Nicholas Smirnoff

List of Publications by Year
in descending order

73 papers	15,240 citations	57631 44 h-index	79541 73 g-index
80 all docs	80 docs citations	80 times ranked	13773 citing authors

#	Article	IF	Citations
1	OsVTC1-1 RNAi Mutant with Reduction of Ascorbic Acid Synthesis Alters Cell Wall Sugar Composition and Cell Wall-Associated Proteins. Agronomy, 2022, 12, 1272.	1.3	7
2	Chloroplast immunity illuminated. New Phytologist, 2021, 229, 3088-3107.	3.5	77
3	Jasmonates induce Arabidopsis bioactivities selectively inhibiting the growth of breast cancer cells through CDC6 and mTOR. New Phytologist, 2021, 229, 2120-2134.	3.5	14
4	Spatiotemporal patterns of intracellular Ca²⁺ signalling govern hypoâ€osmotic stress resilience in marine diatoms. New Phytologist, 2021, 230, 155-170.	3.5	23
5	The role of GDP-<scp>l</scp>-galactose phosphorylase in the control of ascorbate biosynthesis. Plant Physiology, 2021, 185, 1574-1594.	2.3	39
6	Plant redox biologyâ€"on the move. Plant Physiology, 2021, 186, 1-3.	2.3	3
7	Photosynthesis-independent production of reactive oxygen species in the rice bundle sheath during high light is mediated by NADPH oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	32
8	Journal of Experimental Botany 70th anniversary: plant metabolism in a changing world. Journal of Experimental Botany, 2021, 72, 5939-5941.	2.4	0
9	Self-Incompatibility Triggers Irreversible Oxidative Modification of Proteins in Incompatible Pollen. Plant Physiology, 2020, 183, 1391-1404.	2.3	13
10	Responses of a Newly Evolved Auxotroph of Chlamydomonas to B₁₂ Deprivation. Plant Physiology, 2020, 183, 167-178.	2.3	11
11	Spatial chloroplast-to-nucleus signalling involving plastidâ€"nuclear complexes and stromules. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190405.	1.8	52
12	Evolutionary temperature compensation of carbon fixation in marine phytoplankton. Ecology Letters, 2020, 23, 722-733.	3.0	86
13	Deficiency of GDP-l-galactose phosphorylase, an enzyme required for ascorbic acid synthesis, reduces tomato fruit yield. Planta, 2020, 251, 54.	1.6	17
14	Hydrogen peroxide metabolism and functions in plants. New Phytologist, 2019, 221, 1197-1214.	3.5	582
15	Engineering of Metabolic Pathways Using Synthetic Enzyme Complexes. Plant Physiology, 2019, 179, 918-928.	2.3	19
16	A role for 3â€²-O-Î²-D-ribofuranosyladenosine in altering plant immunity. Phytochemistry, 2019, 157, 128-134.	1.4	11
17	ROS-dependent signalling pathways in plants and algae exposed to high light: Comparisons with other eukaryotes. Free Radical Biology and Medicine, 2018, 122, 52-64.	1.3	118
18	Environmental fluctuations accelerate molecular evolution of thermal tolerance in a marine diatom. Nature Communications, 2018, 9, 1719.	5.8	98

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19	Biosynthesis and Regulation of Ascorbic Acid in Plants. , 2018, , 163-179.		18
20	Ascorbic acid metabolism and functions: A comparison of plants and mammals. Free Radical Biology and Medicine, 2018, 122, 116-129.	1.3	390
21	Quantitative proteomics of a B₁₂â€dependent alga grown in coculture with bacteria reveals metabolic tradeoffs required for mutualism. New Phytologist, 2018, 217, 599-612.	3.5	29
22	Adaptation of phytoplankton to a decade of experimental warming linked to increased photosynthesis. Nature Ecology and Evolution, 2017, 1, 94.	3.4	128
23	Photosynthesis-dependent H2O2 transfer from chloroplasts to nuclei provides a high-light signalling mechanism. Nature Communications, 2017, 8, 49.	5.8	284
24	Ash leaf metabolomes reveal differences between trees tolerant and susceptible to ash dieback disease. Scientific Data, 2017, 4, 170190.	2.4	13
25	Ascorbate-Deficient vtc2 Mutants in Arabidopsis Do Not Exhibit Decreased Growth. Frontiers in Plant Science, 2016, 7, 1025.	1.7	40
26	Time-Series Transcriptomics Reveals That <i>AGAMOUS-LIKE22</i> Affects Primary Metabolism and Developmental Processes in Drought-Stressed Arabidopsis. Plant Cell, 2016, 28, 345-366.	3.1	92
27	Transcriptional Dynamics Driving MAMP-Triggered Immunity and Pathogen Effector-Mediated Immunosuppression in Arabidopsis Leaves Following Infection with <i>Pseudomonas syringae</i> pv tomato DC3000. Plant Cell, 2015, 27, 3038-3064.	3.1	148
28	Evolution of alternative biosynthetic pathways for vitamin C following plastid acquisition in photosynthetic eukaryotes. ELife, 2015, 4, .	2.8	140
29	Chloroplasts play a central role in plant defence and are targeted by pathogen effectors. Nature Plants, 2015, 1, 15074.	4.7	226
30	Ascorbate deficiency influences the leaf cell wall glycoproteome in <scp><i>A</i></scp><i>rabidopsis thaliana</i>. Plant, Cell and Environment, 2015, 38, 375-384.	2.8	26
31	Seed production temperature regulation of primary dormancy occurs through control of seed coat phenylpropanoid metabolism. New Phytologist, 2015, 205, 642-652.	3.5	97
32	Maternal temperature history activates Flowering Locus T in fruits to control progeny dormancy according to time of year. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 18787-18792.	3.3	148
33	Synthetic metabolons for metabolic engineering. Journal of Experimental Botany, 2014, 65, 1947-1954.	2.4	41
34	The induction of menadione stress tolerance in the marine microalga, Dunaliella viridis , through cold pretreatment and modulation of the ascorbate and glutathione pools. Plant Physiology and Biochemistry, 2014, 84, 96-104.	2.8	16
35	The Use of HyPer to Examine Spatial and Temporal Changes in H2O2 in High Light-Exposed Plants. Methods in Enzymology, 2013, 527, 185-201.	0.4	21
36	The influence of ascorbate on anthocyanin accumulation during high light acclimation in <i>Arabidopsis thaliana</i>: further evidence for redox control of anthocyanin synthesis. Plant, Cell and Environment, 2012, 35, 388-404.	2.8	182

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37	Reactive Oxygen Species and Nitric Oxide Mediate Actin Reorganization and Programmed Cell Death in the Self-Incompatibility Response of <i>Papaver</i> Â Â Â. Plant Physiology, 2011, 156, 404-416.	2.3	127
38	Ecophysiology of photosynthesis in bryophytes: major roles for oxygen photoreduction and nonâ€photochemical quenching?. Physiologia Plantarum, 2011, 141, 130-140.	2.6	36
39	Expression Analysis of the<i>VTC2</i>and<i>VTC5</i>Genes Encoding GDP-<scp>L</scp>-Galactose Phosphorylase, an Enzyme Involved in Ascorbate Biosynthesis, in<i>Arabidopsis thaliana</i>. Bioscience, Biotechnology and Biochemistry, 2011, 75, 1783-1788.	0.6	40
40	Expression of aspartyl protease and C3HC4-type RING zinc finger genes are responsive to ascorbic acid in Arabidopsis thaliana. Journal of Experimental Botany, 2011, 62, 3647-3657.	2.4	27
41	Tocochromanols: Rancid lipids, seed longevity, and beyond. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 17857-17858.	3.3	15
42	The High Light Response in<i>Arabidopsis</i>Involves ABA Signaling between Vascular and Bundle Sheath Cells. Plant Cell, 2009, 21, 2143-2162.	3.1	240
43	The effect of acute high light and low temperature stresses on the ascorbateâ€“glutathione cycle and superoxide dismutase activity in two <i>Dunaliella salina </i>strains. Physiologia Plantarum, 2009, 135, 272-280.	2.6	60
44	Antioxidant status, peroxidase activity, and PR protein transcript levels in ascorbate-deficient Arabidopsis thaliana vtc mutants. Journal of Experimental Botany, 2008, 59, 3857-3868.	2.4	73
45	Generation of reactive oxygen species by fungal NADPH oxidases is required for rice blast disease. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 11772-11777.	3.3	367
46	Two genes in <i>Arabidopsis thaliana</i> encoding GDPâ€<scp>l</scp>â€galactose phosphorylase are required for ascorbate biosynthesis and seedling viability. Plant Journal, 2007, 52, 673-689.	2.8	371
47	Progress in manipulating ascorbic acid biosynthesis and accumulation in plants. Physiologia Plantarum, 2006, 126, 343-355.	2.6	199
48	Arabidopsis thaliana VTC4 Encodes L-Galactose-1-P Phosphatase, a Plant Ascorbic Acid Biosynthetic Enzyme. Journal of Biological Chemistry, 2006, 281, 15662-15670.	1.6	154
49	Characterisation and biosynthesis of d-erythroascorbic acid in Phycomyces blakesleeanus. Fungal Genetics and Biology, 2005, 42, 390-402.	0.9	23
50	Vitamin C booster. Nature Biotechnology, 2003, 21, 134-136.	9.4	15
51	Seasonal accumulation pattern of pinitol and other carbohydrates in Limonium gmelini subsp. hungarica. Journal of Plant Physiology, 2002, 159, 485-490.	1.6	26
52	Antisense suppression of l-galactose dehydrogenase in Arabidopsis thaliana provides evidence for its role in ascorbate synthesis and reveals light modulated l-galactose synthesis. Plant Journal, 2002, 30, 541-553.	2.8	231
53	BIOSYNTHESIS OFASCORBICACID INPLANTS: A Renaissance. Annual Review of Plant Biology, 2001, 52, 437-467.	14.2	370
54	l-Ascorbic acid biosynthesis. Vitamins and Hormones, 2001, 61, 241-266.	0.7	111

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55	PlantL-ascorbic acid: chemistry, function, metabolism, bioavailability and effects of processing. Journal of the Science of Food and Agriculture, 2000, 80, 825-860.	1.7	1,076
56	The biosynthesis of erythroascorbate in Saccharomyces cerevisiae and its role as an antioxidant. Free Radical Biology and Medicine, 2000, 28, 183-192.	1.3	55
57	The control of ascorbic acid synthesis and turnover in pea seedlings. Journal of Experimental Botany, 2000, 51, 669-674.	2.4	117
58	Ascorbic Acid in Plants: Biosynthesis and Function. Critical Reviews in Biochemistry and Molecular Biology, 2000, 35, 291-314.	2.3	475
59	Ascorbate biosynthesis and function in photoprotection. Philosophical Transactions of the Royal Society B: Biological Sciences, 2000, 355, 1455-1464.	1.8	280
60	Ascorbic acid: metabolism and functions of a multi-facetted molecule. Current Opinion in Plant Biology, 2000, 3, 229-235.	3.5	582
61	Ascorbic acid: metabolism and functions of a multi-facetted molecule. Current Opinion in Plant Biology, 2000, 3, 229-35.	3.5	191
62	The control of ascorbic acid synthesis and turnover in pea seedlings. Journal of Experimental Botany, 2000, 51, 669-74.	2.4	26
63	Ascorbic Acid Metabolism in Pea Seedlings. A Comparison ofd-Glucosone, l-Sorbosone, andl-Galactono-1,4-Lactone as Ascorbate Precursors1. Plant Physiology, 1999, 120, 453-462.	2.3	70
64	DREB takes the stress out of growing up. Nature Biotechnology, 1999, 17, 229-230.	9.4	31
65	Genetic evidence for the role of GDP-mannose in plant ascorbic acid (vitamin C) biosynthesis. Proceedings of the National Academy of Sciences of the United States of America, 1999, 96, 4198-4203.	3.3	367
66	The biosynthetic pathway of vitamin C in higher plants. Nature, 1998, 393, 365-369.	13.7	1,001
67	Plant resistance to environmental stress. Current Opinion in Biotechnology, 1998, 9, 214-219.	3.3	461
68	L-Ascorbic Acid Metabolism in the Ascorbate-Deficient Arabidopsis Mutant vtc1. Plant Physiology, 1997, 115, 1277-1285.	2.3	205
69	BOTANICAL BRIEFING: The Function and Metabolism of Ascorbic Acid in Plants. Annals of Botany, 1996, 78, 661-669.	1.4	620
70	Ascorbate metabolism in relation to oxidative stress. Biochemical Society Transactions, 1996, 24, 472-478.	1.6	182
71	The role of active oxygen in the response of plants to water deficit and desiccation. New Phytologist, 1993, 125, 27-58.	3.5	1,715
72	Hydroxyl radical scavenging activity of compatible solutes. Phytochemistry, 1989, 28, 1057-1060.	1.4	1,732

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73	Drought Influences the Activity of Enzymes of the Chloroplast Hydrogen Peroxide Scavenging System. Journal of Experimental Botany, 1988, 39, 1097-1108.	2.4	182