Mohammad-Reza Hajirezaei

List of Publications by Year
in descending order

101 papers	7,475 citations	43973 48 h-index	58464 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 Arabidopsis thaliana. Biochemical Journal, 2006, 397, 139-148.	1.7	518
2	Root exudation of sugars, amino acids, and organic acids by maize as affected by nitrogen, phosphorus, potassium, and iron deficiency. Journal of Plant Nutrition and Soil Science, 2011, 174, 3-11.	1.1	431
3	Phosphate systemically inhibits development of arbuscular mycorrhiza in Petunia hybrida and represses genes involved in mycorrhizal functioning. Plant Journal, 2010, 64, 1002-1017.	2.8	354
4	Chloroplastâ€generated reactive oxygen species play a major role in localized cell death during the nonâ€host interaction between tobacco and Xanthomonas campestris pv. vesicatoria. Plant Journal, 2009, 60, 962-973.	2.8	203
5	Increased potato tuber size resulting from apoplastic expression of a yeast invertase. Nature Biotechnology, 1997, 15, 794-797.	9.4	197
6	Combined expression of glucokinase and invertase in potato tubers leads to a dramatic reduction in starch accumulation and a stimulation of glycolysis. Plant Journal, 1998, 15, 109-118.	2.8	192
7	Host-related metabolic cues affect colonization strategies of a root endophyte. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13965-13970.	3.3	185
8	Plant Hormone Homeostasis, Signaling, and Function during Adventitious Root Formation in Cuttings. Frontiers in Plant Science, 2016, 7, 381.	1.7	184
9	Molecular physiology of adventitious root formation in Petunia hybrida cuttings: involvement of wound response and primary metabolism. New Phytologist, 2009, 181, 613-625.	3.5	175
10	Functional Replacement of Ferredoxin by a Cyanobacterial Flavodoxin in Tobacco Confers Broad-Range Stress Tolerance. Plant Cell, 2006, 18, 2035-2050.	3.1	169
11	Molecular and physiological control of adventitious rooting in cuttings: phytohormone action meets resource allocation. Annals of Botany, 2019, 123, 929-949.	1.4	165
12	The Entnerâ€“Doudoroff pathway is an overlooked glycolytic route in cyanobacteria and plants. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5441-5446.	3.3	160
13	RNAi-Mediated Tocopherol Deficiency Impairs Photoassimilate Export in Transgenic Potato Plants. Plant Physiology, 2004, 135, 1256-1268.	2.3	157
14	ROS signaling in the hypersensitive response. Plant Signaling and Behavior, 2010, 5, 393-396.	1.2	147
15	Feedback inhibition of the general phenylpropanoid and flavonol biosynthetic pathways upon a compromised flavonol-3-O-glycosylation. Journal of Experimental Botany, 2012, 63, 2465-2478.	2.4	146
16	Distribution of indole-3-acetic acid in Petunia hybrida shoot tip cuttings and relationship between auxin transport, carbohydrate metabolism and adventitious root formation. Planta, 2013, 238, 499-517.	1.6	142
17	Altering Trehalose-6-Phosphate Content in Transgenic Potato Tubers Affects Tuber Growth and Alters Responsiveness to Hormones during Sprouting Â Â. Plant Physiology, 2011, 156, 1754-1771.	2.3	138
18	The Sucrose Transporter StSUT1 Localizes to Sieve Elements in Potato Tuber Phloem and Influences Tuber Physiology and Development,. Plant Physiology, 2003, 131, 102-113.	2.3	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. Plant Journal, 2002, 29, 281-293.	2.8	124
20	A proteomics view on the role of drought-induced senescence and oxidative stress defense in enhanced stem reserves remobilization in wheat. Journal of Proteomics, 2011, 74, 1959-1973.	1.2	111
21	Enhanced plant tolerance to iron starvation by functional substitution of chloroplast ferredoxin with a bacterial flavodoxin. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11495-11500.	3.3	109
22	Decreased sucrose content triggers starch breakdown and respiration in stored potato tubers (Solanum tuberosum). Journal of Experimental Botany, 2003, 54, 477-488.	2.4	91
23	bac genes for recombinant bacilysin and anticapsin production in Bacillus host strains. Archives of Microbiology, 2005, 183, 71-79.	1.0	90
24	Transcriptomic analysis reveals ethylene as stimulator and auxin as regulator of adventitious root formation in petunia cuttings. Frontiers in Plant Science, 2014, 5, 494.	1.7	89
25	Transgenic Tobacco Plants Overexpressing Chloroplastic Ferredoxin-NADP(H) Reductase Display Normal Rates of Photosynthesis and Increased Tolerance to Oxidative Stress. Plant Physiology, 2007, 143, 639-649.	2.3	87
26	Combating stress with flavodoxin: a promising route for crop improvement. Trends in Biotechnology, 2008, 26, 531-537.	4.9	84
27	Arabidopsis INOSITOL TRANSPORTER4 Mediates High-Affinity H+ Symport of Myoinositol across the Plasma Membrane. Plant Physiology, 2006, 141, 565-577.	2.3	80
28	A comparative proteome approach to decipher the mechanism of rice adaptation to phosphorous deficiency. Proteomics, 2009, 9, 159-170.	1.3	80
29	Root endophytic fungus Piriformospora indica improves drought stress adaptation in barley by metabolic and proteomic reprogramming. Environmental and Experimental Botany, 2019, 157, 197-210.	2.0	80
30	Overriding the coâ€limiting import of carbon and energy into tuber amyloplasts increases the starch content and yield of transgenic potato plants. Plant Biotechnology Journal, 2008, 6, 453-464.	4.1	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. Frontiers in Plant Science, 2017, 8, 1359.	1.7	78
32	Providing an Additional Electron Sink by the Introduction of Cyanobacterial Flavodiirons Enhances Growth of A. thaliana Under Various Light Intensities. Frontiers in Plant Science, 2020, 11, 902.	1.7	75
33	Metabolic and transcriptional response of central metabolism affected by root endophytic fungus Piriformospora indica under salinity in barley. Plant Molecular Biology, 2016, 90, 699-717.	2.0	73
34	Antisense-inhibition of ADP-glucose pyrophosphorylase in Vicia narbonensis seeds increases soluble sugars and leads to higher water and nitrogen uptake. Planta, 2002, 214, 954-964.	1.6	72
35	Functional analysis of the essential bifunctional tobacco enzyme 3-dehydroquinate dehydratase/shikimate dehydrogenase in transgenic tobacco plants. Journal of Experimental Botany, 2007, 58, 2053-2067.	2.4	70
36	The Metabolic Signature of Biomass Formation in Barley. Plant and Cell Physiology, 2016, 57, 1943-1960.	1.5	66

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37	Simultaneous boosting of source and sink capacities doubles tuber starch yield of potato plants. Plant Biotechnology Journal, 2012, 10, 1088-1098.	4.1	65
38	Senescenceâ€induced iron mobilization in source leaves of barley (Hordeum vulgare) plants. New Phytologist, 2012, 195, 372-383.	3.5	65
39	Plant Metabolic Modeling: Achieving New Insight into Metabolism and Metabolic Engineering. Plant Cell, 2014, 26, 3847-3866.	3.1	65
40	A dual role of tobacco hexokinase 1 in primary metabolism and sugar sensing. Plant, Cell and Environment, 2013, 36, 1311-1327.	2.8	64
41	Context of action of Proline Dehydrogenase (ProDH) in the Hypersensitive Response of Arabidopsis. BMC Plant Biology, 2014, 14, 21.	1.6	61
42	Sucrose synthase activity does not restrict glycolysis in roots of transgenic potato plants under hypoxic conditions. Planta, 1999, 210, 41-49.	1.6	60
43	Transgenic tobacco plants expressing antisense ferredoxin-NADP(H) reductase transcripts display increased susceptibility to photo-oxidative damage. Plant Journal, 2003, 35, 332-341.	2.8	60
44	Dark exposure of petunia cuttings strongly improves adventitious root formation and enhances carbohydrate availability during rooting in the light. Journal of Plant Physiology, 2010, 167, 547-554.	1.6	58
45	Tocopherol deficiency in transgenic tobacco (Nicotiana tabacum L.) plants leads to accelerated senescence. Plant, Cell and Environment, 2009, 32, 144-157.	2.8	57
46	Flavodoxin displays dose-dependent effects on photosynthesis and stress tolerance when expressed in transgenic tobacco plants. Planta, 2012, 236, 1447-1458.	1.6	55
47	Ascorbate biosynthesis and its involvement in stress tolerance and plant development in rice (Oryza) Tj ETQq1 1 0.784314 rgBT /Over	2.0	55
48	A specific role of iron in promoting meristematic cell division during adventitious root formation. Journal of Experimental Botany, 2017, 68, 4233-4247.	2.4	52
49	Cyanobacterial flavodoxin complements ferredoxin deficiency in knockedâ€down transgenic tobacco plants. Plant Journal, 2011, 65, 922-935.	2.8	51
50	Electrical signaling along the phloem and its physiological responses in the maize leaf. Frontiers in Plant Science, 2013, 4, 239.	1.7	51
51	Abscisic acid influences tillering by modulation of strigolactones in barley. Journal of Experimental Botany, 2018, 69, 3883-3898.	2.4	51
52	ITPK1 is an InsP6/ADP phosphotransferase that controls phosphate signaling in Arabidopsis. Molecular Plant, 2021, 14, 1864-1880.	3.9	51
53	Influence of alternating temperature preculture on cryopreservation results for potato shoot tips. Plant Cell Reports, 2008, 27, 1551-1558.	2.8	49
54	Chloroplast Redox Status Modulates Genome-Wide Plant Responses during the Non-host Interaction of Tobacco with the Hemibiotrophic Bacterium Xanthomonas campestris pv. vesicatoria. Frontiers in Plant Science, 2017, 8, 1158.	1.7	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. New Phytologist, 2009, 184, 607-618.	3.5	46
56	Expression of a Plastid-Targeted Flavodoxin Decreases Chloroplast Reactive Oxygen Species Accumulation and Delays Senescence in Aging Tobacco Leaves. Frontiers in Plant Science, 2018, 9, 1039.	1.7	46
57	Faster photosynthetic induction in tobacco by expressing cyanobacterial flavodiiron proteins in chloroplasts. Photosynthesis Research, 2018, 136, 129-138.	1.6	43
58	A higher sink competitiveness of the rooting zone and invertases are involved in dark stimulation of adventitious root formation in Petunia hybrida cuttings. Plant Science, 2016, 243, 10-22.	1.7	41
59	Inoculation of sugarcane with Pantoea sp. increases amino acid contents in shoot tissues; serine, alanine, glutamine and asparagine permit concomitantly ammonium excretion and nitrogenase activity of the bacterium. Journal of Plant Physiology, 2009, 166, 1152-1161.	1.6	39
60	Comprehensive Transcriptome Analysis Unravels the Existence of Crucial Genes Regulating Primary Metabolism during Adventitious Root Formation in Petunia hybrida. PLoS ONE, 2014, 9, e100997.	1.1	38
61	A Potential Role of Flag Leaf Potassium in Conferring Tolerance to Drought-Induced Leaf Senescence in Barley. Frontiers in Plant Science, 2016, 7, 206.	1.7	38
62	Over-expression of PR-10a leads to increased salt and osmotic tolerance in potato cell cultures. Journal of Biotechnology, 2010, 150, 277-287.	1.9	37
63	Urea retranslocation from senescing Arabidopsis leaves is promoted by <scp>DUR</scp>3â€mediated urea retrieval from leaf apoplast. Plant Journal, 2015, 81, 377-387.	2.8	37
64	Increase of DNA Methylation at the HvCKX2.1 Promoter by Terminal Drought Stress in Barley. Epigenomes, 2017, 1, 9.	0.8	37
65	Comparative proteomic analysis of tobacco expressing cyanobacterial flavodoxin and its wild type under drought stress. Journal of Plant Physiology, 2015, 175, 48-58.	1.6	35
66	Leaf Senescence: The Chloroplast Connection Comes of Age. Plants, 2019, 8, 495.	1.6	34
67	Ascorbate metabolism in rice genotypes differing in zinc efficiency. Planta, 2014, 239, 367-379.	1.6	33
68	RNA interference-mediated repression of sucrose-phosphatase in transgenic potato tubers (Solanum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf on total soluble carbohydrate accumulation. Plant, Cell and Environment, 2007, 31, 071115091544001-???.	2.8	32
69	The influence of cytosolic phosphorylating glyceraldehyde 3-phosphate dehydrogenase (GAPC) on potato tuber metabolism. Journal of Experimental Botany, 2006, 57, 2363-2377.	2.4	29
70	Modulation of carbohydrate metabolism and chloroplast structure in sugarcane leaves which were infected by Sugarcane Yellow Leaf Virus (SCYLV). Physiological and Molecular Plant Pathology, 2008, 73, 78-87.	1.3	29
71	Role of auxin homeostasis and response in nitrogen limitation and dark stimulation of adventitious root formation in petunia cuttings. Annals of Botany, 2019, 124, 1053-1066.	1.4	28
72	Expression of the Minor Isoform Pea Ferredoxin in Tobacco Alters Photosynthetic Electron Partitioning and Enhances Cyclic Electron Flow Â. Plant Physiology, 2013, 161, 866-879.	2.3	27

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73	Diurnal changes in assimilate concentrations and fluxes in the phloem of castor bean (Ricinus) Tj ETQq1 1 0.784314 rgBT /Overlock 1	1.6	26
74	Nitrogen remobilisation facilitates adventitious root formation on reversible dark-induced carbohydrate depletion in Petunia hybrida. BMC Plant Biology, 2016, 16, 219.	1.6	25
75	Potential roles of <scp>YCF</scp>54 and ferredoxinâ€<scp>NADPH</scp> reductase for magnesium protoporphyrin monomethylester cyclase. Plant Journal, 2018, 94, 485-496.	2.8	25
76	Flooding Causes Dramatic Compositional Shifts and Depletion of Putative Beneficial Bacteria on the Spring Wheat Microbiota. Frontiers in Microbiology, 2021, 12, 773116.	1.5	25
77	Changes in nitrogen availability lead to a reprogramming of pyruvate metabolism. BMC Plant Biology, 2018, 18, 77.	1.6	24
78	Engineering the future. Development of transgenic plants with enhanced tolerance to adverse environments. Biotechnology and Genetic Engineering Reviews, 2010, 27, 33-56.	2.4	23
79	The Defense-Related Isoleucic Acid Differentially Accumulates in Arabidopsis Among Branched-Chain Amino Acid-Related 2-Hydroxy Carboxylic Acids. Frontiers in Plant Science, 2018, 9, 766.	1.7	23
80	Ammonium mediated changes in carbon and nitrogen metabolisms induce resistance against Pseudomonas syringae in tomato plants. Journal of Plant Physiology, 2019, 239, 28-37.	1.6	23
81	The 2-oxoglutarate/malate translocator mediates amino acid and storage protein biosynthesis in pea embryos. Plant Journal, 2010, 61, 350-363.	2.8	22
82	Phloem-Specific Methionine Recycling Fuels Polyamine Biosynthesis in a Sulfur-Dependent Manner and Promotes Flower and Seed Development. Plant Physiology, 2016, 170, 790-806.	2.3	22
83	An Age-Dependent Sequence of Physiological Processes Defines Developmental Root Senescence. Plant Physiology, 2019, 181, 993-1007.	2.3	22
84	Influence of oxygen deficiency and the role of specific amino acids in cryopreservation of garlic shoot tips. BMC Biotechnology, 2015, 15, 40.	1.7	21
85	Volatiles from the fungal phytopathogen Penicillium aurantiogriseum modulate root metabolism and architecture through proteome resetting. Plant, Cell and Environment, 2020, 43, 2551-2570.	2.8	19
86	Expression of a Chloroplast-Targeted Cyanobacterial Flavodoxin in Tomato Plants Increases Harvest Index by Altering Plant Size and Productivity. Frontiers in Plant Science, 2019, 10, 1432.	1.7	16
87	Differential root and shoot responses in the metabolism of tomato plants exhibiting reduced levels of gibberellin. Environmental and Experimental Botany, 2019, 157, 331-343.	2.0	16
88	Involvement of the auxinâ€“cytokinin homeostasis in adventitious root formation of rose cuttings as affected by their nodal position in the stock plant. Planta, 2021, 254, 65.	1.6	15
89	Coordinating the morphogenesis-differentiation balance by tweaking the cytokinin-gibberellin equilibrium. PLoS Genetics, 2021, 17, e1009537.	1.5	14
90	Proteomic and metabolomic analysis of desiccation tolerance in wheat young seedlings. Plant Physiology and Biochemistry, 2020, 146, 349-362.	2.8	13

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91	Photosynthetic characterization of flavodoxin-expressing tobacco plants reveals a high light acclimation-like phenotype. Biochimica Et Biophysica Acta - Bioenergetics, 2020, 1861, 148211.	0.5	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. International Journal of Molecular Sciences, 2020, 21, 7199.	1.8	12
93	Seminal and Nodal Roots of Barley Differ in Anatomy, Proteome and Nitrate Uptake Capacity. Plant and Cell Physiology, 2020, 61, 1297-1308.	1.5	12
94	Expression of Flavodiiron Proteins Flv2-Flv4 in Chloroplasts of Arabidopsis and Tobacco Plants Provides Multiple Stress Tolerance. International Journal of Molecular Sciences, 2021, 22, 1178.	1.8	10
95	A Chimeric TGA Repressor Slows Down Fruit Maturation and Ripening in Tomato. Plant and Cell Physiology, 2022, 63, 120-134.	1.5	9
96	Plastid-Targeted Cyanobacterial Flavodiiron Proteins Maintain Carbohydrate Turnover and Enhance Drought Stress Tolerance in Barley. Frontiers in Plant Science, 2020, 11, 613731.	1.7	7
97	Integrating data from biological experiments into metabolic networks with the DBE information system. In Silico Biology, 2005, 5, 93-102.	0.4	6
98	Engineering Climate-Change-Resilient Crops: New Tools and Approaches. International Journal of Molecular Sciences, 2021, 22, 7877.	1.8	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. Sustainable Development and Biodiversity, 2019, , 1-20.	1.4	2
101	Proteomics Approach for Identification of Nutrient Deficiency Related Proteins in Crop Plants. , 2016, , 177-201.		1