1560-1570.	4.6	45
24	Efficient 2,3-Butanediol Production from Cassava Powder by a Crop-Biomass-Utilizer, Enterobacter cloacae subsp. dissolvens SDM. PLoS ONE, 2012, 7, e40442.	1.1	42
25	Metabolic engineering of Escherichia coli for production of (2S,3S)-butane-2,3-diol from glucose. Biotechnology for Biofuels, 2015, 8, 143.	6.2	41
26	Coupling between <scp>d</scp> -3-phosphoglycerate dehydrogenase and <scp>d</scp> -2-hydroxyglutarate dehydrogenase drives bacterial <scp>l</scp> -serine synthesis. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E7574-E7582.	3.3	41
27	Efficient bioconversion of 2,3-butanediol into acetoin using Gluconobacter oxydans DSM 2003. Biotechnology for Biofuels, 2013, 6, 155.	6.2	39
28	A novel ATP dependent dimethylsulfoniopropionate lyase in bacteria that releases dimethyl sulfide and acryloyl-CoA. ELife, 2021, 10, .	2.8	38
29	Production of value-added chemicals from glycerol using in vitro enzymatic cascades. Communications Chemistry, 2018, 1, .	2.0	37
30	Enantioselective oxidation of racemic lactic acid to d-lactic acid and pyruvic acid by Pseudomonas stutzeri SDM. Bioresource Technology, 2009, 100, 1878-1880.	4.8	35
31	Transcription Elongation Factor GreA Has Functional Chaperone Activity. PLoS ONE, 2012, 7, e47521.	1.1	35
32	Kinetic resolution of 2-hydroxybutanoate racemic mixtures by NAD-independent l-lactate dehydrogenase. Bioresource Technology, 2011, 102, 4595-4599.	4.8	32
33	NAD-Independent L-Lactate Dehydrogenase Is Required for L-Lactate Utilization in Pseudomonas stutzeri SDM. PLoS ONE, 2012, 7, e36519.	1.1	30
34	Pseudomonas stutzeri as a novel biocatalyst for pyruvate production from DL-lactate. Biotechnology Letters, 2006, 29, 105-110.	1.1	29
35	Relative Catalytic Efficiency of <i>ldhL</i> - and <i>ldhD</i> -Encoded Products Is Crucial for Optical Purity of Lactic Acid Produced by Lactobacillus Strains. Applied and Environmental Microbiology, 2012, 78, 3480-3483.	1.4	29
36	Escherichia coli transcription termination factor NusA: heat-induced oligomerization and chaperone activity. Scientific Reports, 2013, 3, 2347.	1.6	29

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37	Highly stereoselective biosynthesis of (R)-Î±-hydroxy carboxylic acids through rationally re-designed mutation of d-lactate dehydrogenase. Scientific Reports, 2013, 3, 3401.	1.6	28
38	NAD-Independent l-Lactate Dehydrogenase Required for l-Lactate Utilization in Pseudomonas stutzeri A1501. Journal of Bacteriology, 2015, 197, 2239-2247.	1.0	27
39	Efficient 2,3-butanediol production from whey powder using metabolically engineered Klebsiella oxytoca. Microbial Cell Factories, 2020, 19, 162.	1.9	27
40	Efficient Production of 2-Oxobutyrate from 2-Hydroxybutyrate by Using Whole Cells of <i>Pseudomonas stutzeri</i> Strain SDM. Applied and Environmental Microbiology, 2010, 76, 1679-1682.	1.4	24
41	Production of diacetyl by metabolically engineered Enterobacter cloacae. Scientific Reports, 2015, 5, 9033.	1.6	24
42	Overexpression of transport proteins improves the production of 5-aminovalerate from l-lysine in Escherichia coli. Scientific Reports, 2016, 6, 30884.	1.6	24
43	Efficient production of propionic acid through high density culture with recycling cells of Propionibacterium acidipropionici. Bioresource Technology, 2016, 216, 856-861.	4.8	23
44	Enzymatic Cascades for Efficient Biotransformation of Racemic Lactate Derived from Corn Steep Water. ACS Sustainable Chemistry and Engineering, 2017, 5, 3456-3464.	3.2	22
45	2,3â€Butanediol catabolism in <i>Pseudomonas aeruginosa</i> PAO1. Environmental Microbiology, 2018, 20, 3927-3940.	1.8	22
46	Genome Sequence of Pseudomonas stutzeri SDM-LAC, a Typical Strain for Studying the Molecular Mechanism of Lactate Utilization. Journal of Bacteriology, 2012, 194, 894-895.	1.0	21
47	Utilization of <scp>d</scp> -Lactate as an Energy Source Supports the Growth of Gluconobacter oxydans. Applied and Environmental Microbiology, 2015, 81, 4098-4110.	1.4	21
48	Metabolic Engineering of Bacillus licheniformis for Production of Acetoin. Frontiers in Bioengineering and Biotechnology, 2020, 8, 125.	2.0	21
49	An l-2-hydroxyglutarate biosensor based on specific transcriptional regulator LhgR. Nature Communications, 2021, 12, 3619.	5.8	21
50	Production of <scp>d-</scp>Xylonate from Corn Cob Hydrolysate by a Metabolically Engineered <i>Escherichia coli</i> Strain. ACS Sustainable Chemistry and Engineering, 2019, 7, 2160-2168.	3.2	20
51	Chemoenzymatic Synthesis of <i>N</i> -Acetyl- <scp>d</scp> -Neuraminic Acid from <i>N</i> -Acetyl- <scp>d</scp> -Glucosamine by Using the Spore Surface-Displayed <i>N</i> -Acetyl- <scp>d</scp> -Neuraminic Acid Aldolase. Applied and Environmental Microbiology, 2011, 77, 7080-7083.	1.4	17
52	Rationally re-designed mutation of NAD-independent l-lactate dehydrogenase: high optical resolution of racemic mandelic acid by the engineered Escherichia coli. Microbial Cell Factories, 2012, 11, 151.	1.9	17
53	Both FMNH2 and FADH2 can be utilized by the dibenzothiophene monooxygenase from a desulfurizing bacterium Mycobacterium goodii X7B. Bioresource Technology, 2009, 100, 2594-2599.	4.8	16
54	Pyruvate producing biocatalyst with constitutive NAD-independent lactate dehydrogenases. Process Biochemistry, 2010, 45, 1912-1915.	1.8	16

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55	Genome Sequence of the Lactate-Utilizing Pseudomonas aeruginosa Strain XMG. Journal of Bacteriology, 2012, 194, 4751-4752.	1.0	16
56	Efficient conversion of 1,2-butanediol to (R)-2-hydroxybutyric acid using whole cells of Gluconobacter oxydans. Bioresource Technology, 2012, 115, 75-78.	4.8	16
57	Functional and cooperative stabilization of a two-metal (Ca, Zn) center in Î±-amylase derived from Flavobacteriaceae species. Scientific Reports, 2017, 7, 17933.	1.6	16
58	Non-Sterilized Fermentation of 2,3-Butanediol with Seawater by Metabolic Engineered Fast-Growing Vibrio natriegens. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	16
59	Regulation of Glutarate Catabolism by GntR Family Regulator CsiR and LysR Family Regulator GcdR in Pseudomonas putida KT2440. MBio, 2019, 10, .	1.8	15
60	A d-2-hydroxyglutarate biosensor based on specific transcriptional regulator DhdR. Nature Communications, 2021, 12, 7108.	5.8	14
61	Enzymatic Resolution by a <scp>d</scp>â€Lactate Oxidase Catalyzed Reaction for (<i>S</i>)â€2â€Hydroxycarboxylic Acids. ChemCatChem, 2016, 8, 2630-2633.	1.8	13
62	d-2-Hydroxyglutarate dehydrogenase plays a dual role in l-serine biosynthesis and d-malate utilization in the bacterium Pseudomonas stutzeri. Journal of Biological Chemistry, 2018, 293, 15513-15523.	1.6	13
63	A novel biocatalyst for efficient production of 2-oxo-carboxylates using glycerol as the cost-effective carbon source. Biotechnology for Biofuels, 2015, 8, 186.	6.2	12
64	A Bacterial Multidomain NAD-Independent <scp>d</scp> -Lactate Dehydrogenase Utilizes Flavin Adenine Dinucleotide and Fe-S Clusters as Cofactors and Quinone as an Electron Acceptor for <scp>d</scp> -Lactate Oxidization. Journal of Bacteriology, 2017, 199, .	1.0	12
65	2,3-Butanediol synthesis from glucose supplies NADH for elimination of toxic acetate produced during overflow metabolism. Cell Discovery, 2021, 7, 43.	3.1	12
66	Efficient bioconversion of l-threonine to 2-oxobutyrate using whole cells of Pseudomonas stutzeri SDM. Bioresource Technology, 2012, 110, 719-722.	4.8	11
67	Efficient secretory expression of recombinant proteins in Escherichia coli with a novel actinomycete signal peptide. Protein Expression and Purification, 2017, 129, 69-74.	0.6	11
68	Genome Sequence of the Nonpathogenic Pseudomonas aeruginosa Strain ATCC 15442. Genome Announcements, 2014, 2, .	0.8	10
69	Engineering of glycerol utilization in Gluconobacter oxydans 621H for biocatalyst preparation in a low-cost way. Microbial Cell Factories, 2018, 17, 158.	1.9	10
70	Genome Sequence of Clostridium butyricum Strain DSM 10702, a Promising Producer of Biofuels and Biochemicals. Genome Announcements, 2013, 1, .	0.8	9
71	Reconstruction of lactate utilization system in Pseudomonas putida KT2440: a novel biocatalyst for l-2-hydroxy-carboxylate production. Scientific Reports, 2014, 4, 6939.	1.6	9
72	Efficient Production of (R)-2-Hydroxy-4-Phenylbutyric Acid by Using a Coupled Reconstructed d-Lactate Dehydrogenase and Formate Dehydrogenase System. PLoS ONE, 2014, 9, e104204.	1.1	9

#	ARTICLE	IF	CITATIONS
73	Insights into methionine S-methylation in diverse organisms. Nature Communications, 2022, 13, .	5.8	9
74	Efficient Production of Pyruvate from DL-Lactate by the Lactate-Utilizing Strain Pseudomonas stutzeri SDM. PLoS ONE, 2012, 7, e40755.	1.1	8
75	Coexistence of two <scp>d</scp>â€lactateâ€utilizing systems in <i>Pseudomonas putida</i> KT2440. Environmental Microbiology Reports, 2016, 8, 699-707.	1.0	8
76	Coculture of <i>Gluconobacter oxydans</i> and <i>Escherichia coli</i> for 3,4-Dihydroxybutyric Acid Production from Xylose. ACS Sustainable Chemistry and Engineering, 2021, 9, 10809-10817.	3.2	8
77	Genome Sequence of Klebsiella pneumoniae LZ, a Potential Platform Strain for 1,3-Propanediol Production. Journal of Bacteriology, 2012, 194, 4457-4458.	1.0	7
78	Purification and characterization of a flavin reductase from the biodesulfurizing bacterium Mycobacterium goodii X7B. Process Biochemistry, 2012, 47, 1144-1149.	1.8	7
79	Two NADâ€independent <scp>l</scp>â€lactate dehydrogenases drive <scp>l</scp>â€lactate utilization in <i>Pseudomonas aeruginosa</i> PAO1. Environmental Microbiology Reports, 2018, 10, 569-575.	1.0	7
80	Biotechnological production of chiral acetoin. Trends in Biotechnology, 2022, 40, 958-973.	4.9	7
81	Pyruvate Production from Whey Powder by Metabolic Engineered <i>Klebsiella oxytoca</i>. Journal of Agricultural and Food Chemistry, 2020, 68, 15275-15283.	2.4	6
82	Production of Ethylene Glycol from Glycerol Using an In Vitro Enzymatic Cascade. Catalysts, 2021, 11, 214.	1.6	6
83	A d,l-lactate biosensor based on allosteric transcription factor LldR and amplified luminescent proximity homogeneous assay. Biosensors and Bioelectronics, 2022, 211, 114378.	5.3	6
84	Numerical analysis and experimental research on load carrying capacity of water-lubricated tilting-pad thrust bearings. Mechanics and Industry, 2018, 19, 201.	0.5	5
85	Enhanced In Vitro Cascade Catalysis of Glycerol into Pyruvate and Acetoin by Integration with Dihydroxy Acid Dehydratase from Paralcaligenes ureilyticus. Catalysts, 2021, 11, 1282.	1.6	5
86	Enhanced <scp>l</scp>-Serine Production from Glycerol by Integration with Thermodynamically Favorable <scp>d-</scp>Glycerate Oxidation. ACS Sustainable Chemistry and Engineering, 2022, 10, 2587-2592.	3.2	5
87	Crystal structures of Î³-glutamylmethylamide synthetase provide insight into bacterial metabolism of oceanic monomethylamine. Journal of Biological Chemistry, 2021, 296, 100081.	1.6	3
88	Draft Genome Sequence of the Gluconobacter oxydans Strain DSM 2003, an Important Biocatalyst for Industrial Use. Genome Announcements, 2014, 2, .	0.8	2
89	Dehydrogenation Mechanism of Three Stereoisomers of Butane-2,3-Diol in Pseudomonas putida KT2440. Frontiers in Bioengineering and Biotechnology, 2021, 9, 728767.	2.0	2
90	Production of hydroxypyruvate from glycerate by a novel biotechnological route. Bioresource Technology, 2013, 131, 552-554.	4.8	1

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91	Characterization of the Trimethylamine N-Oxide Transporter From Pelagibacter Strain HTCC1062 Reveals Its Oligotrophic Niche Adaption. Frontiers in Microbiology, 2022, 13, 838608.	1.5	1
92	Sequence similarity network analysis, crystallization, and X-ray crystallographic analysis of the lactate metabolism regulator LldR from Pseudomonas aeruginosa. Bioresources and Bioprocessing, 2016, 3, .	2.0	0