Eleanore T Wurtzel

List of Publications by Year
in descending order

56 papers	4,730 citations	147801 31 h-index	155660 55 g-index
58 all docs	58 docs citations	58 times ranked	4025 citing authors

#	Article	IF	Citations
1	Natural Genetic Variation in Lycopene Epsilon Cyclase Tapped for Maize Biofortification. Science, 2008, 319, 330-333.	12.6	692
2	Mechanistic Aspects of Carotenoid Biosynthesis. Chemical Reviews, 2014, 114, 164-193.	47.7	243
3	PSY3, a New Member of the Phytoene Synthase Gene Family Conserved in the Poaceae and Regulator of Abiotic Stress-Induced Root Carotenogenesis Â Â. Plant Physiology, 2008, 146, 1333-1345.	4.8	233
4	The Maize Phytoene Synthase Gene Family: Overlapping Roles for Carotenogenesis in Endosperm, Photomorphogenesis, and Thermal Stress Tolerance Â Â Â. Plant Physiology, 2008, 147, 1334-1346.	4.8	224
5	Isolation and Characterization of the Z-ISO Gene Encoding a Missing Component of Carotenoid Biosynthesis in Plants Â Â Â. Plant Physiology, 2010, 153, 66-79.	4.8	203
6	Metabolic engineering of carotenoid accumulation in Escherichia coli by modulation of the isoprenoid precursor pool with expression of deoxyxylulose phosphate synthase. Applied Microbiology and Biotechnology, 2000, 53, 396-400.	3.6	197
7	Plant metabolism, the diverse chemistry set of the future. Science, 2016, 353, 1232-1236.	12.6	180
8	QTL and candidate genes phytoene synthase and Î¶-carotene desaturase associated with the accumulation of carotenoids in maize. Theoretical and Applied Genetics, 2004, 108, 349-359.	3.6	176
9	Maize Y9 Encodes a Product Essential for 15-cis-Î¶-Carotene Isomerization. Plant Physiology, 2007, 144, 1181-1189.	4.8	155
10	Gene Duplication in the Carotenoid Biosynthetic Pathway Preceded Evolution of the Grasses. Plant Physiology, 2004, 135, 1776-1783.	4.8	150
11	The carotenoid biosynthetic pathway: Thinking in all dimensions. Plant Science, 2013, 208, 58-63.	3.6	147
12	Timing and Biosynthetic Potential for Carotenoid Accumulation in Genetically Diverse Germplasm of Maize Â Â Â. Plant Physiology, 2009, 150, 562-572.	4.8	139
13	Plastid Localization of the Key Carotenoid Enzyme Phytoene Synthase Is Altered by Isozyme, Allelic Variation, and Activity. Plant Cell, 2012, 24, 3725-3741.	6.6	136
14	Maize phytoene desaturase and Â-carotene desaturase catalyse a poly-Z desaturation pathway: implications for genetic engineering of carotenoid content among cereal crops. Journal of Experimental Botany, 2003, 54, 2215-2230.	4.8	130
15	A transcriptional analysis of carotenoid, chlorophyll and plastidial isoprenoid biosynthesis genes during development and osmotic stress responses in Arabidopsis thaliana. BMC Systems Biology, 2011, 5, 77.	3.0	128
16	The carotenoid dioxygenase gene family in maize, sorghum, and rice. Archives of Biochemistry and Biophysics, 2010, 504, 104-111.	3.0	127
17	Metabolite Sorting of a Germplasm Collection Reveals the Hydroxylase3 Locus as a New Target for Maize Provitamin A Biofortification Â Â Â. Plant Physiology, 2009, 151, 1635-1645.	4.8	111
18	Changing Form and Function through Carotenoids and Synthetic Biology. Plant Physiology, 2019, 179, 830-843.	4.8	101

#	Article	IF	Citations
19	Revolutionizing agriculture with synthetic biology. Nature Plants, 2019, 5, 1207-1210.	9.3	100
20	Maize Provitamin A Carotenoids, Current Resources, and Future Metabolic Engineering Challenges. Frontiers in Plant Science, 2012, 3, 29.	3.6	97
21	Cloning and characterization of a maize cDNA encoding phytoene desaturase, an enzyme of the carotenoid biosynthetic pathway. Plant Molecular Biology, 1996, 30, 269-279.	3.9	94
22	Synergistic Interactions between Carotene Ring Hydroxylases Drive Lutein Formation in Plant Carotenoid Biosynthesis Â Â. Plant Physiology, 2012, 160, 204-214.	4.8	84
23	Control of carotenoid biosynthesis through a heme-based cis-trans isomerase. Nature Chemical Biology, 2015, 11, 598-605.	8.0	72
24	The Phytoene synthase gene family of apple (Malus x domestica) and its role in controlling fruit carotenoid content. BMC Plant Biology, 2015, 15, 185.	3.6	65
25	The phytoene synthase gene family in the Grasses. Plant Signaling and Behavior, 2009, 4, 208-211.	2.4	61
26	Cloning of the regulatory genes (ompR and envZ) for the matrix proteins of the Escherichia coli outer membrane. Journal of Bacteriology, 1982, 150, 1462-1466.	2.2	61
27	Escherichia coli as a platform for functional expression of plant P450 carotene hydroxylases. Archives of Biochemistry and Biophysics, 2007, 458, 146-157.	3.0	59
28	Maize cDNAs Expressed in Endosperm Encode Functional Farnesyl Diphosphate Synthase with Geranylgeranyl Diphosphate Synthase Activity. Plant Physiology, 2006, 141, 220-231.	4.8	44
29	A Phylogenetic Analysis of American Zamiaceae (Cycadales) Using Chloroplast DNA Restriction Fragment Length Polymorphisms. Brittonia, 1991, 43, 135.	0.2	36
30	Gene dosage effects of the structural gene for a lipoprotein of the Escherichia coli outer membrane. Journal of Bacteriology, 1978, 133, 81-84.	2.2	35
31	Chapter five Genomics, genetics, and biochemistry of maize carotenoid biosynthesis. Recent Advances in Phytochemistry, 2004, 38, 85-110.	0.5	32
32	Theviviparous12maize mutant is deficient in abscisic acid, carotenoids, and chlorophyll synthesis. Journal of Experimental Botany, 1997, 48, 1259-1268.	4.8	31
33	Characterization of an Immunoglobulin Binding Protein Homolog in the Maize floury-2 Endosperm Mutant. Plant Cell, 1991, 3, 483.	6.6	30
34	From epoxycarotenoids to ABA: The role of ABA 8â€²-hydroxylases in drought-stressed maize roots. Archives of Biochemistry and Biophysics, 2010, 504, 112-117.	3.0	29
35	Regulation of carotenoid and chlorophyll pools in hesperidia, anatomically unique fruits found only in Citrus. Plant Physiology, 2021, 187, 829-845.	4.8	29
36	Surrogate biochemistry: use of Escherichia coli to identify plant cDNAs that impact metabolic engineering of carotenoid accumulation. Applied Microbiology and Biotechnology, 2003, 60, 713-719.	3.6	28

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37	DNase I hypersensitivity and expression of the Shrunken-1 gene of maize. Plant Molecular Biology, 1987, 8, 251-264.	3.9	26
38	Lycopene cyclase paralog CruP protects against reactive oxygen species in oxygenic photosynthetic organisms. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E1888-97.	7.1	26
39	Restriction enzyme cleavage sites surrounding the structural gene for the lipoprotein of the Escherichia coli outer membrane. Journal of Bacteriology, 1979, 138, 715-720.	2.2	24
40	The MORPH Algorithm: Ranking Candidate Genes for Membership in Arabidopsis and Tomato Pathways. Plant Cell, 2012, 24, 4389-4406.	6.6	23
41	The ltk gene family encodes novel receptor-like kinases with temporal expression in developing maize endosperm. , 1998, 37, 749-761.		21
42	COMPARISON OF CHLOROPLAST DNA AND ALLOZYME VARIATION IN WINTER STRAINS OF THE MARINE DIATOM SKELETONEMA COSTATUM(BACILLARIOPHYTA)1. Journal of Phycology, 1992, 28, 90-94.	2.3	18
43	Molecular analysis of intraspecific variation in the marine diatom Skeletonema costatum. Biochemical Systematics and Ecology, 1990, 18, 5-9.	1.3	17
44	A simple approach to identify the first rice mutants blocked in carotenoid biosynthesis. Journal of Experimental Botany, 2001, 52, 161-166.	4.8	15
45	Lipoprotein from Proteus mirabilis. Journal of Bacteriology, 1978, 134, 674-676.	2.2	12
46	Use of a Ds Chromosome-Breaking Element to Examine Maize Vp5 Expression. Journal of Heredity, 1992, 83, 109-113.	2.4	11
47	Building the Synthetic Biology Toolbox with Enzyme Variants to Expand Opportunities for Biofortification of Provitamin A and Other Health-Promoting Carotenoids. Journal of Agricultural and Food Chemistry, 2020, 68, 12048-12057.	5.2	11
48	COLINEARITY OF CHLOROPLAST GENOMES IN DIVERGENT ECOTYPES OF THE MARINE DIATOM SKELETONEMA COSTATUM (BACILLARIOPHYTA)1. Journal of Phycology, 1995, 31, 795-800.	2.3	5
49	Focus Issue Editorial: Synthetic Biology. Plant Physiology, 2019, 179, 772-774.	4.8	4
50	Elucidating Carotenoid Biosynthetic Enzyme Localization and Interactions Using Fluorescent Microscopy. Methods in Molecular Biology, 2020, 2083, 223-234.	0.9	4
51	Improved Expression and Purification of the Carotenoid Biosynthetic Enzyme Z-ISO. Methods in Molecular Biology, 2020, 2083, 53-61.	0.9	4
52	Localizing and Quantifying Carotenoids in Intact Cells and Tissues. , 0, , .		3
53	A simple approach to identify the first rice mutants blocked in carotenoid biosynthesis. Journal of Experimental Botany, 2001, 52, 161-166.	4.8	1
54	Guest editorsâ€™ introduction. Archives of Biochemistry and Biophysics, 2010, 504, 1-2.	3.0	1

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55	Coupled Transcript-Metabolite Profiling: Towards Systems Biology Approaches to Unravel Regulation of Seed Secondary Metabolism. , 2012, , 367-385.		1
56	Analysis of plant-derived carotenoids in camouflaging stick and leaf insects (Phasmatodea). Methods in Enzymology, 2022, , 499-524.	1.0	1