

# Changfu Zhu

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8538104/publications.pdf>

Version: 2024-02-01

94  
papers

5,914  
citations

71102

41  
h-index

76900

74  
g-index

95  
all docs

95  
docs citations

95  
times ranked

5633  
citing authors

#	ARTICLE	IF	CITATIONS
1	A global perspective on carotenoids: Metabolism, biotechnology, and benefits for nutrition and health. <i>Progress in Lipid Research</i> , 2018, 70, 62-93.	11.6	634
2	Transgenic multivitamin corn through biofortification of endosperm with three vitamins representing three distinct metabolic pathways. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 7762-7767.	7.1	457
3	Combinatorial genetic transformation generates a library of metabolic phenotypes for the carotenoid pathway in maize. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 18232-18237.	7.1	330
4	Critical evaluation of strategies for mineral fortification of staple food crops. <i>Transgenic Research</i> , 2010, 19, 165-180.	2.4	236
5	Transgenic strategies for the nutritional enhancement of plants. <i>Trends in Plant Science</i> , 2007, 12, 548-555.	8.8	232
6	When more is better: multigene engineering in plants. <i>Trends in Plant Science</i> , 2010, 15, 48-56.	8.8	187
7	Promoter diversity in multigene transformation. <i>Plant Molecular Biology</i> , 2010, 73, 363-378.	3.9	155
8	Travel advice on the road to carotenoids in plants. <i>Plant Science</i> , 2010, 179, 28-48.	3.6	151
9	The regulation of carotenoid pigmentation in flowers. <i>Archives of Biochemistry and Biophysics</i> , 2010, 504, 132-141.	3.0	149
10	Patterns of CRISPR/Cas9 activity in plants, animals and microbes. <i>Plant Biotechnology Journal</i> , 2016, 14, 2203-2216.	8.3	141
11	The contribution of transgenic plants to better health through improved nutrition: opportunities and constraints. <i>Genes and Nutrition</i> , 2013, 8, 29-41.	2.5	122
12	Characteristics of Genome Editing Mutations in Cereal Crops. <i>Trends in Plant Science</i> , 2017, 22, 38-52.	8.8	122
13	Nutritionally important carotenoids as consumer products. <i>Phytochemistry Reviews</i> , 2015, 14, 727-743.	6.5	118
14	Engineering Complex Metabolic Pathways in Plants. <i>Annual Review of Plant Biology</i> , 2014, 65, 187-223.	18.7	117
15	Bottlenecks in carotenoid biosynthesis and accumulation in rice endosperm are influenced by the precursor-product balance. <i>Plant Biotechnology Journal</i> , 2016, 14, 195-205.	8.3	113
16	Bleaching Herbicide Norflurazon Inhibits Phytoene Desaturase by Competition with the Cofactors. <i>Journal of Agricultural and Food Chemistry</i> , 2001, 49, 5270-5272.	5.2	109
17	Light-dark regulation of carotenoid biosynthesis in pepper ( <i>Capsicum annuum</i> ) leaves. <i>Journal of Plant Physiology</i> , 2003, 160, 439-443.	3.5	107
18	Biofortification of plants with altered antioxidant content and composition: genetic engineering strategies. <i>Plant Biotechnology Journal</i> , 2013, 11, 129-141.	8.3	102

#	ARTICLE	IF	CITATIONS
19	A golden era“pro-vitamin A enhancement in diverse crops. <i>In Vitro Cellular and Developmental Biology - Plant</i> , 2011, 47, 205-221.	2.1	90
20	The carotenoid cleavage dioxygenase <scp>CCD</scp>2 catalysing the synthesis of crocetin in spring crocuses and saffron is a plastidial enzyme. <i>New Phytologist</i> , 2016, 209, 650-663.	7.3	88
21	Nutritious crops producing multiple carotenoids “ a metabolic balancing act. <i>Trends in Plant Science</i> , 2011, 16, 532-540.	8.8	84
22	Biofortification of crops with nutrients: factors affecting utilization and storage. <i>Current Opinion in Biotechnology</i> , 2017, 44, 115-123.	6.6	83
23	Metabolic engineering of ketocarotenoid biosynthesis in higher plants. <i>Archives of Biochemistry and Biophysics</i> , 2009, 483, 182-190.	3.0	80
24	Applications of multiplex genome editing in higher plants. <i>Current Opinion in Biotechnology</i> , 2019, 59, 93-102.	6.6	78
25	cDNA cloning and expression of carotenogenic genes during flower development in <i>Gentiana lutea</i> . <i>Plant Molecular Biology</i> , 2002, 48, 277-285.	3.9	69
26	Combined transcript, proteome, and metabolite analysis of transgenic maize seeds engineered for enhanced carotenoid synthesis reveals pleiotropic effects in core metabolism. <i>Journal of Experimental Botany</i> , 2015, 66, 3141-3150.	4.8	65
27	An <i>in vitro</i> system for the rapid functional characterization of genes involved in carotenoid biosynthesis and accumulation. <i>Plant Journal</i> , 2014, 77, 464-475.	5.7	63
28	Nutritionally enhanced crops and food security: scientific achievements versus political expediency. <i>Current Opinion in Biotechnology</i> , 2011, 22, 245-251.	6.6	60
29	cDNAs for the synthesis of cyclic carotenoids in petals of <i>Gentiana lutea</i> and their regulation during flower development. <i>Biochimica Et Biophysica Acta Gene Regulatory Mechanisms</i> , 2003, 1625, 305-308.	2.4	53
30	The distribution of carotenoids in hens fed on biofortified maize is influenced by feed composition, absorption, resource allocation and storage. <i>Scientific Reports</i> , 2016, 6, 35346.	3.3	53
31	Multigene engineering of starch biosynthesis in maize endosperm increases the total starch content and the proportion of amylose. <i>Transgenic Research</i> , 2013, 22, 1133-1142.	2.4	51
32	Cloning and functional characterization of the maize carotenoid isomerase and Î²-carotene hydroxylase genes and their regulation during endosperm maturation. <i>Transgenic Research</i> , 2010, 19, 1053-1068.	2.4	49
33	High-value products from transgenic maize. <i>Biotechnology Advances</i> , 2011, 29, 40-53.	11.7	48
34	<i>Nicotiana glauca</i> engineered for the production of ketocarotenoids in flowers and leaves by expressing the cyanobacterial crtO ketolase gene. <i>Transgenic Research</i> , 2007, 16, 813-821.	2.4	47
35	The potential impact of plant biotechnology on the Millennium Development Goals. <i>Plant Cell Reports</i> , 2011, 30, 249-265.	5.6	47
36	Synergistic metabolism in hybrid corn indicates bottlenecks in the carotenoid pathway and leads to the accumulation of extraordinary levels of the nutritionally important carotenoid zeaxanthin. <i>Plant Biotechnology Journal</i> , 2011, 9, 384-393.	8.3	46

#	ARTICLE	IF	CITATIONS
37	Genome editing in cereal crops: an overview. <i>Transgenic Research</i> , 2021, 30, 461-498.	2.4	46
38	CRISPR/Cas9 activity in the rice OsBE1b gene does not induce off-target effects in the closely related paralog OsBE1a. <i>Molecular Breeding</i> , 2016, 36, 1.	2.1	45
39	CRISPR/Cas9 mutations in the rice Waxy/GBSSI gene induce allele-specific and zygosity-dependent feedback effects on endosperm starch biosynthesis. <i>Plant Cell Reports</i> , 2019, 38, 417-433.	5.6	45
40	Inactivation of rice starch branching enzyme IIb triggers broad and unexpected changes in metabolism by transcriptional reprogramming. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 26503-26512.	7.1	45
41	Maize cDNAs Expressed in Endosperm Encode Functional Farnesyl Diphosphate Synthase with Geranylgeranyl Diphosphate Synthase Activity. <i>Plant Physiology</i> , 2006, 141, 220-231.	4.8	44
42	Metabolic engineering of astaxanthin biosynthesis in maize endosperm and characterization of a prototype high oil hybrid. <i>Transgenic Research</i> , 2016, 25, 477-489.	2.4	44
43	Knowledge-driven approaches for engineering complex metabolic pathways in plants. <i>Current Opinion in Biotechnology</i> , 2015, 32, 54-60.	6.6	43
44	Metabolic engineering of ketocarotenoid biosynthesis in leaves and flowers of tobacco species. <i>Biotechnology Journal</i> , 2007, 2, 1263-1269.	3.5	42
45	Simultaneous expression of Arabidopsis $\beta$ -hydroxyphenylpyruvate dioxygenase and MPBQ methyltransferase in transgenic corn kernels triples the tocopherol content. <i>Transgenic Research</i> , 2011, 20, 177-181.	2.4	42
46	Transgenic rice grains expressing a heterologous $\beta$ -hydroxyphenylpyruvate dioxygenase shift tocopherol synthesis from the $\beta^3$ to the $\beta^1$ isoform without increasing absolute tocopherol levels. <i>Transgenic Research</i> , 2012, 21, 1093-1097.	2.4	38
47	Engineering metabolic pathways in plants by multigene transformation. <i>International Journal of Developmental Biology</i> , 2013, 57, 565-576.	0.6	38
48	The Arabidopsis ORANGE (AtOR) gene promotes carotenoid accumulation in transgenic corn hybrids derived from parental lines with limited carotenoid pools. <i>Plant Cell Reports</i> , 2017, 36, 933-945.	5.6	38
49	Carotenoid-enriched transgenic corn delivers bioavailable carotenoids to poultry and protects them against coccidiosis. <i>Plant Biotechnology Journal</i> , 2016, 14, 160-168.	8.3	36
50	Cloning of two individual cDNAs encoding 9-cis-epoxycarotenoid dioxygenase from <i>Gentiana lutea</i> , their tissue-specific expression and physiological effect in transgenic tobacco. <i>Journal of Plant Physiology</i> , 2007, 164, 195-204.	3.5	35
51	Targeted transcriptomic and metabolic profiling reveals temporal bottlenecks in the maize carotenoid pathway that may be addressed by multigene engineering. <i>Plant Journal</i> , 2013, 75, 441-455.	5.7	27
52	Fast Quantitative Method for the Analysis of Carotenoids in Transgenic Maize. <i>Journal of Agricultural and Food Chemistry</i> , 2013, 61, 5279-5285.	5.2	27
53	Differential accumulation of pelargonidin glycosides in petals at three different developmental stages of the orange-flowered gentian ( <i>Gentiana lutea</i> L. var. <i>aurantiaca</i> ). <i>PLoS ONE</i> , 2019, 14, e0212062.	2.5	26
54	High-carotenoid maize: development of plant biotechnology prototypes for human and animal health and nutrition. <i>Phytochemistry Reviews</i> , 2018, 17, 195-209.	6.5	24

#	ARTICLE	IF	CITATIONS
55	Red Anthocyanins and Yellow Carotenoids Form the Color of Orange-Flower Gentian ( <i>Gentiana lutea</i> ) Tj ETQq1 1 0,784314 rgBT /Ove	2.5	23
56	Transgenic wheat plants expressing an oat arginine decarboxylase cDNA exhibit increases in polyamine content in vegetative tissue and seeds. <i>Molecular Breeding</i> , 2008, 22, 39-50.	2.1	21
57	High-carotenoid biofortified maize is an alternative to color additives in poultry feed. <i>Animal Feed Science and Technology</i> , 2017, 231, 38-46.	2.2	21
58	Reconstruction of the astaxanthin biosynthesis pathway in rice endosperm reveals a metabolic bottleneck at the level of endogenous $\beta$ -carotene hydroxylase activity. <i>Transgenic Research</i> , 2017, 26, 13-23.	2.4	21
59	Poultry diets containing (keto)carotenoid-enriched maize improve egg yolk color and maintain quality. <i>Animal Feed Science and Technology</i> , 2020, 260, 114334.	2.2	21
60	A question of balance: achieving appropriate nutrient levels in biofortified staple crops. <i>Nutrition Research Reviews</i> , 2013, 26, 235-245.	4.1	20
61	Cloning and functional analysis of the promoters that upregulate carotenogenic gene expression during flower development in <i>Gentiana lutea</i> . <i>Physiologia Plantarum</i> , 2014, 150, 493-504.	5.2	20
62	Engineered maize as a source of astaxanthin: processing and application as fish feed. <i>Transgenic Research</i> , 2016, 25, 785-793.	2.4	20
63	The Silencing of Carotenoid $\beta$ -Hydroxylases by RNA Interference in Different Maize Genetic Backgrounds Increases the $\beta$ -Carotene Content of the Endosperm. <i>International Journal of Molecular Sciences</i> , 2017, 18, 2515.	4.1	20
64	ZmPBF and ZmGAMYB transcription factors independently transactivate the promoter of the maize ( <i>Zea mays</i> ) $\beta$ -carotene hydroxylase 2 gene. <i>New Phytologist</i> , 2019, 222, 793-804.	7.3	20
65	Can the world afford to ignore biotechnology solutions that address food insecurity?. <i>Plant Molecular Biology</i> , 2013, 83, 5-19.	3.9	19
66	Modification of cereal plant architecture by genome editing to improve yields. <i>Plant Cell Reports</i> , 2021, 40, 953-978.	5.6	18
67	A novel carotenoid, 4-keto- $\beta$ -carotene, as an unexpected by-product during genetic engineering of carotenogenesis in rice callus. <i>Phytochemistry</i> , 2014, 98, 85-91.	2.9	17
68	Functional characterization of the <i>Gentiana lutea</i> zeaxanthin epoxidase (GIZEP) promoter in transgenic tomato plants. <i>Transgenic Research</i> , 2012, 21, 1043-1056.	2.4	16
69	Combinatorial Genetic Transformation of Cereals and the Creation of Metabolic Libraries for the Carotenoid Pathway. <i>Methods in Molecular Biology</i> , 2012, 847, 419-435.	0.9	16
70	Ascorbic acid synthesis and metabolism in maize are subject to complex and genotype-dependent feedback regulation during endosperm development. <i>Biotechnology Journal</i> , 2013, 8, 1221-1230.	3.5	16
71	Recognition motifs rather than phylogenetic origin influence the ability of targeting peptides to import nuclear-encoded recombinant proteins into rice mitochondria. <i>Transgenic Research</i> , 2020, 29, 37-52.	2.4	16
72	Metabolic Engineering of Crocin Biosynthesis in <i>Nicotiana</i> Species. <i>Frontiers in Plant Science</i> , 2022, 13, 861140.	3.6	16

#	ARTICLE	IF	CITATIONS
73	The biotechnological potential of the al-2 gene from <i>Neurospora crassa</i> for the production of monocyclic keto hydroxy carotenoids. <i>Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids</i> , 2006, 1761, 1085-1092.	2.4	15
74	Mice fed on a diet enriched with genetically engineered multivitamin corn show no subacute toxic effects and no subchronic toxicity. <i>Plant Biotechnology Journal</i> , 2012, 10, 1026-1034.	8.3	15
75	The subcellular localization of two isopentenyl diphosphate isomerases in rice suggests a role for the endoplasmic reticulum in isoprenoid biosynthesis. <i>Plant Cell Reports</i> , 2020, 39, 119-133.	5.6	14
76	Influence of Cooking Conditions on Carotenoid Content and Stability in Porridges Prepared from High-Carotenoid Maize. <i>Plant Foods for Human Nutrition</i> , 2017, 72, 113-119.	3.2	13
77	Molecular characterization of the Arginine decarboxylase gene family in rice. <i>Transgenic Research</i> , 2010, 19, 785-797.	2.4	12
78	Provitamin A carotenoids from an engineered high-carotenoid maize are bioavailable and zeaxanthin does not compromise $\beta$ -carotene absorption in poultry. <i>Transgenic Research</i> , 2017, 26, 591-601.	2.4	11
79	CRISPR/Cas9-induced monoallelic mutations in the cytosolic AGPase large subunit gene <i>APL2</i> induce the ectopic expression of <i>APL2</i> and the corresponding small subunit gene <i>APS2b</i> in rice leaves. <i>Transgenic Research</i> , 2018, 27, 423-439.	2.4	10
80	Protoplast culture and plant regeneration of <i>Pinellia ternata</i> . <i>Plant Cell Reports</i> , 1996, 16, 92-96.	5.6	9
81	Freedom-to-operate analysis of a transgenic multivitamin corn variety. <i>Plant Biotechnology Journal</i> , 2016, 14, 1225-1240.	8.3	9
82	Identification of line-specific strategies for improving carotenoid production in synthetic maize through data-driven mathematical modeling. <i>Plant Journal</i> , 2016, 87, 455-471.	5.7	9
83	The ratio of phytoalexins nicotianamine to deoxymugenic acid controls metal homeostasis in rice. <i>Planta</i> , 2019, 250, 1339-1354.	3.2	9
84	Cloning and Functional Characterization of the Maize ( <i>Zea mays</i> L.) Carotenoid Epsilon Hydroxylase Gene. <i>PLoS ONE</i> , 2015, 10, e0128758.	2.5	5
85	The Biosynthesis of Non-Endogenous Apocarotenoids in Transgenic <i>Nicotiana glauca</i> . <i>Metabolites</i> , 2022, 12, 575.	2.9	5
86	Multilevel interactions between native and ectopic isoprenoid pathways affect global metabolism in rice. <i>Transgenic Research</i> , 2022, 31, 249-268.	2.4	4
87	The Coordinated Upregulated Expression of Genes Involved in MEP, Chlorophyll, Carotenoid and Tocopherol Pathways, Mirrored the Corresponding Metabolite Contents in Rice Leaves during De-Etiolation. <i>Plants</i> , 2021, 10, 1456.	3.5	3
88	Transgenic Multivitamin Biofortified Corn: Science, Regulation, and Politics. , 2013, , 335-347.		3
89	Engineered Maize Hybrids with Diverse Carotenoid Profiles and Potential Applications in Animal Feeding. <i>Advances in Experimental Medicine and Biology</i> , 2021, 1261, 95-113.	1.6	2
90	Increasing the vitamin E content of food by in-plant production.. <i>CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources</i> , 0, , 1-10.	1.0	2

#	ARTICLE	IF	CITATIONS
91	Functional Analysis of Genes GlDFR1 and GlDFR2 Encoding Dihydroflavonol 4-Reductase (DFR) in <i>Gentiana lutea</i> L. Var. <i>Aurantiaca</i> (M. LaÅnz) M. LaÅnz. <i>BioMed Research International</i> , 2022, 2022, 1-23.	1.9	1
92	Protoplast culture and plant regeneration of <i>Pinellia ternata</i> . <i>Plant Cell Reports</i> , 1996, 16, 92-96.	5.6	1
93	Molecular regulation and biotechnology of carotenoid accumulation in flowers. <i>Journal of Biotechnology</i> , 2008, 136, S239-S240.	3.8	0
94	Biotechnology crop/cropping biotechnology and Nutritional Improvement crop/cropping nutritional improvement of Crops crop/cropping. , 2013, , 280-327.		0