

Mohammad-Reza Hajirezaei

List of Publications by Year in descending order

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101
papers

7,475
citations

44069

48
h-index

58581

82
g-index

108
all docs

108
docs citations

108
times ranked

8792
citing authors

#	ARTICLE	IF	CITATIONS
1	Sugar-induced increases in trehalose 6-phosphate are correlated with redox activation of ADPglucose pyrophosphorylase and higher rates of starch synthesis in <i>Arabidopsis thaliana</i> . <i>Biochemical Journal</i> , 2006, 397, 139-148.	3.7	518
2	Root exudation of sugars, amino acids, and organic acids by maize as affected by nitrogen, phosphorus, potassium, and iron deficiency. <i>Journal of Plant Nutrition and Soil Science</i> , 2011, 174, 3-11.	1.9	431
3	Phosphate systemically inhibits development of arbuscular mycorrhiza in <i>Petunia hybrida</i> and represses genes involved in mycorrhizal functioning. <i>Plant Journal</i> , 2010, 64, 1002-1017.	5.7	354
4	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.	5.7	203
5	Increased potato tuber size resulting from apoplastic expression of a yeast invertase. <i>Nature Biotechnology</i> , 1997, 15, 794-797.	17.5	197
6	Combined expression of glucokinase and invertase in potato tubers leads to a dramatic reduction in starch accumulation and a stimulation of glycolysis. <i>Plant Journal</i> , 1998, 15, 109-118.	5.7	192
7	Host-related metabolic cues affect colonization strategies of a root endophyte. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 13965-13970.	7.1	185
8	Plant Hormone Homeostasis, Signaling, and Function during Adventitious Root Formation in Cuttings. <i>Frontiers in Plant Science</i> , 2016, 7, 381.	3.6	184
9	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.	7.3	175
10	Functional Replacement of Ferredoxin by a Cyanobacterial Flavodoxin in Tobacco Confers Broad-Range Stress Tolerance. <i>Plant Cell</i> , 2006, 18, 2035-2050.	6.6	169
11	Molecular and physiological control of adventitious rooting in cuttings: phytohormone action meets resource allocation. <i>Annals of Botany</i> , 2019, 123, 929-949.	2.9	165
12	The Entner-Doudoroff pathway is an overlooked glycolytic route in cyanobacteria and plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 5441-5446.	7.1	160
13	RNAi-Mediated Tocopherol Deficiency Impairs Photoassimilate Export in Transgenic Potato Plants. <i>Plant Physiology</i> , 2004, 135, 1256-1268.	4.8	157
14	ROS signaling in the hypersensitive response. <i>Plant Signaling and Behavior</i> , 2010, 5, 393-396.	2.4	147
15	Feedback inhibition of the general phenylpropanoid and flavonol biosynthetic pathways upon a compromised flavonol-3-O-glycosylation. <i>Journal of Experimental Botany</i> , 2012, 63, 2465-2478.	4.8	146
16	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.	3.2	142
17	Altering Trehalose-6-Phosphate Content in Transgenic Potato Tubers Affects Tuber Growth and Alters Responsiveness to Hormones during Sprouting. <i>Plant Physiology</i> , 2011, 156, 1754-1771.	4.8	138
18	The Sucrose Transporter StSUT1 Localizes to Sieve Elements in Potato Tuber Phloem and Influences Tuber Physiology and Development. <i>Plant Physiology</i> , 2003, 131, 102-113.	4.8	134

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19	Small changes in the activity of chloroplastic NADP+-dependent ferredoxin oxidoreductase lead to impaired plant growth and restrict photosynthetic activity of transgenic tobacco plants. <i>Plant Journal</i> , 2002, 29, 281-293.	5.7	124
20	A proteomics view on the role of drought-induced senescence and oxidative stress defense in enhanced stem reserves remobilization in wheat. <i>Journal of Proteomics</i> , 2011, 74, 1959-1973.	2.4	111
21	Enhanced plant tolerance to iron starvation by functional substitution of chloroplast ferredoxin with a bacterial flavodoxin. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 11495-11500.	7.1	109
22	Decreased sucrose content triggers starch breakdown and respiration in stored potato tubers (<i>Solanum tuberosum</i>). <i>Journal of Experimental Botany</i> , 2003, 54, 477-488.	4.8	91
23	bac genes for recombinant bacilysin and anticapsin production in <i>Bacillus</i> host strains. <i>Archives of Microbiology</i> , 2005, 183, 71-79.	2.2	90
24	Transcriptomic analysis reveals ethylene as stimulator and auxin as regulator of adventitious root formation in petunia cuttings. <i>Frontiers in Plant Science</i> , 2014, 5, 494.	3.6	89
25	Transgenic Tobacco Plants Overexpressing Chloroplastic Ferredoxin-NADP(H) Reductase Display Normal Rates of Photosynthesis and Increased Tolerance to Oxidative Stress. <i>Plant Physiology</i> , 2007, 143, 639-649.	4.8	87
26	Combating stress with flavodoxin: a promising route for crop improvement. <i>Trends in Biotechnology</i> , 2008, 26, 531-537.	9.3	84
27	<i>Arabidopsis</i> INOSITOL TRANSPORTER4 Mediates High-Affinity H+ Symport of Myoinositol across the Plasma Membrane. <i>Plant Physiology</i> , 2006, 141, 565-577.	4.8	80
28	A comparative proteome approach to decipher the mechanism of rice adaptation to phosphorous deficiency. <i>Proteomics</i> , 2009, 9, 159-170.	2.2	80
29	Root endophytic fungus <i>Piriformospora indica</i> improves drought stress adaptation in barley by metabolic and proteomic reprogramming. <i>Environmental and Experimental Botany</i> , 2019, 157, 197-210.	4.2	80
30	Overriding the co-limiting import of carbon and energy into tuber amyloplasts increases the starch content and yield of transgenic potato plants. <i>Plant Biotechnology Journal</i> , 2008, 6, 453-464.	8.3	78
31	Induction of Barley Silicon Transporter HvLsi1 and HvLsi2, increased silicon concentration in the shoot and regulated Starch and ABA Homeostasis under Osmotic stress and Concomitant Potassium Deficiency. <i>Frontiers in Plant Science</i> , 2017, 8, 1359.	3.6	78
32	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.	3.6	75
33	Metabolic and transcriptional response of central metabolism affected by root endophytic fungus <i>Piriformospora indica</i> under salinity in barley. <i>Plant Molecular Biology</i> , 2016, 90, 699-717.	3.9	73
34	Antisense-inhibition of ADP-glucose pyrophosphorylase in <i>Vicia narbonensis</i> seeds increases soluble sugars and leads to higher water and nitrogen uptake. <i>Planta</i> , 2002, 214, 954-964.	3.2	72
35	Functional analysis of the essential bifunctional tobacco enzyme 3-dehydroquinate dehydratase/shikimate dehydrogenase in transgenic tobacco plants. <i>Journal of Experimental Botany</i> , 2007, 58, 2053-2067.	4.8	70
36	The Metabolic Signature of Biomass Formation in Barley. <i>Plant and Cell Physiology</i> , 2016, 57, 1943-1960.	3.1	66

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37	Simultaneous boosting of source and sink capacities doubles tuber starch yield of potato plants. <i>Plant Biotechnology Journal</i> , 2012, 10, 1088-1098.	8.3	65
38	Senescence-induced iron mobilization in source leaves of barley (<i>Hordeum vulgare</i>) plants. <i>New Phytologist</i> , 2012, 195, 372-383.	7.3	65
39	Plant Metabolic Modeling: Achieving New Insight into Metabolism and Metabolic Engineering. <i>Plant Cell</i> , 2014, 26, 3847-3866.	6.6	65
40	A dual role of tobacco hexokinase 1 in primary metabolism and sugar sensing. <i>Plant, Cell and Environment</i> , 2013, 36, 1311-1327.	5.7	64
41	Context of action of Proline Dehydrogenase (ProDH) in the Hypersensitive Response of Arabidopsis. <i>BMC Plant Biology</i> , 2014, 14, 21.	3.6	61
42	Sucrose synthase activity does not restrict glycolysis in roots of transgenic potato plants under hypoxic conditions. <i>Planta</i> , 1999, 210, 41-49.	3.2	60
43	Transgenic tobacco plants expressing antisense ferredoxin-NADP(H) reductase transcripts display increased susceptibility to photo-oxidative damage. <i>Plant Journal</i> , 2003, 35, 332-341.	5.7	60
44	Dark exposure of petunia cuttings strongly improves adventitious root formation and enhances carbohydrate availability during rooting in the light. <i>Journal of Plant Physiology</i> , 2010, 167, 547-554.	3.5	58
45	Tocopherol deficiency in transgenic tobacco (<i>Nicotiana tabacum</i> L.) plants leads to accelerated senescence. <i>Plant, Cell and Environment</i> , 2009, 32, 144-157.	5.7	57
46	Flavodoxin displays dose-dependent effects on photosynthesis and stress tolerance when expressed in transgenic tobacco plants. <i>Planta</i> , 2012, 236, 1447-1458.	3.2	55
47	Ascorbate biosynthesis and its involvement in stress tolerance and plant development in rice (<i>Oryza</i>) Tj ETQq1 1 0.784314 rgBT /Overl	3.9	55
48	A specific role of iron in promoting meristematic cell division during adventitious root formation. <i>Journal of Experimental Botany</i> , 2017, 68, 4233-4247.	4.8	52
49	Cyanobacterial flavodoxin complements ferredoxin deficiency in knocked-down transgenic tobacco plants. <i>Plant Journal</i> , 2011, 65, 922-935.	5.7	51
50	Electrical signaling along the phloem and its physiological responses in the maize leaf. <i>Frontiers in Plant Science</i> , 2013, 4, 239.	3.6	51
51	Abscisic acid influences tillering by modulation of strigolactones in barley. <i>Journal of Experimental Botany</i> , 2018, 69, 3883-3898.	4.8	51
52	ITPK1 is an InsP6/ADP phosphotransferase that controls phosphate signaling in Arabidopsis. <i>Molecular Plant</i> , 2021, 14, 1864-1880.	8.3	51
53	Influence of alternating temperature preculture on cryopreservation results for potato shoot tips. <i>Plant Cell Reports</i> , 2008, 27, 1551-1558.	5.6	49
54	Chloroplast Redox Status Modulates Genome-Wide Plant Responses during the Non-host Interaction of Tobacco with the Hemibiotrophic Bacterium <i>Xanthomonas campestris</i> pv. <i>vesicatoria</i> . <i>Frontiers in Plant Science</i> , 2017, 8, 1158.	3.6	47

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55	Antisense inhibition of enolase strongly limits the metabolism of aromatic amino acids, but has only minor effects on respiration in leaves of transgenic tobacco plants. <i>New Phytologist</i> , 2009, 184, 607-618.	7.3	46
56	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.	3.6	46
57	Faster photosynthetic induction in tobacco by expressing cyanobacterial flavodiiron proteins in chloroplasts. <i>Photosynthesis Research</i> , 2018, 136, 129-138.	2.9	43
58	A higher sink competitiveness of the rooting zone and invertases are involved in dark stimulation of adventitious root formation in <i>Petunia hybrida</i> cuttings. <i>Plant Science</i> , 2016, 243, 10-22.	3.6	41
59	Inoculation of sugarcane with <i>Pantoea</i> sp. increases amino acid contents in shoot tissues; serine, alanine, glutamine and asparagine permit concomitantly ammonium excretion and nitrogenase activity of the bacterium. <i>Journal of Plant Physiology</i> , 2009, 166, 1152-1161.	3.5	39
60	Comprehensive Transcriptome Analysis Unravels the Existence of Crucial Genes Regulating Primary Metabolism during Adventitious Root Formation in <i>Petunia hybrida</i> . <i>PLoS ONE</i> , 2014, 9, e100997.	2.5	38
61	A Potential Role of Flag Leaf Potassium in Conferring Tolerance to Drought-Induced Leaf Senescence in Barley. <i>Frontiers in Plant Science</i> , 2016, 7, 206.	3.6	38
62	Over-expression of PR-10a leads to increased salt and osmotic tolerance in potato cell cultures. <i>Journal of Biotechnology</i> , 2010, 150, 277-287.	3.8	37
63	Urea retranslocation from senescing <i>Arabidopsis</i> leaves is promoted by DUR^3 -mediated urea retrieval from leaf apoplast. <i>Plant Journal</i> , 2015, 81, 377-387.	5.7	37
64	Increase of DNA Methylation at the HvCKX2.1 Promoter by Terminal Drought Stress in Barley. <i>Epigenomes</i> , 2017, 1, 9.	1.8	37
65	Comparative proteomic analysis of tobacco expressing cyanobacterial flavodoxin and its wild type under drought stress. <i>Journal of Plant Physiology</i> , 2015, 175, 48-58.	3.5	35
66	Leaf Senescence: The Chloroplast Connection Comes of Age. <i>Plants</i> , 2019, 8, 495.	3.5	34
67	Ascorbate metabolism in rice genotypes differing in zinc efficiency. <i>Planta</i> , 2014, 239, 367-379.	3.2	33
68	RNA interference-mediated repression of sucrose-phosphatase in transgenic potato tubers (<i>Solanum tuberosum</i>) on total soluble carbohydrate accumulation. <i>Plant, Cell and Environment</i> , 2007, 31, 071115091544001-???	5.7	32
69	The influence of cytosolic phosphorylating glyceraldehyde 3-phosphate dehydrogenase (GAPC) on potato tuber metabolism. <i>Journal of Experimental Botany</i> , 2006, 57, 2363-2377.	4.8	29
70	Modulation of carbohydrate metabolism and chloroplast structure in sugarcane leaves which were infected by Sugarcane Yellow Leaf Virus (SCYLV). <i>Physiological and Molecular Plant Pathology</i> , 2008, 73, 78-87.	2.5	29
71	Role of auxin homeostasis and response in nitrogen limitation and dark stimulation of adventitious root formation in <i>petunia</i> cuttings. <i>Annals of Botany</i> , 2019, 124, 1053-1066.	2.9	28
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.	4.8	27

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73	Diurnal changes in assimilate concentrations and fluxes in the phloem of castor bean (<i>Ricinus</i>) Tj ETQq1 1 0.784314 rgBT /Overlock 101	3.2	26
74	Nitrogen remobilisation facilitates adventitious root formation on reversible dark-induced carbohydrate depletion in <i>Petunia hybrida</i> . <i>BMC Plant Biology</i> , 2016, 16, 219.	3.6	25
75	Potential roles of YCF54 and ferredoxin-NADPH reductase for magnesium protoporphyrin monomethylester cyclase. <i>Plant Journal</i> , 2018, 94, 485-496.	5.7	25
76	Flooding Causes Dramatic Compositional Shifts and Depletion of Putative Beneficial Bacteria on the Spring Wheat Microbiota. <i>Frontiers in Microbiology</i> , 2021, 12, 773116.	3.5	25
77	Changes in nitrogen availability lead to a reprogramming of pyruvate metabolism. <i>BMC Plant Biology</i> , 2018, 18, 77.	3.6	24
78	Engineering the future. Development of transgenic plants with enhanced tolerance to adverse environments. <i>Biotechnology and Genetic Engineering Reviews</i> , 2010, 27, 33-56.	6.2	23
79	The Defense-Related Isoleucic Acid Differentially Accumulates in <i>Arabidopsis</i> Among Branched-Chain Amino Acid-Related 2-Hydroxy Carboxylic Acids. <i>Frontiers in Plant Science</i> , 2018, 9, 766.	3.6	23
80	Ammonium mediated changes in carbon and nitrogen metabolisms induce resistance against <i>Pseudomonas syringae</i> in tomato plants. <i>Journal of Plant Physiology</i> , 2019, 239, 28-37.	3.5	23
81	The 2-oxoglutarate/malate translocator mediates amino acid and storage protein biosynthesis in pea embryos. <i>Plant Journal</i> , 2010, 61, 350-363.	5.7	22
82	Phloem-Specific Methionine Recycling Fuels Polyamine Biosynthesis in a Sulfur-Dependent Manner and Promotes Flower and Seed Development. <i>Plant Physiology</i> , 2016, 170, 790-806.	4.8	22
83	An Age-Dependent Sequence of Physiological Processes Defines Developmental Root Senescence. <i>Plant Physiology</i> , 2019, 181, 993-1007.	4.8	22
84	Influence of oxygen deficiency and the role of specific amino acids in cryopreservation of garlic shoot tips. <i>BMC Biotechnology</i> , 2015, 15, 40.	3.3	21
85	Volatiles from the fungal phytopathogen <i>Penicillium aurantiogriseum</i> modulate root metabolism and architecture through proteome resetting. <i>Plant, Cell and Environment</i> , 2020, 43, 2551-2570.	5.7	19
86	Expression of a Chloroplast-Targeted Cyanobacterial Flavodoxin in Tomato Plants Increases Harvest Index by Altering Plant Size and Productivity. <i>Frontiers in Plant Science</i> , 2019, 10, 1432.	3.6	16
87	Differential root and shoot responses in the metabolism of tomato plants exhibiting reduced levels of gibberellin. <i>Environmental and Experimental Botany</i> , 2019, 157, 331-343.	4.2	16
88	Involvement of the auxin-cytokinin homeostasis in adventitious root formation of rose cuttings as affected by their nodal position in the stock plant. <i>Planta</i> , 2021, 254, 65.	3.2	15
89	Coordinating the morphogenesis-differentiation balance by tweaking the cytokinin-gibberellin equilibrium. <i>PLoS Genetics</i> , 2021, 17, e1009537.	3.5	14
90	Proteomic and metabolomic analysis of desiccation tolerance in wheat young seedlings. <i>Plant Physiology and Biochemistry</i> , 2020, 146, 349-362.	5.8	13

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91	Photosynthetic characterization of flavodoxin-expressing tobacco plants reveals a high light acclimation-like phenotype. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2020, 1861, 148211.	1.0	13
92	Transcriptional and Metabolic Profiling of Potato Plants Expressing a Plastid-Targeted Electron Shuttle Reveal Modulation of Genes Associated to Drought Tolerance by Chloroplast Redox Poise. <i>International Journal of Molecular Sciences</i> , 2020, 21, 7199.	4.1	12
93	Seminal and Nodal Roots of Barley Differ in Anatomy, Proteome and Nitrate Uptake Capacity. <i>Plant and Cell Physiology</i> , 2020, 61, 1297-1308.	3.1	12
94	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.	4.1	10
95	A Chimeric TGA Repressor Slows Down Fruit Maturation and Ripening in Tomato. <i>Plant and Cell Physiology</i> , 2022, 63, 120-134.	3.1	9
96	Plastid-Targeted Cyanobacterial Flavodiiron Proteins Maintain Carbohydrate Turnover and Enhance Drought Stress Tolerance in Barley. <i>Frontiers in Plant Science</i> , 2020, 11, 613731.	3.6	7
97	Integrating data from biological experiments into metabolic networks with the DBE information system. <i>In Silico Biology</i> , 2005, 5, 93-102.	0.9	6
98	Engineering Climate-Change-Resilient Crops: New Tools and Approaches. <i>International Journal of Molecular Sciences</i> , 2021, 22, 7877.	4.1	5
99	Use of Cyanobacterial Proteins to Engineer New Crops. , 2009, , 65-88.		2
100	Genetics and Genomics of Stomatal Traits for Improvement of Abiotic Stress Tolerance in Cereals. <i>Sustainable Development and Biodiversity</i> , 2019, , 1-20.	1.7	2
101	Proteomics Approach for Identification of Nutrient Deficiency Related Proteins in Crop Plants. , 2016, , 177-201.		1