Changfu Zhu

List of Publications by Year
in descending order

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94 papers	5,914 citations	71061 41 h-index	76872 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. Progress in Lipid Research, 2018, 70, 62-93.	5.3	634
2	Transgenic multivitamin corn through biofortification of endosperm with three vitamins representing three distinct metabolic pathways. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 7762-7767.	3.3	457
3	Combinatorial genetic transformation generates a library of metabolic phenotypes for the carotenoid pathway in maize. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 18232-18237.	3.3	330
4	Critical evaluation of strategies for mineral fortification of staple food crops. Transgenic Research, 2010, 19, 165-180.	1.3	236
5	Transgenic strategies for the nutritional enhancement of plants. Trends in Plant Science, 2007, 12, 548-555.	4.3	232
6	When more is better: multigene engineering in plants. Trends in Plant Science, 2010, 15, 48-56.	4.3	187
7	Promoter diversity in multigene transformation. Plant Molecular Biology, 2010, 73, 363-378.	2.0	155
8	Travel advice on the road to carotenoids in plants. Plant Science, 2010, 179, 28-48.	1.7	151
9	The regulation of carotenoid pigmentation in flowers. Archives of Biochemistry and Biophysics, 2010, 504, 132-141.	1.4	149
10	Patterns of CRISPR/Cas9 activity in plants, animals and microbes. Plant Biotechnology Journal, 2016, 14, 2203-2216.	4.1	141
11	The contribution of transgenic plants to better health through improved nutrition: opportunities and constraints. Genes and Nutrition, 2013, 8, 29-41.	1.2	122
12	Characteristics of Genome Editing Mutations in Cereal Crops. Trends in Plant Science, 2017, 22, 38-52.	4.3	122
13	Nutritionally important carotenoids as consumer products. Phytochemistry Reviews, 2015, 14, 727-743.	3.1	118
14	Engineering Complex Metabolic Pathways in Plants. Annual Review of Plant Biology, 2014, 65, 187-223.	8.6	117
15	Bottlenecks in carotenoid biosynthesis and accumulation in rice endosperm are influenced by the precursorâ€"product balance. Plant Biotechnology Journal, 2016, 14, 195-205.	4.1	113
16	Bleaching Herbicide Norflurazon Inhibits Phytoene Desaturase by Competition with the Cofactors. Journal of Agricultural and Food Chemistry, 2001, 49, 5270-5272.	2.4	109
17	Light-dark regulation of carotenoid biosynthesis in pepper (Capsicum annuum) leaves. Journal of Plant Physiology, 2003, 160, 439-443.	1.6	107
18	Biofortification of plants with altered antioxidant content and composition: genetic engineering strategies. Plant Biotechnology Journal, 2013, 11, 129-141.	4.1	102

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19	A golden eraâ€”pro-vitamin A enhancement in diverse crops. In Vitro Cellular and Developmental Biology - Plant, 2011, 47, 205-221.	0.9	90
20	The carotenoid cleavage dioxygenase <scp>CCD</scp>2 catalysing the synthesis of crocetin in spring crocuses and saffron is a plastidial enzyme. New Phytologist, 2016, 209, 650-663.	3.5	88
21	Nutritious crops producing multiple carotenoids â€“ a metabolic balancing act. Trends in Plant Science, 2011, 16, 532-540.	4.3	84
22	Biofortification of crops with nutrients: factors affecting utilization and storage. Current Opinion in Biotechnology, 2017, 44, 115-123.	3.3	83
23	Metabolic engineering of ketocarotenoid biosynthesis in higher plants. Archives of Biochemistry and Biophysics, 2009, 483, 182-190.	1.4	80
24	Applications of multiplex genome editing in higher plants. Current Opinion in Biotechnology, 2019, 59, 93-102.	3.3	78
25	cDNA cloning and expression of carotenogenic genes during flower development in Gentiana lutea. Plant Molecular Biology, 2002, 48, 277-285.	2.0	69
26	Combined transcript, proteome, and metabolite analysis of transgenic maize seeds engineered for enhanced carotenoid synthesis reveals pleotropic effects in core metabolism. Journal of Experimental Botany, 2015, 66, 3141-3150.	2.4	65
27	An <i>in vitro</i> system for the rapid functional characterization of genes involved in carotenoid biosynthesis and accumulation. Plant Journal, 2014, 77, 464-475.	2.8	63
28	Nutritionally enhanced crops and food security: scientific achievements versus political expediency. Current Opinion in Biotechnology, 2011, 22, 245-251.	3.3	60
29	cDNAs for the synthesis of cyclic carotenoids in petals of Gentiana lutea and their regulation during flower development. Biochimica Et Biophysica Acta Gene Regulatory Mechanisms, 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. Scientific Reports, 2016, 6, 35346.	1.6	53
31	Multigene engineering of starch biosynthesis in maize endosperm increases the total starch content and the proportion of amylose. Transgenic Research, 2013, 22, 1133-1142.	1.3	51
32	Cloning and functional characterization of the maize carotenoid isomerase and Î²-carotene hydroxylase genes and their regulation during endosperm maturation. Transgenic Research, 2010, 19, 1053-1068.	1.3	49
33	High-value products from transgenic maize. Biotechnology Advances, 2011, 29, 40-53.	6.0	48
34	Nicotiana glauca engineered for the production of ketocarotenoids in flowers and leaves by expressing the cyanobacterial crtO ketolase gene. Transgenic Research, 2007, 16, 813-821.	1.3	47
35	The potential impact of plant biotechnology on the Millennium Development Goals. Plant Cell Reports, 2011, 30, 249-265.	2.8	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. Plant Biotechnology Journal, 2011, 9, 384-393.	4.1	46

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37	Genome editing in cereal crops: an overview. Transgenic Research, 2021, 30, 461-498.	1.3	46
38	CRISPR/Cas9 activity in the rice OsBEIIb gene does not induce off-target effects in the closely related paralog OsBEIIa. Molecular Breeding, 2016, 36, 1.	1.0	45
39	CRISPR/Cas9 mutations in the rice Waxy/GBSSI gene induce allele-specific and zygosity-dependent feedback effects on endosperm starch biosynthesis. Plant Cell Reports, 2019, 38, 417-433.	2.8	45
40	Inactivation of rice starch branching enzyme IIb triggers broad and unexpected changes in metabolism by transcriptional reprogramming. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26503-26512.	3.3	45
41	Maize cDNAs Expressed in Endosperm Encode Functional Farnesyl Diphosphate Synthase with Geranylgeranyl Diphosphate Synthase Activity. Plant Physiology, 2006, 141, 220-231.	2.3	44
42	Metabolic engineering of astaxanthin biosynthesis in maize endosperm and characterization of a prototype high oil hybrid. Transgenic Research, 2016, 25, 477-489.	1.3	44
43	Knowledge-driven approaches for engineering complex metabolic pathways in plants. Current Opinion in Biotechnology, 2015, 32, 54-60.	3.3	43
44	Metabolic engineering of ketocarotenoid biosynthesis in leaves and flowers of tobacco species. Biotechnology Journal, 2007, 2, 1263-1269.	1.8	42
45	Simultaneous expression of Arabidopsis Ï•hydroxyphenylpyruvate dioxygenase and MPBQ methyltransferase in transgenic corn kernels triples the tocopherol content. Transgenic Research, 2011, 20, 177-181.	1.3	42
46	Transgenic rice grains expressing a heterologous Ï•hydroxyphenylpyruvate dioxygenase shift tocopherol synthesis from the Î³ to the Î± isoform without increasing absolute tocopherol levels. Transgenic Research, 2012, 21, 1093-1097.	1.3	38
47	Engineering metabolic pathways in plants by multigene transformation. International Journal of Developmental Biology, 2013, 57, 565-576.	0.3	38
48	The Arabidopsis ORANGE (AtOR) gene promotes carotenoid accumulation in transgenic corn hybrids derived from parental lines with limited carotenoid pools. Plant Cell Reports, 2017, 36, 933-945.	2.8	38
49	Carotenoidâ€enriched transgenic corn delivers bioavailable carotenoids to poultry and protects them against coccidiosis. Plant Biotechnology Journal, 2016, 14, 160-168.	4.1	36
50	Cloning of two individual cDNAS encoding 9-cis-epoxycarotenoid dioxygenase from Gentiana lutea, their tissue-specific expression and physiological effect in transgenic tobacco. Journal of Plant Physiology, 2007, 164, 195-204.	1.6	35
51	Targeted transcriptomic and metabolic profiling reveals temporal bottlenecks in the maize carotenoid pathway that may be addressed by multigene engineering. Plant Journal, 2013, 75, 441-455.	2.8	27
52	Fast Quantitative Method for the Analysis of Carotenoids in Transgenic Maize. Journal of Agricultural and Food Chemistry, 2013, 61, 5279-5285.	2.4	27
53	Differential accumulation of pelargonidin glycosides in petals at three different developmental stages of the orange-flowered gentian (Gentiana lutea L. var. aurantiaca). PLoS ONE, 2019, 14, e0212062.	1.1	26
54	High-carotenoid maize: development of plant biotechnology prototypes for human and animal health and nutrition. Phytochemistry Reviews, 2018, 17, 195-209.	3.1	24

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55	Red Anthocyanins and Yellow Carotenoids Form the Color of Orange-Flower Gentian (Gentiana lutea) Tj ETQq1 1 0.784314 rgBT /Overlo	1.1	23
56	Transgenic wheat plants expressing an oat arginine decarboxylase cDNA exhibit increases in polyamine content in vegetative tissue and seeds. Molecular Breeding, 2008, 22, 39-50.	1.0	21
57	High-carotenoid biofortified maize is an alternative to color additives in poultry feed. Animal Feed Science and Technology, 2017, 231, 38-46.	1.1	21
58	Reconstruction of the astaxanthin biosynthesis pathway in rice endosperm reveals a metabolic bottleneck at the level of endogenous Î²-carotene hydroxylase activity. Transgenic Research, 2017, 26, 13-23.	1.3	21
59	Poultry diets containing (keto)carotenoid-enriched maize improve egg yolk color and maintain quality. Animal Feed Science and Technology, 2020, 260, 114334.	1.1	21
60	A question of balance: achieving appropriate nutrient levels in biofortified staple crops. Nutrition Research Reviews, 2013, 26, 235-245.	2.1	20
61	Cloning and functional analysis of the promoters that upregulate carotenogenic gene expression during flower development in <i>Gentiana lutea</i>. Physiologia Plantarum, 2014, 150, 493-504.	2.6	20
62	Engineered maize as a source of astaxanthin: processing and application as fish feed. Transgenic Research, 2016, 25, 785-793.	1.3	20
63	The Silencing of Carotenoid Î²-Hydroxylases by RNA Interference in Different Maize Genetic Backgrounds Increases the Î²-Carotene Content of the Endosperm. International Journal of Molecular Sciences, 2017, 18, 2515.	1.8	20
64	Zm<scp>PBF</scp> and Zm<scp>GAMYB</scp> transcription factors independently transactivate the promoter of the maize (<i>Zea mays</i>) Î²â€carotene hydroxylase 2 gene. New Phytologist, 2019, 222, 793-804.	3.5	20
65	Can the world afford to ignore biotechnology solutions that address food insecurity?. Plant Molecular Biology, 2013, 83, 5-19.	2.0	19
66	Modification of cereal plant architecture by genome editing to improve yields. Plant Cell Reports, 2021, 40, 953-978.	2.8	18
67	A novel carotenoid, 4-keto-Î±-carotene, as an unexpected by-product during genetic engineering of carotenogenesis in rice callus. Phytochemistry, 2014, 98, 85-91.	1.4	17
68	Functional characterization of the Gentiana lutea zeaxanthin epoxidase (GlZEP) promoter in transgenic tomato plants. Transgenic Research, 2012, 21, 1043-1056.	1.3	16
69	Combinatorial Genetic Transformation of Cereals and the Creation of Metabolic Libraries for the Carotenoid Pathway. Methods in Molecular Biology, 2012, 847, 419-435.	0.4	16
70	Ascorbic acid synthesis and metabolism in maize are subject to complex and genotypeâ€dependent feedback regulation during endosperm development. Biotechnology Journal, 2013, 8, 1221-1230.	1.8	16
71	Recognition motifs rather than phylogenetic origin influence the ability of targeting peptides to import nuclear-encoded recombinant proteins into rice mitochondria. Transgenic Research, 2020, 29, 37-52.	1.3	16
72	Metabolic Engineering of Crocin Biosynthesis in Nicotiana Species. Frontiers in Plant Science, 2022, 13, 861140.	1.7	16

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73	The biotechnological potential of the al-2 gene from Neurospra crassa for the production of monocyclic keto hydroxy carotenoids. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2006, 1761, 1085-1092.	1.2	15
74	Mice fed on a diet enriched with genetically engineered multivitamin corn show no subâ€acute toxic effects and no subâ€chronic toxicity. Plant Biotechnology Journal, 2012, 10, 1026-1034.	4.1	15
75	The subcellular localization of two isopentenyl diphosphate isomerases in rice suggests a role for the endoplasmic reticulum in isoprenoid biosynthesis. Plant Cell Reports, 2020, 39, 119-133.	2.8	14
76	Influence of Cooking Conditions on Carotenoid Content and Stability in Porridges Prepared from High-Carotenoid Maize. Plant Foods for Human Nutrition, 2017, 72, 113-119.	1.4	13
77	Molecular characterization of the Arginine decarboxylase gene family in rice. Transgenic Research, 2010, 19, 785-797.	1.3	12
78	Provitamin A carotenoids from an engineered high-carotenoid maize are bioavailable and zeaxanthin does not compromise Î²-carotene absorption in poultry. Transgenic Research, 2017, 26, 591-601.	1.3	11
79	CRISPR/Cas9-induced monoallelic mutations in the cytosolic AGPase large subunit gene APL2 induce the ectopic expression of APL2 and the corresponding small subunit gene APS2b in rice leaves. Transgenic Research, 2018, 27, 423-439.	1.3	10
80	Protoplast culture and plant regeneration ofPinellia ternata. Plant Cell Reports, 1996, 16, 92-96.	2.8	9
81	Freedomâ€toâ€operate analysis of a transgenic multivitamin corn variety. Plant Biotechnology Journal, 2016, 14, 1225-1240.	4.1	9
82	Identification of lineâ€specific strategies for improving carotenoid production in synthetic maize through dataâ€driven mathematical modeling. Plant Journal, 2016, 87, 455-471.	2.8	9
83	The ratio of phytosiderophores nicotianamine to deoxymugenic acid controls metal homeostasis in rice. Planta, 2019, 250, 1339-1354.	1.6	9
84	Cloning and Functional Characterization of the Maize (Zea mays L.) Carotenoid Epsilon Hydroxylase Gene. PLoS ONE, 2015, 10, e0128758.	1.1	5
85	The Biosynthesis of Non-Endogenous Apocarotenoids in Transgenic Nicotiana glauca. Metabolites, 2022, 12, 575.	1.3	5
86	Multilevel interactions between native and ectopic isoprenoid pathways affect global metabolism in rice. Transgenic Research, 2022, 31, 249-268.	1.3	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. Plants, 2021, 10, 1456.	1.6	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. Advances in Experimental Medicine and Biology, 2021, 1261, 95-113.	0.8	2
90	Increasing the vitamin E content of food by in-plant production.. CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources, 0, , 1-10.	0.6	2

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91	Functional Analysis of Genes GlaDFR1 and GlaDFR2 Encoding Dihydroflavonol 4-Reductase (DFR) in Gentiana lutea L. Var. Aurantiaca (M. LaÃnz) M. LaÃnz. BioMed Research International, 2022, 2022, 1-23.	0.9	1
92	Protoplast culture and plant regeneration of Pinellia ternata. Plant Cell Reports, 1996, 16, 92-96.	2.8	1
93	Molecular regulation and biotechnology of carotenoid accumulation in flowers. Journal of Biotechnology, 2008, 136, S239-S240.	1.9	0
94	Biotechnology crop/cropping biotechnology and Nutritional Improvement crop/cropping nutritional improvement of Crops crop/cropping. , 2013, , 280-327.		0