JosÃ© M. Palma

List of Publications by Year
in descending order

113 papers	9,969 citations	30070 54 h-index	36028 97 g-index
117 all docs	117 docs citations	117 times ranked	6359 citing authors

#	Article	IF	Citations
1	Reactive Oxygen Species and Reactive Nitrogen Species in Peroxisomes. Production, Scavenging, and Role in Cell Signaling. Plant Physiology, 2006, 141, 330-335.	4.8	530
2	Plant proteases, protein degradation, and oxidative stress: role of peroxisomes. Plant Physiology and Biochemistry, 2002, 40, 521-530.	5.8	371
3	Cellular and Subcellular Localization of Endogenous Nitric Oxide in Young and Senescent Pea Plants. Plant Physiology, 2004, 136, 2722-2733.	4.8	360
4	The Activated Oxygen Role of Peroxisomes in Senescence1. Plant Physiology, 1998, 116, 1195-1200.	4.8	354
5	Localization of Nitric-oxide Synthase in Plant Peroxisomes. Journal of Biological Chemistry, 1999, 274, 36729-36733.	3.4	324
6	Metabolism of reactive oxygen species and reactive nitrogen species in pepper (<i>Capsicum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542	5.7	304
7	Metabolism of Reactive Nitrogen Species in Pea Plants Under Abiotic Stress Conditions. Plant and Cell Physiology, 2008, 49, 1711-1722.	3.1	287
8	Constitutive arginine-dependent nitric oxide synthase activity in different organs of pea seedlings during plant development. Planta, 2006, 224, 246-254.	3.2	277
9	Nitric oxide imbalance provokes a nitrosative response in plants under abiotic stress. Plant Science, 2011, 181, 604-611.	3.6	273
10	Metabolism of oxygen radicals in peroxisomes and cellular implications. Free Radical Biology and Medicine, 1992, 13, 557-580.	2.9	250
11	Evidence supporting the existence of <scp>l</scp>â€arginineâ€dependent nitric oxide synthase activity in plants. New Phytologist, 2009, 184, 9-14.	7.3	228
12	A forty year journey: The generation and roles of NO in plants. Nitric Oxide - Biology and Chemistry, 2019, 93, 53-70.	2.7	209
13	Nitric oxide and hydrogen sulfide in plants: which comes first?. Journal of Experimental Botany, 2019, 70, 4391-4404.	4.8	206
14	Arsenic triggers the nitric oxide (NO) and S-nitrosoglutathione (GSNO) metabolism in Arabidopsis. Environmental Pollution, 2012, 166, 136-143.	7.5	186
15	Protein targets of tyrosine nitration in sunflower (Helianthus annuus L.) hypocotyls. Journal of Experimental Botany, 2009, 60, 4221-4234.	4.8	180
16	Protein tyrosine nitration in pea roots during development and senescence. Journal of Experimental Botany, 2013, 64, 1121-1134.	4.8	171
17	Antioxidative enzymes in cultivars of pepper plants with different sensitivity to cadmium. Plant Physiology and Biochemistry, 2002, 40, 813-820.	5.8	157
18	Glutathione reductase from pea leaves: response to abiotic stress and characterization of the peroxisomal isozyme. New Phytologist, 2006, 170, 43-52.	7.3	157

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19	Plant peroxisomes: A nitro-oxidative cocktail. Redox Biology, 2017, 11, 535-542.	9.0	150
20	H2S signaling in plants and applications in agriculture. Journal of Advanced Research, 2020, 24, 131-137.	9.5	146
21	Function of S-nitrosoglutathione reductase (GSNOR) in plant development and under biotic/abiotic stress. Plant Signaling and Behavior, 2011, 6, 789-793.	2.4	144
22	Proteomics as an approach to the understanding of the molecular physiology of fruit development and ripening. Journal of Proteomics, 2011, 74, 1230-1243.	2.4	143
23	Ripening of pepper (Capsicum annuum) fruit is characterized by an enhancement of protein tyrosine nitration. Annals of Botany, 2015, 116, 637-647.	2.9	141
24	Peroxisomal NADP-Dependent Isocitrate Dehydrogenase. Characterization and Activity Regulation during Natural Senescence. Plant Physiology, 1999, 121, 921-928.	4.8	128
25	Plant catalases as NO and H2S targets. Redox Biology, 2020, 34, 101525.	9.0	125
26	Cadmium induces senescence symptoms in leaf peroxisomes of pea plants. Plant, Cell and Environment, 2001, 24, 1065-1073.	5.7	115
27	Reactive oxygen species-mediated enzymatic systems involved in the oxidative action of 2,4-dichlorophenoxyacetic acid*. Plant, Cell and Environment, 2004, 27, 1135-1148.	5.7	111
28	Peroxisomal xanthine oxidoreductase: Characterization of the enzyme from pea (Pisum sativum L.) leaves. Journal of Plant Physiology, 2008, 165, 1319-1330.	3.5	111
29	Nitro-oxidative metabolism during fruit ripening. Journal of Experimental Botany, 2018, 69, 3449-3463.	4.8	110
30	Protein tyrosine nitration in higher plants grown under natural and stress conditions. Frontiers in Plant Science, 2013, 4, 29.	3.6	108
31	Hydrogen sulfide: A novel component in Arabidopsis peroxisomes which triggers catalase inhibition. Journal of Integrative Plant Biology, 2019, 61, 871-883.	8.5	108
32	Detection and Quantification of S-Nitrosoglutathione (GSNO) in Pepper (Capsicum annuum L.) Plant Organs by LC-ES/MS. Plant and Cell Physiology, 2011, 52, 2006-2015.	3.1	107
33	Zinc induces distinct changes in the metabolism of reactive oxygen and nitrogen species (ROS and RNS) in the roots of twoBrassicaspecies with different sensitivity to zinc stress. Annals of Botany, 2015, 116, 613-625.	2.9	105
34	Characterization of the galactono-1,4-lactone dehydrogenase from pepper fruits and its modulation in the ascorbate biosynthesis. Role of nitric oxide. Redox Biology, 2017, 12, 171-181.	9.0	92
35	Endogenous hydrogen sulfide (H2S) is up-regulated during sweet pepper (Capsicum annuum L.) fruit ripening. In vitro analysis shows that NADP-dependent isocitrate dehydrogenase (ICDH) activity is inhibited by H2S and NO. Nitric Oxide - Biology and Chemistry, 2018, 81, 36-45.	2.7	92
36	Regulating the regulator: nitric oxide control of postâ€translational modifications. New Phytologist, 2020, 227, 1319-1325.	7.3	91

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37	Roles for redox regulation in leaf senescence of pea plants grown on different sources of nitrogen nutrition. Journal of Experimental Botany, 2006, 57, 1735-1745.	4.8	88
38	Proteome of plant peroxisomes: new perspectives on the role of these organelles in cell biology. Proteomics, 2009, 9, 2301-2312.	2.2	87
39	Antioxidative enzymes from chloroplasts, mitochondria, and peroxisomes during leaf senescence of nodulated pea plants. Journal of Experimental Botany, 2006, 57, 1747-1758.	4.8	86
40	Peroxisomes as a source of superoxide and hydrogen peroxide in stressed plants. Biochemical Society Transactions, 1996, 24, 434-438.	3.4	84
41	Nitric oxide-dependent regulation of sweet pepper fruit ripening. Journal of Experimental Botany, 2019, 70, 4557-4570.	4.8	84
42	Nitric oxide in the physiology and quality of fleshy fruits. Journal of Experimental Botany, 2019, 70, 4405-4417.	4.8	83
43	Glyphosate-induced oxidative stress in Arabidopsis thaliana affecting peroxisomal metabolism and triggers activity in the oxidative phase of the pentose phosphate pathway (OxPPP) involved in NADPH generation. Journal of Plant Physiology, 2017, 218, 196-205.	3.5	81
44	Antioxidant Systems from Pepper (Capsicum annuum L.): Involvement in the Response to Temperature Changes in Ripe Fruits. International Journal of Molecular Sciences, 2013, 14, 9556-9580.	4.1	78
45	Nitric oxide on/off in fruit ripening. Plant Biology, 2018, 20, 805-807.	3.8	75
46	Plant Peroxisomes: A Factory of Reactive Species. Frontiers in Plant Science, 2020, 11, 853.	3.6	73
47	Arsenate disrupts ion balance, sulfur and nitric oxide metabolisms in roots and leaves of pea (Pisum) Tj ETQq1 1 0.784314 rgBT /Over	4.2	72
48	Plant peroxisomes at the crossroad of NO and H₂O₂ metabolism. Journal of Integrative Plant Biology, 2019, 61, 803-816.	8.5	71
49	Physiology of pepper fruit and the metabolism of antioxidants: chloroplasts, mitochondria and peroxisomes. Annals of Botany, 2015, 116, 627-636.	2.9	66
50	S-nitrosoglutathione reductase (GSNOR) activity is down-regulated during pepper (Capsicum annuum) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.7	64
51	NADPâ€dehydrogenases from pepper fruits: effect of maturation. Physiologia Plantarum, 2009, 135, 130-139.	5.2	62
52	Inhibition of peroxisomal hydroxypyruvate reductase (HPR1) by tyrosine nitration. Biochimica Et Biophysica Acta - General Subjects, 2013, 1830, 4981-4989.	2.4	62
53	NADPH Oxidase (Rboh) Activity is Up Regulated during Sweet Pepper (Capsicum annuum L.) Fruit Ripening. Antioxidants, 2019, 8, 9.	5.1	61
54	Modulation of superoxide dismutase (SOD) isozymes by organ development and high long-term salinity in the halophyte Cakile maritima. Protoplasma, 2016, 253, 885-894.	2.1	58

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55	Blood antioxidant defenses and hematological adjustments in crowded/uncrowded rainbow trout (Oncorhynchus mykiss) fed on diets with different levels of antioxidant vitamins and HUFA. Comparative Biochemistry and Physiology Part - C: Toxicology and Pharmacology, 2009, 149, 440-447.	2.6	57
56	Inhibition of NADPâ€malic enzyme activity by H₂S and NO in sweet pepper (Capsicum) Tj ETQq0 0 0 rgBT /Overlock 10	5.2	57
57	Multifaceted roles of nitric oxide in tomato fruit ripening: NO-induced metabolic rewiring and consequences for fruit quality traits. Journal of Experimental Botany, 2021, 72, 941-958.	4.8	57
58	Recommendations on terminology and experimental best practice associated with plant nitric oxide research. New Phytologist, 2020, 225, 1828-1834.	7.3	56
59	Arsenic-induced stress activates sulfur metabolism in different organs of garlic (Allium sativum L.) plants accompanied by a general decline of the NADPH-generating systems in roots. Journal of Plant Physiology, 2017, 211, 27-35.	3.5	53
60	Influence of Fruit Ripening Stage and Harvest Period on the Antioxidant Content of Sweet Pepper Cultivars. Plant Foods for Human Nutrition, 2011, 66, 416-423.	3.2	51
61	NADP-Dependent Isocitrate Dehydrogenase fromArabidopsisRoots Contributes in the Mechanism of Defence against the Nitro-Oxidative Stress Induced by Salinity. Scientific World Journal, The, 2012, 2012, 1-9.	2.1	51
62	Sweet Pepper (Capsicum annuum L.) Fruits Contain an Atypical Peroxisomal Catalase That Is Modulated by Reactive Oxygen and Nitrogen Species. Antioxidants, 2019, 8, 374.	5.1	51
63	Plant Superoxide Dismutases: Function Under Abiotic Stress Conditions. , 2018, , 1-26.		48
64	Growth, Yield, and Fruit Quality of Pepper Plants Amended with Two Sanitized Sewage Sludges. Journal of Agricultural and Food Chemistry, 2010, 58, 6951-6959.	5.2	46
65	Spatial and temporal regulation of the metabolism of reactive oxygen and nitrogen species during the early development of pepper (Capsicum annuum) seedlings. Annals of Botany, 2015, 116, 679-693.	2.9	46
66	Reactive Oxygen Species and Oxidative Damage in Plants Under Stress. , 2015, , .		45
67	Peroxisomal NADP-isocitrate dehydrogenase is required for Arabidopsis stomatal movement. Protoplasma, 2016, 253, 403-415.	2.1	44
68	Peroxisomal manganese superoxide dismutase: Purification and properties of the isozyme from pea leaves. Physiologia Plantarum, 1998, 104, 720-726.	5.2	43
69	Nitric oxide and hydrogen sulfide modulate the NADPH-generating enzymatic system in higher plants. Journal of Experimental Botany, 2021, 72, 830-847.	4.8	42
70	Appraisal of H2S metabolism in Arabidopsis thaliana: In silico analysis at the subcellular level. Plant Physiology and Biochemistry, 2020, 155, 579-588.	5.8	41
71	Assessing Nitric Oxide (NO) in Higher Plants: An Outline. Nitrogen, 2018, 1, 3.	1.3	40
72	Impact of Nitric Oxide (NO) on the ROS Metabolism of Peroxisomes. Plants, 2019, 8, 37.	3.5	40

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73	Heavy Metal Stress in Plants. , 2013, , .		38
74	Superoxide Radical Metabolism in Sweet Pepper (Capsicum annuum L.) Fruits Is Regulated by Ripening and by a NO-Enriched Environment. Frontiers in Plant Science, 2020, 11, 485.	3.6	37
75	Influence of metallic, metallic oxide, and organic nanoparticles on plant physiology. Chemosphere, 2022, 290, 133329.	8.2	37
76	Mechanical wounding promotes local and long distance response in the halophyte Cakile maritima through the involvement of the ROS and RNS metabolism. Nitric Oxide - Biology and Chemistry, 2018, 74, 93-101.	2.7	36
77	Nitric oxide: A radical molecule with potential biotechnological applications in fruit ripening. Journal of Biotechnology, 2020, 324, 211-219.	3.8	36
78	Peroxisomal membrane manganese superoxide dismutase: characterization of the isozyme from watermelon (Citrullus lanatus Schrad.) cotyledons. Journal of Experimental Botany, 2007, 58, 2417-2427.	4.8	35
79	Production Sites of Reactive Oxygen Species (ROS) in Organelles from Plant Cells. , 2015, , 1-22.		33
80	NO source in higher plants: present and future of an unresolved question. Trends in Plant Science, 2022, 27, 116-119.	8.8	33
81	Arbuscular mycorrhizal fungi alleviate oxidative stress induced by ADOR and enhance antioxidant responses of tomato plants. Journal of Plant Physiology, 2014, 171, 421-428.	3.5	32
82	NADPH as a quality footprinting in horticultural crops marketability. Trends in Food Science and Technology, 2020, 103, 152-161.	15.1	32
83	Thiol-based Oxidative Posttranslational Modifications (OxiPTMs) of Plant Proteins. Plant and Cell Physiology, 2022, 63, 889-900.	3.1	29
84	Loss of function of the chloroplast membrane K+/H+ antiporters AtKEA1 and AtKEA2 alters the ROS and NO metabolism but promotes drought stress resilience. Plant Physiology and Biochemistry, 2021, 160, 106-119.	5.8	27
85	Role of peroxisomes in the oxidative injury induced by 2,4-dichlorophenoxyacetic acid in leaves of pea plants. Biologia Plantarum, 2011, 55, 485-492.	1.9	26
86	Cytosolic NADP-isocitrate dehydrogenase in Arabidopsis leaves and roots. Biologia Plantarum, 2012, 56, 705-710.	1.9	26
87	Proteomic identification of mitochondrial carbonylated proteins in two maturation stages of pepper fruits. Proteomics, 2015, 15, 2634-2642.	2.2	26
88	Redox State as a Central Regulator of Plant-Cell Stress Responses. , 2016, , .		26
89	Reactive Oxygen Species (ROS) Metabolism and Nitric Oxide (NO) Content in Roots and Shoots of Rice (Oryza sativa L.) Plants under Arsenic-Induced Stress. Agronomy, 2020, 10, 1014.	3.0	26
90	The Proteome of Fruit Peroxisomes: Sweet Pepper (Capsicum annuum L.) as a Model. Sub-Cellular Biochemistry, 2018, 89, 323-341.	2.4	23

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91	Antioxidant Profile of Pepper (Capsicum annuum L.) Fruits Containing Diverse Levels of Capsaicinoids. Antioxidants, 2020, 9, 878.	5.1	21
92	Nitric oxideâ€•releasing nanomaterials: from basic research to potential biotechnological applications in agriculture. New Phytologist, 2022, 234, 1119-1125.	7.3	21
93	Function of Nitric Oxide Under Environmental Stress Conditions. , 2012, , 99-113.		19
94	The Modus Operandi of Hydrogen Sulfide(H2S)-Dependent Protein Persulfidation in Higher Plants. Antioxidants, 2021, 10, 1686.	5.1	19
95	Identification of Compounds with Potential Therapeutic Uses from Sweet Pepper (Capsicum annuum L.) Fruits and Their Modulation by Nitric Oxide (NO). International Journal of Molecular Sciences, 2021, 22, 4476.	4.1	18
96	Nitric Oxide (NO) Differentially Modulates the Ascorbate Peroxidase (APX) Isozymes of Sweet Pepper (Capsicum annuum L.) Fruits. Antioxidants, 2022, 11, 765.	5.1	18
97	Nitric Oxide (NO) Scaffolds the Peroxisomal Proteinâ€“Protein Interaction Network in Higher Plants. International Journal of Molecular Sciences, 2021, 22, 2444.	4.1	14
98	Potassium (K+) Starvation-Induced Oxidative Stress Triggers a General Boost of Antioxidant and NADPH-Generating Systems in the Halophyte Cakile maritima. Antioxidants, 2022, 11, 401.	5.1	12
99	Immunological evidence for the presence of peroxiredoxin in pea leaf peroxisomes and response to oxidative stress conditions. Acta Physiologiae Plantarum, 2017, 39, 1.	2.1	11
100	A Simple and Useful Method to Apply Exogenous NO Gas to Plant Systems: Bell Pepper Fruits as a Model. Methods in Molecular Biology, 2018, 1747, 3-11.	0.9	11
101	To Be or Not to Beâ€¦ An Antioxidant? That Is the Question. Antioxidants, 2020, 9, 1234.	5.1	11
102	H2S in Horticultural Plants: Endogenous Detection by an Electrochemical Sensor, Emission by a Gas Detector, and Its Correlation with L-Cysteine Desulfhydrase (LCD) Activity. International Journal of Molecular Sciences, 2022, 23, 5648.	4.1	11
103	Organ-specific effects of the auxin herbicide 2,4-D on the oxidative stress and senescence-related parameters of the stems of pea plants. Acta Physiologiae Plantarum, 2011, 33, 2239-2247.	2.1	9
104	â€œAlperujoâ€•Compost Improves the Ascorbate (Vitamin C) Content in Pepper (Capsicum annuum L.) Fruits and Influences Their Oxidative Metabolism. Agronomy, 2018, 8, 82.	3.0	8
105	Editorial: Fruit Ripening: From Present Knowledge to Future Development. Frontiers in Plant Science, 2019, 10, 545.	3.6	8
106	Metalloenzymes Involved in the Metabolism of Reactive Oxygen Species and Heavy Metal Stress. , 2013, , 1-17.		8
107	Pomegranate (Punica granatum L.) Fruits: Characterization of the Main Enzymatic Antioxidants (Peroxisomal Catalase and SOD Isozymes) and the NADPH-Regenerating System. Agronomy, 2019, 9, 338.	3.0	6
108	Function of Peroxisomes as a Cellular Source of Nitric Oxide and Other Reactive Nitrogen Species. , 2014, , 33-55.		5

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109	Editorial: Subcellular Compartmentalization of Plant Antioxidants and ROS Generating Systems. Frontiers in Plant Science, 2021, 12, 643239.	3.6	4
110	Detection of Protein S-nitrosothiols (SNOs) in Plant Samples on Diaminofluorescein (DAF) Gels. Bio-protocol, 2017, 7, e2559.	0.4	2
111	Separation of Plant 6-Phosphogluconate Dehydrogenase (6PGDH) Isoforms by Non-denaturing Gel Electrophoresis. Bio-protocol, 2017, 7, e2399.	0.4	1
112	The paper below was published in the Journal of Experimental Botany and was not made open access. The publisher would like to apologise for this error. Journal of Experimental Botany, 2007, 58, 3483-3483.	4.8	0
113	Transcriptomic Profiling of Fruits from Pepper (Capsicum annuum L.), Variety PadrÃ³n (Mild Hot), at Two Ripening States. Biology and Life Sciences Forum, 2021, 3, 16.	0.6	0