Shimon Rachmilevitch

List of Publications by Year
in descending order

110 papers	4,205 citations	126708 33 h-index	128067 60 g-index
112 all docs	112 docs citations	112 times ranked	5661 citing authors

#	Article	IF	Citations
1	Double antisense plants lacking ascorbate peroxidase and catalase are less sensitive to oxidative stress than single antisense plants lacking ascorbate peroxidase or catalase. Plant Journal, 2002, 32, 329-342.	2.8	308
2	Nitrate assimilation in plant shoots depends on photorespiration. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 11506-11510.	3.3	279
3	Metabolite profiling and network analysis reveal coordinated changes in grapevine water stress response. BMC Plant Biology, 2013, 13, 184.	1.6	158
4	Role of Plants in a Constructed Wetland: Current and New Perspectives. Water (Switzerland), 2013, 5, 405-419.	1.2	156
5	Root carbon and protein metabolism associated with heat tolerance. Journal of Experimental Botany, 2012, 63, 3455-3465.	2.4	137
6	Metabolite and transcript profiling of berry skin during fruit development elucidates differential regulation between Cabernet Sauvignon and Shiraz cultivars at branching points in the polyphenol pathway. BMC Plant Biology, 2014, 14, 188.	1.6	135
7	CO₂ enrichment inhibits shoot nitrate assimilation in C₃ but not C₄ plants and slows growth under nitrate in C₃ plants. Ecology, 2012, 93, 355-367.	1.5	132
8	A root is a root is a root? Water uptake rates of Citrus root orders. Plant, Cell and Environment, 2011, 34, 33-42.	2.8	128
9	Combining leaf physiology, hyperspectral imaging and partial least squares-regression (PLS-R) for grapevine water status assessment. ISPRS Journal of Photogrammetry and Remote Sensing, 2015, 109, 88-97.	4.9	126
10	An Elicitor from Botrytis cinerea Induces the Hypersensitive Response in Arabidopsis thaliana and Other Plants and Promotes the Gray Mold Disease. Phytopathology, 2006, 96, 299-307.	1.1	112
11	Living under a â€˜dormantâ€™ canopy: a molecular acclimation mechanism of the desert plantRetama raetam. Plant Journal, 2001, 25, 407-416.	2.8	109
12	Enhanced photosynthesis and growth of transgenic plants that expressictB, a gene involved in HCO3â^'accumulation in cyanobacteria. Plant Biotechnology Journal, 2003, 1, 43-50.	4.1	94
13	Effects of photorespiration, the cytochrome pathway, and the alternative pathway on the triple isotopic composition of atmospheric O2. Global Biogeochemical Cycles, 2003, 17, .	1.9	93
14	Î²-Caryophyllene, a Compound Isolated from the Biblical Balm of Gilead (Commiphora) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 2 and Alternative Medicine, 2012, 2012, 1-8.	0.5	93
15	Near isohydric grapevine cultivar displays higher photosynthetic efficiency and photorespiration rates under drought stress as compared with near anisohydric grapevine cultivar. Physiologia Plantarum, 2013, 147, 443-452.	2.6	89
16	The use of Bassia indica for salt phytoremediation in constructed wetlands. Water Research, 2012, 46, 3967-3976.	5.3	84
17	Grapevine petioles are more sensitive to drought induced embolism than stems: evidence from in vivo MRI and microcomputed tomography observations of hydraulic vulnerability segmentation. Plant, Cell and Environment, 2016, 39, 1886-1894.	2.8	82
18	The role of dew in Negev Desert plants. Oecologia, 2015, 178, 317-327.	0.9	78

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19	Root respiratory characteristics associated with plant adaptation to high soil temperature for geothermal and turf-type Agrostis species. Journal of Experimental Botany, 2006, 57, 623-631.	2.4	74
20	Assessment of maize yield and phenology by drone-mounted superspectral camera. Precision Agriculture, 2020, 21, 51-76.	3.1	73
21	Root taxa identification in plant mixtures â€“ current techniques and future challenges. Plant and Soil, 2012, 359, 165-182.	1.8	69
22	Phenotypic plasticity and water flux rates of Citrus root orders under salinity. Journal of Experimental Botany, 2012, 63, 2717-2727.	2.4	64
23	LeFRK2 is required for phloem and xylem differentiation and the transport of both sugar and water. Planta, 2009, 230, 795-805.	1.6	62
24	Cultivar specific metabolic changes in grapevines berry skins in relation to deficit irrigation and hydraulic behavior. Plant Physiology and Biochemistry, 2015, 88, 42-52.	2.8	56
25	Tolerance to high soil temperature in foxtail millet (Setaria italica L.) is related to shoot and root growth and metabolism. Plant Physiology and Biochemistry, 2016, 106, 73-81.	2.8	56
26	Assimilation and allocation of carbon and nitrogen of thermal and nonthermal Agrostis species in response to high soil temperature. New Phytologist, 2006, 170, 479-490.	3.5	55
27	Responses of Arabidopsis and Wheat to Rising CO₂ Depend on Nitrogen Source and Nighttime CO₂ Levels. Plant Physiology, 2015, 168, 156-163.	2.3	55
28	Metabolic and Physiological Responses of Shiraz and Cabernet Sauvignon (Vitis vinifera L.) to Near Optimal Temperatures of 25 and 35 Â°C. International Journal of Molecular Sciences, 2015, 16, 24276-24294.	1.8	52
29	Cytochrome and alternative pathway activity in roots of thermal and non-thermal Agrostis species in response to high soil temperature. Physiologia Plantarum, 2007, 129, 163-174.	2.6	49
30	Paclobutrazol induces tolerance in tomato to deficit irrigation through diversified effects on plant morphology, physiology and metabolism. Scientific Reports, 2016, 6, 39321.	1.6	47
31	Salt uptake and evapotranspiration under arid conditions in horizontal subsurface flow constructed wetland planted with halophytes. Ecological Engineering, 2014, 70, 282-286.	1.6	45
32	Adaptive Plasticity of Salt-Stressed Root Systems. , 2013, , 169-201.		37
33	The variability in the xylem architecture of grapevine petiole and its contribution to hydraulic differences. Functional Plant Biology, 2015, 42, 357.	1.1	35
34	The tomato plastidic fructokinase Sl<scp>FRK</scp>3 plays a role in xylem development. New Phytologist, 2016, 209, 1484-1495.	3.5	35
35	Increased root oxygen uptake in pea plants responding to non-self neighbors. Planta, 2013, 238, 577-586.	1.6	34
36	The effects of elevated CO2 and nitrogen nutrition on root dynamics. Plant Science, 2018, 272, 294-300.	1.7	34

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37	Root halotropism: Salinity effects onBassia indicaroot. Plant Biosystems, 2010, 144, 471-478.	0.8	33
38	Smallâ€scale Geodiversity Regulates Functioning, Connectivity, and Productivity of Shrubby, Semiâ€arid Rangelands. Land Degradation and Development, 2018, 29, 205-209.	1.8	27
39	Effects of photoselective netting on root growth and development of young grafted orange trees under semi-arid climate. Scientia Horticulturae, 2018, 238, 272-280.	1.7	27
40	The Effect of Differential Growth Rates across Plants on Spectral Predictions of Physiological Parameters. PLoS ONE, 2014, 9, e88930.	1.1	26
41	Geodiversity decreases shrub mortality and increases ecosystem tolerance to droughts and climate change. Earth Surface Processes and Landforms, 2018, 43, 2808-2817.	1.2	26
42	Geodiversity effects on soil quality and geo-ecosystem functioning in drylands. Catena, 2019, 176, 372-380.	2.2	26
43	Short-term and long-term root respiratory acclimation to elevated temperatures associated with root thermotolerance for two Agrostis grass species. Journal of Experimental Botany, 2008, 59, 3803-3809.	2.4	25
44	The potential of the spectral â€˜water balance indexâ€™ (<scp>WABI</scp>) for crop irrigation scheduling. New Phytologist, 2017, 216, 741-757.	3.5	24
45	Anastatica hierochuntica, an Arabidopsis Desert Relative, Is Tolerant to Multiple Abiotic Stresses and Exhibits Species-Specific and Common Stress Tolerance Strategies with Its Halophytic Relative, Eutrema (Thellungiella) salsugineum. Frontiers in Plant Science, 2016, 7, 1992.	1.7	24
46	Seasonal and diurnal variations in gene expression in the desert legume Retama raetam. Plant, Cell and Environment, 2002, 25, 1627-1638.	2.8	23
47	Influence of saline drip-irrigation on fine root and sap-flow densities of two mature olive varieties. Environmental and Experimental Botany, 2011, 72, 107-114.	2.0	23
48	A bell pepper cultivar tolerant to chilling enhanced nitrogen allocation and stressâ€related metabolite accumulation in the roots in response to low rootâ€zone temperature. Physiologia Plantarum, 2017, 161, 196-210.	2.6	23
49	Modelling the impact of drought and heat stress on common bean with two different photosynthesis model approaches. Environmental Modelling and Software, 2016, 81, 111-121.	1.9	22
50	CO2 and nitrogen interaction alters root anatomy, morphology, nitrogen partitioning and photosynthetic acclimation of tomato plants. Planta, 2019, 250, 1423-1432.	1.6	22
51	Land use Change, a Case Study from Southern Italy: General Implications for Agricultural Subsidy Policies. Land Degradation and Development, 2016, 27, 868-870.	1.8	21
52	Potassium and storage root development: focusing on photosynthesis, metabolites and soluble carbohydrates in cassava. Physiologia Plantarum, 2020, 169, 169-178.	2.6	20
53	Tri-Party Underground Symbiosis between a Weevil, Bacteria and a Desert Plant. PLoS ONE, 2013, 8, e76588.	1.1	19
54	High Nitrogen Availability Limits Photosynthesis and Compromises Carbohydrate Allocation to Storage in Roots of Manihot esculenta Crantz. Frontiers in Plant Science, 2019, 10, 1041.	1.7	18

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55	The high oxygen atmosphere toward the endâ€Cretaceous; a possible contributing factor to the K/T boundary extinctions and to the emergence of C4 species. Journal of Experimental Botany, 2001, 52, 801-809.	2.4	17
56	Physiological Conjunction of Allelochemicals and Desert Plants. PLoS ONE, 2013, 8, e81580.	1.1	16
57	Recognition of Orobanche cumana Below-Ground Parasitism Through Physiological and Hyper Spectral Measurements in Sunflower (Helianthus annuus L.). Frontiers in Plant Science, 2017, 8, 909.	1.7	16
58	Synergistic effects of abiotic stresses in plants: a case study of nitrogen limitation and saturating light intensity in Arabidopsis thaliana. Physiologia Plantarum, 2019, 165, 755-767.	2.6	16
59	On the distribution and evaluation of Na, Mg and Cl in leaves of selected halophytes. Nuclear Instruments & Methods in Physics Research B, 2013, 306, 144-149.	0.6	14
60	Low induction of nonâ€photochemical quenching and high photochemical efficiency in the annual desert plant Anastatica hierochuntica. Physiologia Plantarum, 2014, 151, 544-558.	2.6	14
61	Carbon Allocation Patterns into Proteins and Lipids Associated with Superior Tolerance of Perennial Grass to High Soil Temperature. Crop Science, 2015, 55, 2262-2269.	0.8	14
62	Green roofs: what can we learn from desert plants?. Israel Journal of Ecology and Evolution, 2016, 62, 58-67.	0.2	14
63	The role of different root orders in nutrient uptake. Environmental and Experimental Botany, 2020, 179, 104212.	2.0	14
64	Bacterial Community Structure Dynamics in Meloidogyne incognita -Infected Roots and Its Role in Worm-Microbiome Interactions. MSphere, 2020, 5, .	1.3	14
65	Belowground dynamics in two olive varieties as affected by saline irrigation. Scientia Horticulturae, 2013, 162, 313-319.	1.7	13
66	Geodiversity impacts plant community structure in a semi-arid region. Scientific Reports, 2021, 11, 15259.	1.6	13
67	TransientAgrobacterium-mediated gene expression in theArabidopsis hydroponics root system for subcellular localization studies. Plant Molecular Biology Reporter, 2005, 23, 179-184.	1.0	12
68	Physiological parameters of plants as indicators of water quality in a constructed wetland. Environmental Science and Pollution Research, 2011, 18, 1234-1242.	2.7	12
69	The response of Hordeum spontaneum desert ecotype to drought and excessive light intensity is characterized by induction of O2 dependent photochemical activity and anthocyanin accumulation. Plant Science, 2013, 201-202, 74-80.	1.7	12
70	Thermal Benefits From White Variegation of Silybum marianum Leaves. Frontiers in Plant Science, 2019, 10, 688.	1.7	12
71	Establishment of a constructed wetland in extreme dryland. Environmental Science and Pollution Research, 2009, 16, 862-875.	2.7	11
72	Physiology and metabolism of grafted bell pepper in response to low root-zone temperature. Functional Plant Biology, 2019, 46, 339.	1.1	11

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73	Domestication of plants for sustainable agriculture in drylands: Experience from the Negev Desert. Arid Land Research and Management, 2016, 30, 209-228.	0.6	10
74	Long and short term population dynamics of acacia trees via remote sensing and spatial analysis: Case study in the southern Negev Desert. Remote Sensing of Environment, 2017, 198, 95-104.	4.6	10
75	Strontium as a tracer for calcium: uptake, transport and partitioning within tomato plants. Plant and Soil, 2021, 466, 303-316.	1.8	10
76	Vertical microclimate heterogeneity and dew formation in semi-closed and naturally ventilated tomato greenhouses. Scientia Horticulturae, 2021, 288, 110271.	1.7	10
77	Physiological and Biochemical Indicators for Stress Tolerance. , 2006, , 321-355.		9
78	Survival of Schismus arabicus seedlings exposed to desiccation depends on annual periodicity. Planta, 2010, 231, 1475-1482.	1.6	8
79	SALT STRESS EFFECTS ON ROOT SYSTEMS OF TWO MATURE OLIVE CULTIVARS. Acta Horticulturae, 2011, , 109-118.	0.1	8
80	REVIVAL OF THE EXTINCT BALM OF GILEAD IN ISRAEL: STUDYING ITS ANTI-CANCER ACTIVITY. Acta Horticulturae, 2015, , 509-514.	0.1	8
81	Plants Coping Abiotic and Biotic Stresses: A Tale of Diligent Management. BioMed Research International, 2015, 2015, 1-2.	0.9	8
82	Insights into root structure and function of Bassia indica: water redistribution and element dispersion. Functional Plant Biology, 2016, 43, 620.	1.1	8
83	Nutrient use efficiency and harvest index of cassava decline as fertigation solution concentration increases. Journal of Plant Nutrition and Soil Science, 2018, 181, 644-654.	1.1	8
84	Grafting as a Method to Increase the Tolerance Response of Bell Pepper to Extreme Temperatures. Vadose Zone Journal, 2018, 17, 1-8.	1.3	8
85	The Phosphorus Economy of Mediterranean Oak Saplings Under Global Change. Frontiers in Plant Science, 2019, 10, 405.	1.7	8
86	The effect of irrigation regimes on plum (Prunus cerasifera) root system development dynamics. Plant Biosystems, 2019, 153, 529-537.	0.8	8
87	Transgenic overexpression of rubisco subunits and the assembly factor RAF1 are beneficial to recovery from drought stress in maize. Environmental and Experimental Botany, 2020, 177, 104126.	2.0	8
88	Photosynthesis and photoprotection under drought in the annual desert plant Anastatica hierochuntica. Photosynthetica, 2016, 54, 143-147.	0.9	6
89	Tripartite symbiosis of plant-weevil-bacteria is a widespread phenomenon in the Negev Desert. Scientific Reports, 2018, 8, 2420.	1.6	6
90	Source-sink relations of sunflower plants as affected by a parasite modifies carbon allocations and leaf traits. Plant Science, 2018, 271, 100-107.	1.7	6

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91	Spectral monitoring of salinity stress in tomato plants. Biosystems Engineering, 2022, 217, 26-40.	1.9	6
92	Dew water-uptake pathways in Negev desert plants: a study using stable isotope tracers. Oecologia, 2021, 196, 353-361.	0.9	5
93	A novel approach for long-term spectral monitoring of desert shrubs affected by an oil spill. Environmental Pollution, 2021, 289, 117788.	3.7	5
94	Plasticity of biomass allometry and root traits of two tomato cultivars under deficit irrigationÂÃ—Âchemically induced drought hardening by Paclobutrazol. Irrigation Science, 2017, 35, 501-514.	1.3	4
95	Phosphorus affects storage root yield of cassava through root numbers. Journal of Plant Nutrition, 2019, 42, 2070-2079.	0.9	4
96	Modified Hiltner Dew Balance to Re-Estimate Dewfall Accumulation as a Reliable Water Source in the Negev Desert. Water (Switzerland), 2020, 12, 2952.	1.2	4
97	Wide vessels sustain marginal transpiration flux and do not optimize inefficient gas exchange activity under impaired hydraulic control and salinity. Physiologia Plantarum, 2020, 170, 60-74.	2.6	4
98	Short communication. A high level of atmospheric oxygen, as occurred toward the end of the Cretaceous period, increases leaf diffusion conductance. Journal of Experimental Botany, 1999, 50, 869-872.	2.4	4
99	Root and rhizosphere processesÃ¢â‚¬â€œhigh time to dig deeper. Frontiers in Plant Science, 2014, 5, 278.	1.7	3
100	Low water availability and salinity effects on seedling viability of Bassia indica compared to B. iranica and B. prostrata (Amaranthaceae). Seed Science Research, 2016, 26, 77-83.	0.8	3
101	Water deficit effects on the molecular processes, physiology and quality of grapevine. Acta Horticulturae, 2017, , 239-254.	0.1	3
102	Phelipanche aegyptiaca parasitism impairs salinity tolerance in young leaves of tomato. Physiologia Plantarum, 2018, 164, 191-203.	2.6	2
103	Aeroponic systems: A unique tool for estimating plant water relations and NO₃ uptake in response to salinity stress. Plant Direct, 2021, 5, e00312.	0.8	2
104	Leveraging a graft collection to develop metabolome-based trait prediction for the selection of tomato rootstocks with enhanced salt tolerance. Horticulture Research, 2022, 9, uhac061.	2.9	2
105	Grapevines hydraulic diversity â€“ a critical consideration for irrigation management?. Acta Horticulturae, 2017, , 443-448.	0.1	1
106	MONITORING TREE POPULATION DYNAMICS IN ARID ZONE THROUGH MULTIPLE TEMPORAL SCALES: INTEGRATION OF SPATIAL ANALYSIS, CHANGE DETECTION AND FIELD LONG TERM MONITORING. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLI-B7, 513-515.	0.2	1
107	Optimizing root yield of cassava under fertigation and the masked effect of atmospheric temperature. Journal of the Science of Food and Agriculture, 2020, 100, 4592-4600.	1.7	0
108	The cultivation of medicinal desert plants. Planta Medica, 2010, 76, .	0.7	0

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109	Leaf surface influence on potential water use in desert plants. Journal of Arid Environments, 2022, 198, 104694.	1.2	0
110	Leaf coordination between petiole vascular development and water demand in response to elevated CO 2 in tomato plants. Plant Direct, 2022, 6, e371.	0.8	0