

# Michael Melzer

## List of Publications by Year in descending order

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99  
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5,351  
citations

61857

43  
h-index

95083

68  
g-index

105  
all docs

105  
docs citations

105  
times ranked

6991  
citing authors

#	ARTICLE	IF	CITATIONS
1	Plastidial Thioredoxin <i>z</i> Interacts with Two Fructokinase-Like Proteins in a Thiol-Dependent Manner: Evidence for an Essential Role in Chloroplast Development in <i>Arabidopsis</i> and <i>Nicotiana benthamiana</i> . <i>Plant Cell</i> , 2010, 22, 1498-1515.	3.1	281
2	Chloroplast-generated reactive oxygen species play a major role in localized cell death during the non-host interaction between tobacco and <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> . <i>Plant Journal</i> , 2009, 60, 962-973.	2.8	203
3	Molecular physiology of adventitious root formation in <i>Petunia hybrida</i> cuttings: involvement of wound response and primary metabolism. <i>New Phytologist</i> , 2009, 181, 613-625.	3.5	175
4	<i>Arabidopsis</i> Chloroplastic Glutathione Peroxidases Play a Role in Cross Talk between Photooxidative Stress and Immune Responses. <i>Plant Physiology</i> , 2009, 150, 670-683.	2.3	171
5	Functional Replacement of Ferredoxin by a Cyanobacterial Flavodoxin in Tobacco Confers Broad-Range Stress Tolerance. <i>Plant Cell</i> , 2006, 18, 2035-2050.	3.1	169
6	RNAi-Mediated Tocopherol Deficiency Impairs Photoassimilate Export in Transgenic Potato Plants. <i>Plant Physiology</i> , 2004, 135, 1256-1268.	2.3	157
7	Distribution of indole-3-acetic acid in <i>Petunia hybrida</i> shoot tip cuttings and relationship between auxin transport, carbohydrate metabolism and adventitious root formation. <i>Planta</i> , 2013, 238, 499-517.	1.6	142
8	The transcript elongation factor FACT affects <i>Arabidopsis</i> vegetative and reproductive development and genetically interacts with HUB1/2. <i>Plant Journal</i> , 2010, 61, 686-697.	2.8	134
9	Heterosis manifestation during early <i>Arabidopsis</i> seedling development is characterized by intermediate gene expression and enhanced metabolic activity in the hybrids. <i>Plant Journal</i> , 2012, 71, 669-683.	2.8	117
10	An Archaeobacterial Topoisomerase Homolog Not Present in Other Eukaryotes Is Indispensable for Cell Proliferation of Plants. <i>Current Biology</i> , 2002, 12, 1787-1791.	1.8	113
11	Diurnal and Light-Regulated Expression of AtSTP1 in Guard Cells of <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2003, 133, 528-537.	2.3	111
12	AtSUC3, a gene encoding a new <i>Arabidopsis</i> sucrose transporter, is expressed in cells adjacent to the vascular tissue and in a carpel cell layer. <i>Plant Journal</i> , 2000, 24, 869-882.	2.8	106
13	PsbS interactions involved in the activation of energy dissipation in <i>Arabidopsis</i> . <i>Nature Plants</i> , 2016, 2, 15225.	4.7	105
14	Different Hormonal Regulation of Cellular Differentiation and Function in Nucellar Projection and Endosperm Transfer Cells: A Microdissection-Based Transcriptome Study of Young Barley Grains. <i>Plant Physiology</i> , 2008, 148, 1436-1452.	2.3	104
15	A Novel Superoxide Dismutase with a High Isoelectric Point in Higher Plants. Expression, Regulation, and Protein Localization. <i>Plant Physiology</i> , 2001, 126, 1668-1677.	2.3	98
16	An <i>Arabidopsis</i> GluTR Binding Protein Mediates Spatial Separation of 5-Aminolevulinic Acid Synthesis in Chloroplasts. <i>Plant Cell</i> , 2011, 23, 4476-4491.	3.1	96
17	A proteome approach defines protective functions of tobacco leaf trichomes. <i>Proteomics</i> , 2005, 5, 2508-2518.	1.3	85
18	Plant Growth under Natural Light Conditions Provides Highly Flexible Short-Term Acclimation Properties toward High Light Stress. <i>Frontiers in Plant Science</i> , 2017, 8, 681.	1.7	82

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19	Expression of a luteoviral movement protein in transgenic plants leads to carbohydrate accumulation and reduced photosynthetic capacity in source leaves. <i>Plant Journal</i> , 1997, 12, 1045-1056.	2.8	80
20	Limitation of nocturnal import of ATP into <i>Arabidopsis</i> chloroplasts leads to photooxidative damage. <i>Plant Journal</i> , 2007, 50, 293-304.	2.8	80
21	Evidence for expression level-dependent modulation of carbohydrate status and viral resistance by the potato leafroll virus movement protein in transgenic tobacco plants. <i>Plant Journal</i> , 2001, 28, 529-543.	2.8	77
22	The Role of Diglycosyl Lipids in Photosynthesis and Membrane Lipid Homeostasis in <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2009, 150, 1147-1159.	2.3	76
23	Providing an Additional Electron Sink by the Introduction of Cyanobacterial Flavodiirons Enhances Growth of <i>A. thaliana</i> Under Various Light Intensities. <i>Frontiers in Plant Science</i> , 2020, 11, 902.	1.7	75
24	Transcript Elongation Factor TFIIS Is Involved in <i>Arabidopsis</i> Seed Dormancy. <i>Journal of Molecular Biology</i> , 2009, 386, 598-611.	2.0	73
25	Hydrogen peroxide and expression of hipl-superoxide dismutase are associated with the development of secondary cell walls in <i>Zinnia elegans</i> . <i>Journal of Experimental Botany</i> , 2005, 56, 2085-2093.	2.4	72
26	Tissue-Specific Accumulation and Regulation of Zeaxanthin Epoxidase in <i>Arabidopsis</i> Reflect the Multiple Functions of the Enzyme in Plastids. <i>Plant and Cell Physiology</i> , 2015, 56, 346-357.	1.5	70
27	Identification of a Novel Adenine Nucleotide Transporter in the Endoplasmic Reticulum of <i>Arabidopsis</i> . <i>Plant Cell</i> , 2008, 20, 438-451.	3.1	66
28	A dual role of tobacco hexokinase 1 in primary metabolism and sugar sensing. <i>Plant, Cell and Environment</i> , 2013, 36, 1311-1327.	2.8	64
29	OnPLS integration of transcriptomic, proteomic and metabolomic data shows multi-level oxidative stress responses in the cambium of transgenic hipl- superoxide dismutase <i>Populus</i> plants. <i>BMC Genomics</i> , 2013, 14, 893.	1.2	63
30	Sucrose synthase activity does not restrict glycolysis in roots of transgenic potato plants under hypoxic conditions. <i>Planta</i> , 1999, 210, 41-49.	1.6	60
31	<i>Arabidopsis</i> senescence-associated protein DMP1 is involved in membrane remodeling of the ER and tonoplast. <i>BMC Plant Biology</i> , 2012, 12, 54.	1.6	58
32	Choline transporter-like 1 ( <i>CHER1</i> ) is crucial for plasmodesmata maturation in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2017, 89, 394-406.	2.8	58
33	Photosynthesis in <i>C<sub>3</sub></i> and <i>C<sub>4</sub></i> intermediate <i>Moricandia</i> species. <i>Journal of Experimental Botany</i> , 2017, 68, 191-206.	2.4	58
34	Purification, properties and in situ localization of the amphibolic enzymes D-ribulose 5-phosphate 3-epimerase and transketolase from spinach chloroplasts. <i>FEBS Journal</i> , 1998, 252, 237-244.	0.2	56
35	Flavodoxin displays dose-dependent effects on photosynthesis and stress tolerance when expressed in transgenic tobacco plants. <i>Planta</i> , 2012, 236, 1447-1458.	1.6	55
36	The transcript elongation factor SPT4/SPT5 is involved in auxin-related gene expression in <i>Arabidopsis</i> . <i>Nucleic Acids Research</i> , 2014, 42, 4332-4347.	6.5	54

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37	A specific role of iron in promoting meristematic cell division during adventitious root formation. <i>Journal of Experimental Botany</i> , 2017, 68, 4233-4247.	2.4	52
38	Leaf Variegation and Impaired Chloroplast Development Caused by a Truncated CCT Domain Gene in <i>albostrians</i> Barley. <i>Plant Cell</i> , 2019, 31, 1430-1445.	3.1	52
39	Cyanobacterial flavodoxin complements ferredoxin deficiency in knocked-down transgenic tobacco plants. <i>Plant Journal</i> , 2011, 65, 922-935.	2.8	51
40	A <i>TIR</i> NBS protein encoded by <i>A. rabidopsis</i> <i>C</i> hilling <i>S</i> sensitive 1 ( <i>CHS</i> 1) limits chloroplast damage and cell death at low temperature. <i>Plant Journal</i> , 2013, 75, 539-552.	2.8	50
41	Synthesis and transfer of galactolipids in the chloroplast envelope membranes of <i>Arabidopsis thaliana</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 10714-10719.	3.3	50
42	The lipoxygenase-dependent oxygenation of lipid body membranes is promoted by a patatin-type phospholipase in cucumber cotyledons. <i>Journal of Experimental Botany</i> , 2011, 62, 749-760.	2.4	49
43	Asymmetric growth of root epidermal cells is related to the differentiation of root hair cells in <i>Hordeum vulgare</i> (L.). <i>Journal of Experimental Botany</i> , 2013, 64, 5145-5155.	2.4	48
44	Seed-specific promoters direct gene expression in non-seed tissue. <i>Journal of Experimental Botany</i> , 2004, 55, 1463-1471.	2.4	46
45	Expression of a Plastid-Targeted Flavodoxin Decreases Chloroplast Reactive Oxygen Species Accumulation and Delays Senescence in Aging Tobacco Leaves. <i>Frontiers in Plant Science</i> , 2018, 9, 1039.	1.7	46
46	Differentiation of endosperm transfer cells of barley: a comprehensive analysis at the microscale. <i>Plant Journal</i> , 2012, 71, 639-655.	2.8	42
47	Root Hair Development in the Grasses: What We Already Know and What We Still Need to Know. <i>Plant Physiology</i> , 2015, 168, 407-414.	2.3	41
48	The <i>Arabidopsis</i> THO/TREX component <i>TEX1</i> functionally interacts with <i>MOS11</i> and modulates mRNA export and alternative splicing events. <i>Plant Molecular Biology</i> , 2017, 93, 283-298.	2.0	39
49	Regulation of Root Development and Architecture by Strigolactones under Optimal and Nutrient Deficiency Conditions. <i>International Journal of Molecular Sciences</i> , 2018, 19, 1887.	1.8	38
50	Assimilatory Sulfate Reduction in C3, C3-C4, and C4 Species of <i>Flaveria</i> . <i>Plant Physiology</i> , 2001, 127, 543-550.	2.3	37
51	Urea retranslocation from senescing <i>Arabidopsis</i> leaves is promoted by <i>DUR</i> -mediated urea retrieval from leaf apoplast. <i>Plant Journal</i> , 2015, 81, 377-387.	2.8	37
52	<i>COMPOSITUM 1</i> contributes to the architectural simplification of barley inflorescence via meristem identity signals. <i>Nature Communications</i> , 2020, 11, 5138.	5.8	37
53	Plasma membrane proteome analysis identifies a role of barley membrane steroid binding protein in root architecture response to salinity. <i>Plant, Cell and Environment</i> , 2018, 41, 1311-1330.	2.8	36
54	Heterogeneity in thylakoid membrane proteome of <i>Synechocystis</i> 6803. <i>Journal of Proteomics</i> , 2010, 73, 976-991.	1.2	35

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55	Post-translational modifications of the AFET3 gene product—a component of the iron transport system in budding cells and mycelia of the yeast <i>Arxula adenivorans</i> . <i>Yeast</i> , 2002, 19, 849-862.	0.8	34
56	Arabinogalactan proteins are involved in root hair development in barley. <i>Journal of Experimental Botany</i> , 2015, 66, 1245-1257.	2.4	34
57	Immunoelectron Microscopy for Locating Calvin Cycle Enzymes in the Thylakoids of <i>Synechocystis</i> 6803. <i>Molecular Plant</i> , 2009, 2, 32-42.	3.9	33
58	Alternative Splicing Studies of the Reactive Oxygen Species Gene Network in <i>Populus</i> Reveal Two Isoforms of High-Isoelectric-Point Superoxide Dismutase. <i>Plant Physiology</i> , 2009, 149, 1848-1859.	2.3	33
59	The evolutionary context of root epidermis cell patterning in grasses (Poaceae). <i>Plant Signaling and Behavior</i> , 2014, 9, e27972.	1.2	33
60	Deficiency in riboflavin biosynthesis affects tetrapyrrole biosynthesis in etiolated <i>Arabidopsis</i> tissue. <i>Plant Molecular Biology</i> , 2012, 78, 77-93.	2.0	32
61	Proteomic Analysis of Plasmodesmata From <i>Populus</i> Cell Suspension Cultures in Relation With Callose Biosynthesis. <i>Frontiers in Plant Science</i> , 2018, 9, 1681.	1.7	32
62	High-level production of the non-cariogenic sucrose isomer palatinose in transgenic tobacco plants strongly impairs development. <i>Planta</i> , 2002, 214, 356-364.	1.6	31
63	The Conserved Chimeric Transcript UPGRADE2 Is Associated with Unreduced Pollen Formation and Is Exclusively Found in Apomictic <i>Boechera</i> Species. <i>Plant Physiology</i> , 2013, 163, 1640-1659.	2.3	31
64	Downregulation of high-isoelectric-point extracellular superoxide dismutase mediates alterations in the metabolism of reactive oxygen species and developmental disturbances in hybrid aspen. <i>Plant Journal</i> , 2006, 49, 135-148.	2.8	30
65	Supernumerary B chromosomes of <i>Aegilops speltoides</i> undergo precise elimination in roots early in embryo development. <i>Nature Communications</i> , 2020, 11, 2764.	5.8	30
66	Triacylglycerol and phytol ester synthesis in <i>Synechocystis</i> sp. PCC6803. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 6216-6222.	3.3	29
67	PsbS contributes to photoprotection in <i>Chlamydomonas reinhardtii</i> independently of energy dissipation. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148183.	0.5	29
68	Protein and Metabolite Analysis Reveals Permanent Induction of Stress Defense and Cell Regeneration Processes in a Tobacco Cell Suspension Culture. <i>International Journal of Molecular Sciences</i> , 2009, 10, 3012-3032.	1.8	28
69	PDX1.1-dependent biosynthesis of vitamin B6 protects roots from ammonium-induced oxidative stress. <i>Molecular Plant</i> , 2022, 15, 820-839.	3.9	28
70	Quantum dots—a versatile tool in plant science?. <i>Journal of Nanobiotechnology</i> , 2006, 4, 5.	4.2	27
71	Homologous recombination properties of OsRad51, a recombinase from rice. <i>Plant Molecular Biology</i> , 2008, 68, 479-491.	2.0	27
72	Expression of the Minor Isoform Pea Ferredoxin in Tobacco Alters Photosynthetic Electron Partitioning and Enhances Cyclic Electron Flow. <i>Plant Physiology</i> , 2013, 161, 866-879.	2.3	27

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73	The zeaxanthin epoxidase is degraded along with the D1 protein during photoinhibition of photosystem II. <i>Plant Direct</i> , 2019, 3, e00185.	0.8	27
74	Barley strigolactone signalling mutant <i>hvd14.d</i> reveals the role of strigolactones in abscisic acid-dependent response to drought. <i>Plant, Cell and Environment</i> , 2020, 43, 2239-2253.	2.8	25
75	Analysis of T-DNA integration and generative segregation in transgenic winter triticale (x) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	1.6	22
76	Identification of MAIN, a factor involved in genome stability in the meristems of <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2013, 75, 469-483.	2.8	22
77	Cellular dynamics during early barley pollen embryogenesis revealed by time-lapse imaging. <i>Frontiers in Plant Science</i> , 2014, 5, 675.	1.7	22
78	Single cell-type analysis of cellular lipid remodelling in response to salinity in the epidermal bladder cells of the model halophyte <i>Mesembryanthemum crystallinum</i> . <i>Plant, Cell and Environment</i> , 2018, 41, 2390-2403.	2.8	22
79	Iron Retention in Root Hemicelluloses Causes Genotypic Variability in the Tolerance to Iron Deficiency-Induced Chlorosis in Maize. <i>Frontiers in Plant Science</i> , 2018, 9, 557.	1.7	19
80	Targeted knock-out of a gene encoding sulfite reductase in the moss <i>Physcomitrella patens</i> affects gametophytic and sporophytic development. <i>FEBS Letters</i> , 2010, 584, 2271-2278.	1.3	18
81	Identification and properties of type I-signal peptidases of <i>Bacillus amyloliquefaciens</i> . <i>FEBS Journal</i> , 2002, 269, 458-469.	0.2	17
82	The auxins centrophenoxine and 2,4-D differ in their effects on non-directly induced chromosome doubling in anther culture of wheat ( <i>T. aestivum</i> L.). <i>Plant Biotechnology Reports</i> , 2013, 7, 247-255.	0.9	17
83	Identification and characterization of a plastidial phosphatidylglycerophosphate phosphatase in <i>Arabidopsis thaliana</i> . <i>Plant Journal</i> , 2017, 89, 221-234.	2.8	17
84	Effector-mediated relocalization of a maize lipoxygenase protein triggers susceptibility to <i>Ustilago maydis</i> . <i>Plant Cell</i> , 2022, 34, 2785-2805.	3.1	17
85	A mechanistic view on lodging resistance in rye and wheat: a multiscale comparative study. <i>Plant Biotechnology Journal</i> , 2021, 19, 2646-2661.	4.1	16
86	Dynamics of post-translationally modified histones during barley pollen embryogenesis in the presence or absence of the epi-drug trichostatin A. <i>Plant Reproduction</i> , 2017, 30, 95-105.	1.3	14
87	Photosynthetic characterization of flavodoxin-expressing tobacco plants reveals a high light acclimation-like phenotype. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148211.	0.5	13
88	<i>AtSUC3</i> , a gene encoding a new <i>Arabidopsis</i> sucrose transporter, is expressed in cells adjacent to the vascular tissue and in a carpel cell layer. <i>Plant Journal</i> , 2000, 24, 869-882.	2.8	10
89	Expression of Flavodiiron Proteins Flv2-Flv4 in Chloroplasts of Arabidopsis and Tobacco Plants Provides Multiple Stress Tolerance. <i>International Journal of Molecular Sciences</i> , 2021, 22, 1178.	1.8	10
90	The Jacalin-Related Lectin HvHorch Is Involved in the Physiological Response of Barley Roots to Salt Stress. <i>International Journal of Molecular Sciences</i> , 2021, 22, 10248.	1.8	9

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91	The transcription factor WRKY22 is required during cryo-stress acclimation in Arabidopsis shoot tips. <i>Journal of Experimental Botany</i> , 2020, 71, 4993-5009.	2.4	8
92	Differential distribution of pigment-protein complexes in the Thylakoid membranes of <i>Synechocystis</i> 6803. <i>Journal of Bioenergetics and Biomembranes</i> , 2012, 44, 399-409.	1.0	7
93	Mutation of the ALBOSTRIANS Ohnologous Gene HvCMF3 Impairs Chloroplast Development and Thylakoid Architecture in Barley. <i>Frontiers in Plant Science</i> , 2021, 12, 732608.	1.7	7
94	Barley HISTIDINE KINASE 1 (HvHK1) coordinates transfer cell specification in the young endosperm. <i>Plant Journal</i> , 2020, 103, 1869-1884.	2.8	6
95	The Arabidopsis AAC Proteins CIL and CIA2 Are Sub-functionalized Paralogs Involved in Chloroplast Development. <i>Frontiers in Plant Science</i> , 2021, 12, 681375.	1.7	6
96	Role of the AFRD1-encoded fumarate reductase in hypoxia and osmotolerance in <i>Arxula adenivorans</i> . <i>FEMS Yeast Research</i> , 2012, 12, 924-937.	1.1	4
97	ATP-Dependent Clp Protease Subunit C1, HvClpC1, Is a Strong Candidate Gene for Barley Variegation Mutant luteostrians as Revealed by Genetic Mapping and Genomic Re-sequencing. <i>Frontiers in Plant Science</i> , 2021, 12, 664085.	1.7	2
98	Preparation of Barley Roots for Histological, Structural, and Immunolocalization Studies Using Light and Electron Microscopy. <i>Methods in Molecular Biology</i> , 2019, 1900, 153-166.	0.4	1
99	Blue-Native Page Analysis Validates Heterogeneity in the Thylakoids of <i>Synechocystis</i> 6803. <i>Advanced Topics in Science and Technology in China</i> , 2013, , 385-388.	0.0	0