

# Wenli Zhang

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6157334/publications.pdf>

Version: 2024-02-01

110  
papers

2,822  
citations

186209

28  
h-index

243529

44  
g-index

112  
all docs

112  
docs citations

112  
times ranked

1653  
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent advances on applications and biotechnological production of d-psicose. <i>Applied Microbiology and Biotechnology</i> , 2012, 94, 1461-1467.	1.7	127
2	Enzymatic approaches to rare sugar production. <i>Biotechnology Advances</i> , 2017, 35, 267-274.	6.0	124
3	Recent advances in d-allulose: Physiological functionalities, applications, and biological production. <i>Trends in Food Science and Technology</i> , 2016, 54, 127-137.	7.8	92
4	Characterization of a Metal-Dependent <i>d</i> -Psicose 3-Epimerase from a Novel Strain, <i>Desmospora</i> sp. 8437. <i>Journal of Agricultural and Food Chemistry</i> , 2013, 61, 11468-11476.	2.4	74
5	Characterization of a Novel Metal-Dependent D-Psicose 3-Epimerase from <i>Clostridium scindens</i> 35704. <i>PLoS ONE</i> , 2013, 8, e62987.	1.1	70
6	Characterization of a d-psicose 3-epimerase from <i>Dorea</i> sp. CAG317 with an acidic pH optimum and a high specific activity. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015, 120, 68-74.	1.8	69
7	Characterization of a d-psicose-producing enzyme, d-psicose 3-epimerase, from <i>Clostridium</i> sp.. <i>Biotechnology Letters</i> , 2013, 35, 1481-1486.	1.1	64
8	Biochemical characterization of a <i>d</i> -psicose 3-epimerase from <i>Treponema primitia</i> <i>ZAS</i> and its application on enzymatic production of <i>d</i> -psicose. <i>Journal of the Science of Food and Agriculture</i> , 2016, 96, 49-56.	1.7	60
9	Silver nanoparticles induced cytotoxicity in HT22 cells through autophagy and apoptosis via PI3K/AKT/mTOR signaling pathway. <i>Ecotoxicology and Environmental Safety</i> , 2021, 208, 111696.	2.9	60
10	Recent research on the physiological functions, applications, and biotechnological production of d-allose. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 4269-4278.	1.7	58
11	Accessibility of the Shine-Dalgarno Sequence Dictates N-Terminal Codon Bias in <i>E. Coli</i> . <i>Molecular Cell</i> , 2018, 70, 894-905.e5.	4.5	58
12	Recent advances on $\alpha$ -fucosyllactose: physiological properties, applications, and production approaches. <i>Critical Reviews in Food Science and Nutrition</i> , 2022, 62, 2083-2092.	5.4	56
13	Biosynthesis of levan from sucrose using a thermostable levansucrase from <i>Lactobacillus reuteri</i> LTH5448. <i>International Journal of Biological Macromolecules</i> , 2018, 113, 29-37.	3.6	55
14	Amylosucrase as a transglucosylation tool: From molecular features to bioengineering applications. <i>Biotechnology Advances</i> , 2018, 36, 1540-1552.	6.0	51
15	Inulin and its enzymatic production by inulosucrase: Characteristics, structural features, molecular modifications and applications. <i>Biotechnology Advances</i> , 2019, 37, 306-318.	6.0	49
16	Mannitol: physiological functionalities, determination methods, biotechnological production, and applications. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 6941-6951.	1.7	47
17	Metabolic Engineering of <i>Escherichia coli</i> for Lacto-N-triose II Production with High Productivity. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 3702-3711.	2.4	46
18	Improving the Thermostability and Catalytic Efficiency of the <i>d</i> -Psicose 3-Epimerase from <i>Clostridium boltea</i> ATCC BAA-613 Using Site-Directed Mutagenesis. <i>Journal of Agricultural and Food Chemistry</i> , 2016, 64, 3386-3393.	2.4	45

#	ARTICLE	IF	CITATIONS
19	Recent advances in Levansucrase and Inulosucrase: evolution, characteristics, and application. <i>Critical Reviews in Food Science and Nutrition</i> , 2019, 59, 3630-3647.	5.4	44
20	Recent progress on biological production of $\alpha$ -arbutin. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 8145-8152.	1.7	43
21	$\alpha$ -arabinose isomerases: Characteristics, modification, and application. <i>Trends in Food Science and Technology</i> , 2018, 78, 25-33.	7.8	42
22	Characterization of a d-tagatose 3-epimerase from <i>Caballeronia fortuita</i> and its application in rare sugar production. <i>International Journal of Biological Macromolecules</i> , 2019, 138, 536-545.	3.6	41
23	Thermostability Improvement of the $\alpha$ -Allulose 3-Epimerase from <i>Dorea</i> sp. CAG317 by Site-Directed Mutagenesis at the Interface Regions. <i>Journal of Agricultural and Food Chemistry</i> , 2018, 66, 5593-5601.	2.4	37
24	An overview on biological production of functional lactose derivatives. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 3683-3691.	1.7	37
25	Current research on cellobiose 2-epimerase: Enzymatic properties, mechanistic insights, and potential applications in the dairy industry. <i>Trends in Food Science and Technology</i> , 2018, 82, 167-176.	7.8	36
26	Overview of strategies for developing high thermostability industrial enzymes: Discovery, mechanism, modification and challenges. <i>Critical Reviews in Food Science and Nutrition</i> , 2023, 63, 2057-2073.	5.4	35
27	D-allulose, a versatile rare sugar: recent biotechnological advances and challenges. <i>Critical Reviews in Food Science and Nutrition</i> , 2023, 63, 5661-5679.	5.4	33
28	Semi-rational design and molecular dynamics simulations study of the thermostability enhancement of cellobiose 2-epimerases. <i>International Journal of Biological Macromolecules</i> , 2020, 154, 1356-1365.	3.6	32
29	In-depth biochemical identification of a novel methyl parathion hydrolase from <i>Azohydromonas australica</i> and its high effectiveness in the degradation of various organophosphorus pesticides. <i>Bioresource Technology</i> , 2021, 323, 124641.	4.8	32
30	Isomerases for biotransformation of D-hexoses. <i>Applied Microbiology and Biotechnology</i> , 2015, 99, 6571-6584.	1.7	31
31	Sugar alcohols derived from lactose: lactitol, galactitol, and sorbitol. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 9487-9495.	1.7	31
32	An overview of the biological production of 1-deoxynojirimycin: current status and future perspective. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 9335-9344.	1.7	30
33	Mitophagy lysosomal pathway is involved in silver nanoparticle-induced apoptosis in A549 cells. <i>Ecotoxicology and Environmental Safety</i> , 2021, 208, 111463.	2.9	30
34	Computer-Aided Targeted Mutagenesis of <i>Thermoclostridium caenicola</i> $\alpha$ -Allulose 3-Epimerase for Improved Thermostability. <i>Journal of Agricultural and Food Chemistry</i> , 2022, 70, 1943-1951.	2.4	30
35	Recent studies on the biological production of D-mannose. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 8753-8761.	1.7	29
36	Lactic acid bacteria-derived $\alpha$ -glucans: From enzymatic synthesis to miscellaneous applications. <i>Biotechnology Advances</i> , 2021, 47, 107708.	6.0	28

#	ARTICLE	IF	CITATIONS
37	Human Milk Oligosaccharides: The New Gold Standard for Premium Infant Formula. <i>Journal of Agricultural and Food Chemistry</i> , 2022, 70, 2061-2063.	2.4	28
38	Characterisation of a novel cellobiose 2-epimerase from thermophilic <i>Caldicellulosiruptor obsidiansis</i> for lactulose production. <i>Journal of the Science of Food and Agriculture</i> , 2017, 97, 3095-3105.	1.7	26
39	d-lyxose isomerase and its application for functional sugar production. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 2051-2062.	1.7	26
40	Preparation of a novel water-soluble gel from <i>Erwinia amylovora</i> levan. <i>International Journal of Biological Macromolecules</i> , 2019, 122, 469-478.	3.6	26
41	l-Rhamnose isomerase and its use for biotechnological production of rare sugars. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 2985-2992.	1.7	25
42	Combinatorial Modular Pathway Engineering for Guanosine 5'-Diphosphate-fucose Production in Recombinant <i>Escherichia coli</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2020, 68, 5668-5675.	2.4	24
43	Microbial production, molecular modification, and practical application of l-Asparaginase: A review. <i>International Journal of Biological Macromolecules</i> , 2021, 186, 975-983.	3.6	24
44	Highly selective synthesis of d-amino acids from readily available l-amino acids by a one-pot biocatalytic stereoinversion cascade. <i>RSC Advances</i> , 2019, 9, 29927-29935.	1.7	23
45	Metabolic Engineering of <i>Escherichia coli</i> for Efficient Biosynthesis of Lacto-N-tetraose Using a Novel $\beta$ -1,3-Galactosyltransferase from <i>Pseudogulbenkiania ferrooxidans</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 11342-11349.	2.4	23
46	Efficient Production of $\beta$ -Fucosyllactose from Fucose via Self-Assembling Multienzyme Complexes in Engineered <i>Escherichia coli</i> . <i>ACS Synthetic Biology</i> , 2021, 10, 2488-2498.	1.9	23
47	Efficient control of acrylamide in French fries by an extraordinarily active and thermo-stable l-asparaginase: A lab-scale study. <i>Food Chemistry</i> , 2021, 360, 130046.	4.2	23
48	Sucrose isomers as alternative sweeteners: properties, production, and applications. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 8677-8687.	1.7	22
49	$\beta$ -l-Fucosidases and their applications for the production of fucosylated human milk oligosaccharides. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 5619-5631.	1.7	22
50	Production of cellulose from glucose by <i>Escherichia coli</i> transformant cells co-expressing glucose isomerase and $\beta$ -D-glucosyl 3-epimerase genes. <i>Journal of the Science of Food and Agriculture</i> , 2017, 97, 3420-3426.	1.7	21
51	Characterization of a novel d-lyxose isomerase from <i>Thermoflavimicrobium dichotomicum</i> and its application for D-mannose production. <i>Process Biochemistry</i> , 2019, 83, 131-136.	1.8	21
52	Characterization of an epilactose-producing cellobiose 2-epimerase from <i>Thermoanaerobacterium saccharolyticum</i> . <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2015, 116, 39-44.	1.8	19
53	Characterization of a novel thermostable l-rhamnose isomerase from <i>Thermobacillus composti</i> KWC4 and its application for production of d-allose. <i>Process Biochemistry</i> , 2017, 53, 153-161.	1.8	19
54	Preparation, characterization and application of levan/montmorillonite biocomposite and levan/BSA nanoparticle. <i>Carbohydrate Polymers</i> , 2020, 234, 115921.	5.1	19

#	ARTICLE	IF	CITATIONS
55	High-Level <i>De Novo</i> Biosynthesis of 2-Fucosyllactose by Metabolically Engineered <i>Escherichia coli</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2022, 70, 9017-9025.	2.4	19
56	Characterization of a thermostable recombinant <i>L</i> -rhamnose isomerase from <i>Caldicellulosiruptor obsidiansis</i> OB47 and its application for the production of <i>L</i> -fructose and <i>L</i> -rhamnulose. <i>Journal of the Science of Food and Agriculture</i> , 2018, 98, 2184-2193.	1.7	18
57	A review on selective <i>L</i> -fucose/ <i>D</i> -arabinose isomerases for biocatalytic production of <i>L</i> -fuculose/ <i>D</i> -ribulose. <i>International Journal of Biological Macromolecules</i> , 2021, 168, 558-571.	3.6	18
58	Efficient biotransformation of <i>D</i> -fructose to <i>D</i> -mannose by a thermostable <i>D</i> -lyxose isomerase from <i>Thermosediminibacter oceani</i> . <i>Process Biochemistry</i> , 2016, 51, 2026-2033.	1.8	17
59	Improving Thermostability and Catalytic Behavior of <i>L</i> -Rhamnose Isomerase from <i>Caldicellulosiruptor obsidiansis</i> OB47 toward <i>D</i> -Allulose by Site-Directed Mutagenesis. <i>Journal of Agricultural and Food Chemistry</i> , 2018, 66, 12017-12024.	2.4	17
60	Isomerases and epimerases for biotransformation of pentoses. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 7283-7292.	1.7	17
61	An overview of levan-degrading enzyme from microbes. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 7891-7902.	1.7	17
62	Simulation-guided enzyme discovery: A new microbial source of cellobiose 2-epimerase. <i>International Journal of Biological Macromolecules</i> , 2019, 139, 1002-1008.	3.6	16
63	Recent development of phenyllactic acid: physicochemical properties, biotechnological production strategies and applications. <i>Critical Reviews in Biotechnology</i> , 2023, 43, 293-308.	5.1	16
64	Pathway Optimization and Uridine 5-Triphosphate Regeneration for Enhancing Lacto- <i>N</i> -Tetraose Biosynthesis in Engineered <i>Escherichia coli</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2022, 70, 7727-7735.	2.4	16
65	Advances in the enzymatic production of <i>L</i> -hexoses. <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 6971-6979.	1.7	15
66	Production of <i>D</i> -mannose from <i>D</i> -glucose by co-expression of <i>D</i> -glucose isomerase and <i>D</i> -lyxose isomerase in <i>Escherichia coli</i> . <i>Journal of the Science of Food and Agriculture</i> , 2018, 98, 4895-4902.	1.7	15
67	Polyol dehydrogenases: intermediate role in the bioconversion of rare sugars and alcohols. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 6473-6481.	1.7	15
68	Efficient production of inulooligosaccharides from inulin by endoinulinase from <i>Aspergillus arachidicola</i> . <i>Carbohydrate Polymers</i> , 2019, 208, 70-76.	5.1	15
69	Efficient biosynthesis of lacto- <i>N</i> -neotetraose by a novel $\beta$ -1,4-galactosyltransferase from <i>Aggregatibacter actinomycetemcomitans</i> NUM4039. <i>Enzyme and Microbial Technology</i> , 2022, 153, 109912.	1.6	15
70	Overview of a bioremediation tool: organophosphorus hydrolase and its significant application in the food, environmental, and therapy fields. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 8241-8253.	1.7	15
71	Highly Regioselective and Stereoselective Hydroxylation of Free Amino Acids by a 2-Oxoglutarate-Dependent Dioxygenase from <i>Kutzneria albida</i> . <i>ACS Omega</i> , 2019, 4, 8350-8358.	1.6	14
72	Ribose-5-phosphate isomerases: characteristics, structural features, and applications. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 6429-6441.	1.7	14

#	ARTICLE	IF	CITATIONS
73	A Novel $\alpha$ -1,4-Galactosyltransferase from <i>Histophilus somni</i> Enables Efficient Biosynthesis of Lacto-N-Neotetraose via Both Enzymatic and Cell Factory Approaches. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 5683-5690.	2.4	14
74	Molecular Dynamics Simulation for Food Enzyme Engineering: Why This Technique Should Be Encouraged To Learn. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 4-6.	2.4	14
75	Biochemical characterization of recombinant L-fucose isomerase from <i>Caldanaerobius polysaccharolyticus</i> for L-fucose production. <i>International Journal of Biological Macromolecules</i> , 2020, 146, 965-975.	3.6	13
76	Biochemical identification of a hyperthermostable L-ribulose 3-epimerase from <i>Labeledella endophytica</i> and its application for D-allulose bioconversion. <i>International Journal of Biological Macromolecules</i> , 2021, 189, 214-222.	3.6	13
77	Efficient Production of a Functional Human Milk Oligosaccharide $\alpha$ -Sialyllactose in Genetically Engineered <i>Escherichia coli</i> . <i>ACS Synthetic Biology</i> , 2022, 11, 2837-2845.	1.9	13
78	Production of L-ribose from L-arabinose by co-expression of L-arabinose isomerase and D-xylose isomerase in <i>Escherichia coli</i> . <i>Enzyme and Microbial Technology</i> , 2020, 132, 109443.	1.6	12
79	Neurobehavior and neuron damage following prolonged exposure of silver nanoparticles with/without polyvinylpyrrolidone coating in <i>Caenorhabditis elegans</i> . <i>Journal of Applied Toxicology</i> , 2021, 41, 2055-2067.	1.4	12
80	Comprehensive utilization of sucrose resources via chemical and biotechnological processes: A review. <i>Biotechnology Advances</i> , 2022, 60, 107990.	6.0	12
81	Characterization of a Recombinant D-Allulose 3-epimerase from <i>Thermoclostridium caenicola</i> with Potential Application in D-Allulose Production. <i>Molecular Biotechnology</i> , 2021, 63, 534-543.	1.3	11
82	Recent advances and future prospective of organophosphorus-degrading enzymes: identification, modification, and application. <i>Critical Reviews in Biotechnology</i> , 2021, 41, 1096-1113.	5.1	11
83	A review on L-ribose isomerases for the biocatalytic production of L-ribose and L-ribulose. <i>Food Research International</i> , 2021, 145, 110409.	2.9	10
84	Computer-aided search for a cold-active cellobiose 2-epimerase. <i>Journal of Dairy Science</i> , 2020, 103, 7730-7741.	1.4	10
85	Glycosyltransferase from <i>Bacteroides gallinaceum</i> Is a Novel $\alpha$ -1,3-Fucosyltransferase that Can Be Used for 3-Fucosyllactose Production In Vivo by Metabolically Engineered <i>Escherichia coli</i> . <i>Journal of Agricultural and Food Chemistry</i> , 2022, , .	2.4	10
86	Efficient production of inulin and oligosaccharides using thermostable inulosucrase from <i>Lactobacillus jensenii</i> . <i>International Journal of Biological Macromolecules</i> , 2020, 165, 1250-1257.	3.6	9
87	Characterization of recombinant L-ribose isomerase acquired from <i>Cryobacterium</i> sp. N21 with potential application in L-ribulose production. <i>Process Biochemistry</i> , 2020, 97, 1-10.	1.8	9
88	Characterization of a recombinant D-mannose-producing D-xylose isomerase from <i>Caldanaerobius polysaccharolyticus</i> . <i>Enzyme and Microbial Technology</i> , 2020, 138, 109553.	1.6	9
89	Recent Advances on Lacto-N-neotetraose, a Commercially Added Human Milk Oligosaccharide in Infant Formula. <i>Journal of Agricultural and Food Chemistry</i> , 2022, 70, 4534-4547.	2.4	9
90	Enhancement of the <i>Brenneria</i> sp. levansucrase thermostability by site-directed mutagenesis at Glu404 located at the $\alpha$ -TEAP-residue motif. <i>Journal of Biotechnology</i> , 2019, 290, 1-9.	1.9	8

#	ARTICLE	IF	CITATIONS
91	Current methods and applications in computational protein design for food industry. <i>Critical Reviews in Food Science and Nutrition</i> , 2020, 60, 3259-3270.	5.4	8
92	One-pot production of d-allulose from inulin by a novel identified thermostable exoinulinase from <i>Aspergillus piperis</i> and <i>Dorea</i> sp. d-allulose 3-epimerase. <i>Process Biochemistry</i> , 2020, 99, 87-95.	1.8	8
93	Constructing Rh <sup>+</sup> modified Ta <sub>2</sub> O <sub>5</sub> @TaON@Ta <sub>3</sub> N <sub>5</sub> with special double n mutant heterojunctions for enhanced photocatalytic H <sub>2</sub> -evolution. <i>RSC Advances</i> , 2020, 10, 29424-29431.	1.7	8
94	The key role of autophagy in silver nanoparticle-induced BV2 cells inflammation and polarization. <i>Food and Chemical Toxicology</i> , 2021, 154, 112324.	1.8	8
95	Recent advances on biological production of difructose dianhydride III. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 3007-3015.	1.7	7
96	Microbial and enzymatic strategies for the production of l-ribose. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 3321-3329.	1.7	7
97	Reconstitution of TCA cycle involving l-isoleucine dioxygenase for hydroxylation of l-isoleucine in <i>Escherichia coli</i> using CRISPR-Cas9. <i>3 Biotech</i> , 2020, 10, 167.	1.1	6
98	Biochemical characterization of a novel thermostable DFA I-forming inulin fructotransferases from <i>Streptomyces peucetius</i> subsp. <i>caesius</i> ATCC 27952. <i>Enzyme and Microbial Technology</i> , 2020, 137, 109519.	1.6	6
99	An overview of D-galactose utilization through microbial fermentation and enzyme-catalyzed conversion. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 7161-7170.	1.7	5
100	Identification of a novel recombinant D-lyxose isomerase from Thermoprotei archaeon with high thermostable, weak-acid and nickel ion dependent properties. <i>International Journal of Biological Macromolecules</i> , 2020, 164, 1267-1274.	3.6	4
101	Recent advances in properties, production, and applications of l-ribulose. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 5663-5672.	1.7	4
102	Difructose anhydride III: a 50-year perspective on its production and physiological functions. <i>Critical Reviews in Food Science and Nutrition</i> , 2021, , 1-26.	5.4	4
103	Engineering <i>Escherichia coli</i> for highly efficient production of lacto-N-triose II from N-acetylglucosamine, the monomer of chitin. <i>Biotechnology for Biofuels</i> , 2021, 14, 198.	6.2	4
104	Kinetic study and molecular dynamics simulation of two novel mannose isomerases. <i>Catalysis Science and Technology</i> , 2021, 11, 5898-5907.	2.1	3
105	Molecular Characterization of a Mesophilic Cellobiose 2-Epimerase That Maintains a High Catalytic Efficiency at Low Temperatures. <i>Journal of Agricultural and Food Chemistry</i> , 2021, 69, 8268-8275.	2.4	3
106	Characterization of a Novel Mannose Isomerase from <i>Stenotrophomonas rhizophila</i> and Identification of Its Possible Catalytic Residues. <i>Molecular Biotechnology</i> , 2022, , 1.	1.3	3
107	Occurrence, functional properties, and preparation of 3-fucosyllactose, one of the smallest human milk oligosaccharides. <i>Critical Reviews in Food Science and Nutrition</i> , 2023, 63, 9364-9378.	5.4	3
108	A close look on the effect of polyethylene glycol on the levansucrase thermostability: a case study of <i>Brenneria</i> sp. levansucrase. <i>Journal of the Science of Food and Agriculture</i> , 2019, 99, 6315-6323.	1.7	2

#	ARTICLE	IF	CITATIONS
109	Preparation and photocatalytic activity of pendant heteroaryl groups (pyrimidine and pyridine) grafted polyterthiophene/TiO <sub>2</sub> composites. <i>Materials Express</i> , 2020, 10, 1877-1891.	0.2	1
110	Enzymatic Production of Lactosucrose by Levansucrase, $\beta$ -Fructofuranosidase, and $\beta$ -Galactosidase., 2021, , 125-146.		0