

Zhen Kang

List of Publications by Citations

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115
papers

2,417
citations

29
h-index

42
g-index

135
ext. papers

3,027
ext. citations

5.4
avg, IF

5.17
L-index

#	Paper	IF	Citations
115	Engineering Escherichia coli for efficient production of 5-aminolevulinic acid from glucose. <i>Metabolic Engineering</i> , 2011 , 13, 492-8	9.7	94
114	Developing Bacillus spp. as a cell factory for production of microbial enzymes and industrially important biochemicals in the context of systems and synthetic biology. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 6113-27	5.7	91
113	Recent advances in microbial production of 5-aminolevulinic acid and vitamin B12. <i>Biotechnology Advances</i> , 2012 , 30, 1533-42	17.8	85
112	A combined physiological and proteomic approach to reveal lactic-acid-induced alterations in Lactobacillus casei Zhang and its mutant with enhanced lactic acid tolerance. <i>Applied Microbiology and Biotechnology</i> , 2012 , 93, 707-22	5.7	78
111	Production of specific-molecular-weight hyaluronan by metabolically engineered Bacillus subtilis 168. <i>Metabolic Engineering</i> , 2016 , 35, 21-30	9.7	74
110	Spatial modulation of key pathway enzymes by DNA-guided scaffold system and respiration chain engineering for improved N-acetylglucosamine production by Bacillus subtilis. <i>Metabolic Engineering</i> , 2014 , 24, 61-9	9.7	65
109	Enhanced acid tolerance in Lactobacillus casei by adaptive evolution and compared stress response during acid stress. <i>Biotechnology and Bioprocess Engineering</i> , 2012 , 17, 283-289	3.1	61
108	Characterization and application of endogenous phase-dependent promoters in Bacillus subtilis. <i>Applied Microbiology and Biotechnology</i> , 2017 , 101, 4151-4161	5.7	60
107	Optimization of the heme biosynthesis pathway for the production of 5-aminolevulinic acid in Escherichia coli. <i>Scientific Reports</i> , 2015 , 5, 8584	4.9	59
106	Complete PHB mobilization in Escherichia coli enhances the stress tolerance: a potential biotechnological application. <i>Microbial Cell Factories</i> , 2009 , 8, 47	6.4	59
105	A novel strategy for succinate and polyhydroxybutyrate co-production in Escherichia coli. <i>Bioresource Technology</i> , 2010 , 101, 7675-8	11	56
104	Efficient biosynthesis of polysaccharides chondroitin and heparosan by metabolically engineered Bacillus subtilis. <i>Carbohydrate Polymers</i> , 2016 , 140, 424-32	10.3	55
103	Recent advances in discovery, heterologous expression, and molecular engineering of cyclodextrin glycosyltransferase for versatile applications. <i>Biotechnology Advances</i> , 2014 , 32, 415-28	17.8	53
102	Molecular engineering of secretory machinery components for high-level secretion of proteins in Bacillus species. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2014 , 41, 1599-607	4.2	49
101	Construction of a stress-induced system in Escherichia coli for efficient polyhydroxyalkanoates production. <i>Applied Microbiology and Biotechnology</i> , 2008 , 79, 203-8	5.7	48
100	Small RNA regulators in bacteria: powerful tools for metabolic engineering and synthetic biology. <i>Applied Microbiology and Biotechnology</i> , 2014 , 98, 3413-24	5.7	45
99	Synthetic Biology Toolbox and Chassis Development in Bacillus subtilis. <i>Trends in Biotechnology</i> , 2019 , 37, 548-562	15.1	45

98	High-level extracellular production of alkaline polygalacturonate lyase in <i>Bacillus subtilis</i> with optimized regulatory elements. <i>Bioresource Technology</i> , 2013 , 146, 543-548	11	42
97	Production of succinate and polyhydroxyalkanoate from substrate mixture by metabolically engineered <i>Escherichia coli</i> . <i>Bioresource Technology</i> , 2011 , 102, 6600-4	11	41
96	Rational Design to Improve Protein Thermostability: Recent Advances and Prospects. <i>ChemBioEng Reviews</i> , 2015 , 2, 87-94	5.2	40
95	Bioconversion of l-glutamic acid to ̢-ketoglutaric acid by an immobilized whole-cell biocatalyst expressing l-amino acid deaminase from <i>Proteus mirabilis</i> . <i>Journal of Biotechnology</i> , 2014 , 169, 112-20	3.7	39
94	High-yield novel leech hyaluronidase to expedite the preparation of specific hyaluronan oligomers. <i>Scientific Reports</i> , 2014 , 4, 4471	4.9	38
93	Construction and Characterization of Broad-Spectrum Promoters for Synthetic Biology. <i>ACS Synthetic Biology</i> , 2018 , 7, 287-291	5.7	35
92	Nitrogen regulation involved in the accumulation of urea in <i>Saccharomyces cerevisiae</i> . <i>Yeast</i> , 2013 , 30, 437-47	3.4	34
91	5-Aminolevulinic acid production from inexpensive glucose by engineering the C4 pathway in <i>Escherichia coli</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2017 , 44, 1127-1135	4.2	32
90	Metabolic engineering of <i>Escherichia coli</i> for production of 2-phenylethanol from renewable glucose. <i>Applied Biochemistry and Biotechnology</i> , 2014 , 172, 2012-21	3.2	31
89	Small RNA RyhB as a potential tool used for metabolic engineering in <i>Escherichia coli</i> . <i>Biotechnology Letters</i> , 2012 , 34, 527-31	3	31
88	Combinatorial Evolution of Enzymes and Synthetic Pathways Using One-Step PCR. <i>ACS Synthetic Biology</i> , 2016 , 5, 259-68	5.7	30
87	Overproduction, purification, and characterization of extracellular lipoxygenase of <i>Pseudomonas aeruginosa</i> in <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 5793-800	5.7	30
86	High-level expression and characterization of recombinant acid urease for enzymatic degradation of urea in rice wine. <i>Applied Microbiology and Biotechnology</i> , 2015 , 99, 301-8	5.7	28
85	Analysis of the chemical composition of cotton seed coat by Fourier-transform infrared (FT-IR) microspectroscopy. <i>Cellulose</i> , 2009 , 16, 1099-1107	5.5	28
84	Recent advances in production of 5-aminolevulinic acid using biological strategies. <i>World Journal of Microbiology and Biotechnology</i> , 2017 , 33, 200	4.4	27
83	Engineering of multiple modular pathways for high-yield production of 5-aminolevulinic acid in <i>Escherichia coli</i> . <i>Bioresource Technology</i> , 2019 , 274, 353-360	11	27
82	Eliminating the capsule-like layer to promote glucose uptake for hyaluronan production by engineered <i>Corynebacterium glutamicum</i> . <i>Nature Communications</i> , 2020 , 11, 3120	17.4	26
81	Production of glucaric acid from myo-inositol in engineered <i>Pichia pastoris</i> . <i>Enzyme and Microbial Technology</i> , 2016 , 91, 8-16	3.8	26

80	Development of GRAS strains for nutraceutical production using systems and synthetic biology approaches: advances and prospects. <i>Critical Reviews in Biotechnology</i> , 2017 , 37, 139-150	9.4	23
79	Recent advances of molecular toolbox construction expand <i>Pichia pastoris</i> in synthetic biology applications. <i>World Journal of Microbiology and Biotechnology</i> , 2017 , 33, 19	4.4	23
78	Bio-Based Strategies for Producing Glycosaminoglycans and Their Oligosaccharides. <i>Trends in Biotechnology</i> , 2018 , 36, 806-818	15.1	23
77	Enzymatic production of specifically distributed hyaluronan oligosaccharides. <i>Carbohydrate Polymers</i> , 2015 , 129, 194-200	10.3	22
76	DATEL: A Scarless and Sequence-Independent DNA Assembly Method Using Thermostable Exonucleases and Ligase. <i>ACS Synthetic Biology</i> , 2016 , 5, 1028-32	5.7	22
75	The application of powerful promoters to enhance gene expression in industrial microorganisms. <i>World Journal of Microbiology and Biotechnology</i> , 2017 , 33, 23	4.4	21
74	Construction of a novel, stable, food-grade expression system by engineering the endogenous toxin-antitoxin system in <i>Bacillus subtilis</i> . <i>Journal of Biotechnology</i> , 2016 , 219, 40-7	3.7	20
73	A microbial-enzymatic strategy for producing chondroitin sulfate glycosaminoglycans. <i>Biotechnology and Bioengineering</i> , 2018 , 115, 1561-1570	4.9	19
72	Functional expression of trypsin from <i>Streptomyces griseus</i> by <i>Pichia pastoris</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2012 , 39, 1651-62	4.2	18
71	Enhanced production of L-phenylalanine in <i>Corynebacterium glutamicum</i> due to the introduction of <i>Escherichia coli</i> wild-type gene <i>aroH</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2013 , 40, 643-51	4.2	18
70	Metabolic engineering to improve 5-aminolevulinic acid production. <i>Bioengineered Bugs</i> , 2011 , 2, 342-5		18
69	Enhanced production of leech hyaluronidase by optimizing secretion and cultivation in <i>Pichia pastoris</i> . <i>Applied Microbiology and Biotechnology</i> , 2016 , 100, 707-17	5.7	17
68	Rapid evolution of hyaluronan synthase to improve hyaluronan production and molecular mass in <i>Bacillus subtilis</i> . <i>Biotechnology Letters</i> , 2016 , 38, 2103-2108	3	17
67	Directed evolution combined with synthetic biology strategies expedite semi-rational engineering of genes and genomes. <i>Bioengineered</i> , 2015 , 6, 136-40	5.7	15
66	Construction and application of novel feedback-resistant 3-deoxy-d-arabino-heptulosonate-7-phosphate synthases by engineering the N-terminal domain for L-phenylalanine synthesis. <i>FEMS Microbiology Letters</i> , 2014 , 353, 11-8	2.9	15
65	Developing <i>Aspergillus niger</i> as a cell factory for food enzyme production. <i>Biotechnology Advances</i> , 2020 , 44, 107630	17.8	15
64	High-yield secretory production of stable, active trypsin through engineering of the N-terminal peptide and self-degradation sites in <i>Pichia pastoris</i> . <i>Bioresource Technology</i> , 2018 , 247, 81-87	11	15
63	Comparative analysis of heterologous expression, biochemical characterization optimal production of an alkaline α -amylase from alkaliphilic <i>Alkalimonas amylolytica</i> in <i>Escherichia coli</i> and <i>Pichia pastoris</i> . <i>Biotechnology Progress</i> , 2013 , 29, 39-47	2.8	14

62	Enhanced thermal stability of Pseudomonas aeruginosa lipoxxygenase through modification of two highly flexible regions. <i>Applied Microbiology and Biotechnology</i> , 2014 , 98, 1663-9	5.7	14
61	Engineering Escherichia coli for an efficient aerobic fermentation platform. <i>Journal of Biotechnology</i> , 2009 , 144, 58-63	3.7	14
60	Rational design of a novel propeptide for improving active production of Streptomyces griseus trypsin in Pichia pastoris. <i>Applied and Environmental Microbiology</i> , 2013 , 79, 3851-5	4.8	13
59	Influence of culture modes on the microbial production of hyaluronic acid by Streptococcus zooepidemicus. <i>Biotechnology and Bioprocess Engineering</i> , 2008 , 13, 269-273	3.1	13
58	Molecular Engineering of Bacillus paralicheniformis Acid Urease To Degrade Urea and Ethyl Carbamate in Model Chinese Rice Wine. <i>Journal of Agricultural and Food Chemistry</i> , 2018 , 66, 13011-13019	5.7	13
57	Rational engineering of multiple module pathways for the production of L-phenylalanine in Corynebacterium glutamicum. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2015 , 42, 787-97	4.2	12
56	Structural insights into enzymatic degradation of oxidized polyvinyl alcohol. <i>ChemBioChem</i> , 2014 , 15, 1882-6	3.8	12
55	Improved catalytic efficiency of catalase from Bacillus subtilis by rational mutation of Lys114. <i>Process Biochemistry</i> , 2014 , 49, 1497-1502	4.8	12
54	Production of β-ketoisocaproate via free-whole-cell biotransformation by Rhodococcus opacus DSM 43250 with L-leucine as the substrate. <i>Enzyme and Microbial Technology</i> , 2011 , 49, 321-5	3.8	12
53	Influence of hyaluronidase addition on the production of hyaluronic acid by batch culture of Streptococcus zooepidemicus. <i>Food Chemistry</i> , 2008 , 110, 923-6	8.5	12
52	Improvement of transglutaminase production by extending differentiation phase of Streptomyces hygroscopicus: mechanism and application. <i>Applied Microbiology and Biotechnology</i> , 2013 , 97, 7711-9	5.7	11
51	Identification of transporter proteins for PQQ-secretion pathways by transcriptomics and proteomics analysis in Gluconobacter oxydans WSH-003. <i>Frontiers of Chemical Science and Engineering</i> , 2017 , 11, 72-88	4.5	11
50	Modeling and optimization of microbial hyaluronic acid production by Streptococcus zooepidemicus using radial basis function neural network coupling quantum-behaved particle swarm optimization algorithm. <i>Biotechnology Progress</i> , 2009 , 25, 1819-25	2.8	11
49	Effect of cutinase on the degradation of cotton seed coat in bio-scouring. <i>Biotechnology and Bioprocess Engineering</i> , 2009 , 14, 354-360	3.1	11
48	Salt-induced osmotic stress for glutathione overproduction in Candida utilis. <i>Enzyme and Microbial Technology</i> , 2009 , 45, 324-329	3.8	11
47	Characterisation of separated end hyaluronan oligosaccharides from leech hyaluronidase and evaluation of angiogenesis. <i>Carbohydrate Polymers</i> , 2016 , 142, 309-16	10.3	11
46	Integrated Optimization of the In Vivo Heme Biosynthesis Pathway and the In Vitro Iron Concentration for 5-Aminolevulinate Production. <i>Applied Biochemistry and Biotechnology</i> , 2016 , 178, 1252-62	3.2	10
45	A Bacillus paralicheniformis Iron-Containing Urease Reduces Urea Concentrations in Rice Wine. <i>Applied and Environmental Microbiology</i> , 2017 , 83,	4.8	10

44	N-terminal engineering of glutamyl-tRNA reductase with positive charge arginine to increase 5-aminolevulinic acid biosynthesis. <i>Bioengineered</i> , 2017 , 8, 424-427	5.7	10
43	Improving maltodextrin specificity for enzymatic synthesis of 2-O-d-glucopyranosyl-l-ascorbic acid by site-saturation engineering of subsite-3 in cyclodextrin glycosyltransferase from <i>Paenibacillus macerans</i> . <i>Journal of Biotechnology</i> , 2013 , 166, 198-205	3.7	10
42	Optimization of amino acids addition for efficient production of glutathione in <i>Candida utilis</i> . <i>Biochemical Engineering Journal</i> , 2008 , 41, 234-240	4.2	10
41	Screening and characterization of an aerobic nitrifying-denitrifying bacterium from activated sludge. <i>Biotechnology and Bioprocess Engineering</i> , 2012 , 17, 353-360	3.1	9
40	Enhanced cutinase production of <i>Thermobifida fusca</i> by a two-stage batch and fed-batch cultivation strategy. <i>Biotechnology and Bioprocess Engineering</i> , 2009 , 14, 46-51	3.1	9
39	Construction of Synthetic Promoters by Assembling the Sigma Factor Binding -35 and -10 Boxes. <i>Biotechnology Journal</i> , 2019 , 14, e1800298	5.6	9
38	Improved Production of Active <i>Streptomyces griseus</i> Trypsin with a Novel Auto-Catalyzed Strategy. <i>Scientific Reports</i> , 2016 , 6, 23158	4.9	8
37	Engineering strong and stress-responsive promoters in by interlocking sigma factor binding motifs. <i>Synthetic and Systems Biotechnology</i> , 2019 , 4, 197-203	4.2	8
36	Biosynthesis of non-animal chondroitin sulfate from methanol using genetically engineered <i>Pichia pastoris</i> . <i>Green Chemistry</i> , 2021 , 23, 4365-4374	10	8
35	A new sRNA-mediated posttranscriptional regulation system for <i>Bacillus subtilis</i> . <i>Biotechnology and Bioengineering</i> , 2018 , 115, 2986-2995	4.9	8
34	Secretory expression of biologically active chondroitinase ABC I for production of chondroitin sulfate oligosaccharides. <i>Carbohydrate Polymers</i> , 2019 , 224, 115135	10.3	7
33	Structure-based replacement of methionine residues at the catalytic domains with serine significantly improves the oxidative stability of alkaline amylase from alkaliphilic <i>Alkalimonas amylolytica</i> . <i>Biotechnology Progress</i> , 2012 , 28, 1271-7	2.8	7
32	Biosynthesis of 2-O-D-glucopyranosyl-l-ascorbic acid from maltose by an engineered cyclodextrin glycosyltransferase from <i>Paenibacillus macerans</i> . <i>Carbohydrate Research</i> , 2013 , 382, 101-7	2.9	7
31	Enhanced water absorption of wheat gluten by hydrothermal treatment followed by microbial transglutaminase reaction. <i>Journal of the Science of Food and Agriculture</i> , 2010 , 90, 658-63	4.3	7
30	High-level constitutive expression of leech hyaluronidase with combined strategies in recombinant <i>Pichia pastoris</i> . <i>Applied Microbiology and Biotechnology</i> , 2020 , 104, 1621-1632	5.7	7
29	Food-grade expression of an iron-containing acid urease in <i>Bacillus subtilis</i> . <i>Journal of Biotechnology</i> , 2019 , 293, 66-71	3.7	6
28	Improvement of catalytic efficiency and thermostability of recombinant <i>Streptomyces griseus</i> trypsin by introducing artificial peptide. <i>World Journal of Microbiology and Biotechnology</i> , 2014 , 30, 1819-27	4.4	6
27	Construction of saturated odd- and even-numbered hyaluronan oligosaccharide building block library. <i>Carbohydrate Polymers</i> , 2020 , 231, 115700	10.3	6

26	High-level production of creatine amidinohydrolase from <i>Arthrobacter nicotianae</i> 23710 in <i>Escherichia coli</i> . <i>Applied Biochemistry and Biotechnology</i> , 2015 , 175, 2564-73	3.2	5
25	Optimizing the sulfation-modification system for scale preparation of chondroitin sulfate A. <i>Carbohydrate Polymers</i> , 2020 , 246, 116570	10.3	5
24	High efficiency preparation and characterization of intact poly(vinyl alcohol) dehydrogenase from <i>Sphingopyxis</i> sp.113P3 in <i>Escherichia coli</i> by inclusion bodies renaturation. <i>Applied Biochemistry and Biotechnology</i> , 2014 , 172, 2540-51	3.2	5
23	The effects of RecO deficiency in <i>Lactococcus lactis</i> NZ9000 on resistance to multiple environmental stresses. <i>Journal of the Science of Food and Agriculture</i> , 2014 , 94, 3125-33	4.3	5
22	Engineering the heparin-binding pocket to enhance the catalytic efficiency of a thermostable heparinase III from <i>Bacteroides thetaiotaomicron</i> . <i>Enzyme and Microbial Technology</i> , 2020 , 137, 109549	3.8	5
21	Comparative study of L-phenylalanine production in the growing and stationary phases during high cell density cultivation of an auxotrophic <i>Escherichia coli</i> . <i>Biotechnology and Bioprocess Engineering</i> , 2011 , 16, 916-922	3.1	4
20	Enhancement of glutathione production in a coupled system of adenosine deaminase-deficient recombinant <i>Escherichia coli</i> and <i>Saccharomyces cerevisiae</i> . <i>Enzyme and Microbial Technology</i> , 2009 , 44, 269-273	3.8	4
19	Metabolic Engineering of to Improve Glucan Biosynthesis. <i>Journal of Microbiology and Biotechnology</i> , 2019 , 29, 758-764	3.3	4
18	Hydrodynamics and mass transfer in spinner flasks: Implications for large scale cultured meat production. <i>Biochemical Engineering Journal</i> , 2021 , 167, 107864	4.2	4
17	Statistical model based optimization of spore production by solid-state culture of <i>Beauveria bassiana</i> . <i>Biocontrol Science and Technology</i> , 2010 , 20, 1087-1095	1.7	3
16	In Silico Protein Design Promotes the Rapid Evolution of Industrial Enzymes. <i>Biochemistry</i> , 2019 , 58, 1451-1453	3.1	3
15	Scarless assembly of unphosphorylated DNA fragments with a simplified DATEL method. <i>Bioengineered</i> , 2017 , 8, 296-301	5.7	2
14	Production of novel NaN ₃ -resistant creatine amidinohydrolase in recombinant <i>Escherichia coli</i> . <i>Bioengineered</i> , 2015 , 6, 248-50	5.7	2
13	Roles of tryptophan residue and disulfide bond in the variable lid region of oxidized polyvinyl alcohol hydrolase. <i>Biochemical and Biophysical Research Communications</i> , 2014 , 452, 509-14	3.4	2
12	Evaluation and application of constitutive promoters for cutinase production by <i>Saccharomyces cerevisiae</i> . <i>Journal of Microbiology</i> , 2017 , 55, 538-544	3	2
11	Statistical modeling and optimization for enhanced hyaluronic acid production by batch culture of <i>Streptococcus zooepidemicus</i> via the supplement of uracil. <i>Frontiers of Chemical Engineering in China</i> , 2009 , 3, 351-356		2
10	Secretory expression of the rat aryl sulfotransferases IV with improved catalytic efficiency by molecular engineering. <i>3 Biotech</i> , 2019 , 9, 246	2.8	1
9	Improving production of <i>Streptomyces griseus</i> trypsin for enzymatic processing of insulin precursor. <i>Microbial Cell Factories</i> , 2020 , 19, 88	6.4	1

8	Closed-Loop System Driven by ADP Phosphorylation from Pyrophosphate Affords Equimolar Transformation of ATP to 3?-Phosphoadenosine-5?-phosphosulfate. <i>ACS Catalysis</i> , 2021 , 11, 10405-10415	13.1	1
7	A comparative study on the genomes, transcriptomes, and metabolic properties of Escherichia coli strains Nissle 1917, BL21(DE3), and MG1655. <i>Engineering Microbiology</i> , 2022 , 2, 100012		1
6	Structure and cleavage pattern of a hyaluronate 3-glycanohydrolase in the glycoside hydrolase 79 family. <i>Carbohydrate Polymers</i> , 2022 , 277, 118838	10.3	0
5	Engineering a thermostable chondroitinase for production of specifically distributed low-molecular-weight chondroitin sulfate. <i>Biotechnology Journal</i> , 2021 , 16, e2000321	5.6	0
4	Inducible Population Quality Control of Engineered for Improved -Acetylneuraminic Acid Biosynthesis. <i>ACS Synthetic Biology</i> , 2021 , 10, 2197-2209	5.7	0
3	Engineering the probiotic bacterium Escherichia coli Nissle 1917 as an efficient cell factory for heparosan biosynthesis.. <i>Enzyme and Microbial Technology</i> , 2022 , 158, 110038	3.8	0
2	Combinatorial Evolution of DNA with RECODE. <i>Methods in Molecular Biology</i> , 2018 , 1772, 205-212	1.4	
1	DNA Assembly with the DATEL Method. <i>Methods in Molecular Biology</i> , 2018 , 1772, 421-428	1.4	