Alex Costa

List of Publications by Year
in descending order

97 papers	5,817 citations	70961 41 h-index	82410 72 g-index
122 all docs	122 docs citations	122 times ranked	6279 citing authors

#	Article	IF	Citations
1	Rice OsHKT2;1 transporter mediates large Na+ influx component into K+-starved roots for growth. EMBO Journal, 2007, 26, 3003-3014.	3.5	333
2	Isolation of a strong Arabidopsis guard cell promoter and its potential as a research tool. Plant Methods, 2008, 4, 6.	1.9	295
3	Nitric Oxide Is Involved in Cadmium-Induced Programmed Cell Death in Arabidopsis Suspension Cultures Â Â. Plant Physiology, 2009, 150, 217-228.	2.3	243
4	H2O2 in plant peroxisomes: an in vivo analysis uncovers a Ca2+-dependent scavenging system. Plant Journal, 2010, 62, 760-772.	2.8	211
5	OsHKT1;5 mediates Na⁺ exclusion in the vasculature to protect leaf blades and reproductive tissues from salt toxicity in rice. Plant Journal, 2017, 91, 657-670.	2.8	210
6	Thioredoxin-regulated Î²-amylase (BAM1) triggers diurnal starch degradation in guard cells, and in mesophyll cells under osmotic stress. Journal of Experimental Botany, 2011, 62, 545-555.	2.4	182
7	Salicylic acid activates nitric oxide synthesis in Arabidopsis. Journal of Experimental Botany, 2007, 58, 1397-1405.	2.4	173
8	OsHKT1;4-mediated Na+ transport in stems contributes to Na+ exclusion from leaf blades of rice at the reproductive growth stage upon salt stress. BMC Plant Biology, 2016, 16, 22.	1.6	168
9	Plant cytoplasmic GAPDH: redox post-translational modifications and moonlighting properties. Frontiers in Plant Science, 2013, 4, 450.	1.7	156
10	Î²-amylase 1 (BAM1) degrades transitory starch to sustain proline biosynthesis during drought stress. Journal of Experimental Botany, 2016, 67, 1819-1826.	2.4	156
11	Redox Regulation of a Novel Plastid-Targeted Î²-Amylase of Arabidopsis. Plant Physiology, 2006, 141, 840-850.	2.3	144
12	Cellular Ca²⁺ Signals Generate Defined pH Signatures in Plants. Plant Cell, 2018, 30, 2704-2719.	3.1	141
13	K+ Transport by the OsHKT2;4 Transporter from Rice with Atypical Na+ Transport Properties and Competition in Permeation of K+ over Mg2+ and Ca2+ Ions Â Â Â. Plant Physiology, 2011, 156, 1493-1507.	2.3	138
14	The fluorescent protein sensor ro<scp>GFP</scp>2â€Orp1 monitors <i>inÂvivo</i> H₂O₂ and thiol redox integration and elucidates intracellular H₂O₂ dynamics during elicitorâ€induced oxidative burst in Arabidopsis. New Phytologist, 2019, 221, 1649-1664.	3.5	132
15	Targeting of Cameleons to various subcellular compartments reveals a strict cytoplasmic/mitochondrial Ca²⁺ handling relationship in plant cells. Plant Journal, 2012, 71, 1-13.	2.8	131
16	ATP sensing in living plant cells reveals tissue gradients and stress dynamics of energy physiology. ELife, 2017, 6, .	2.8	125
17	AtKC1, a conditionally targeted Shakerâ€type subunit, regulates the activity of plant K⁺ channels. Plant Journal, 2008, 53, 115-123.	2.8	107
18	The EF-Hand Ca²⁺ Binding Protein MICU Choreographs Mitochondrial Ca²⁺ Dynamics in Arabidopsis. Plant Cell, 2015, 27, 3190-3212.	3.1	103

#	Article	IF	Citations
19	Perception of soft mechanical stress in Arabidopsis leaves activates disease resistance. BMC Plant Biology, 2013, 13, 133.	1.6	98
20	Redox Homeostasis in Photosynthetic Organisms: Novel and Established Thiol-Based Molecular Mechanisms. Antioxidants and Redox Signaling, 2019, 31, 155-210.	2.5	95
21	Nuclear Accumulation of Cytosolic Glyceraldehyde-3-Phosphate Dehydrogenase in Cadmium-Stressed Arabidopsis Roots Â Â. Plant Physiology, 2013, 162, 333-346.	2.3	94
22	The contribution of organelles to plant intracellular calcium signalling. Journal of Experimental Botany, 2018, 69, 4175-4193.	2.4	94
23	Agroinfiltration of grapevine leaves for fast transient assays of gene expression and for long-term production of stable transformed cells. Plant Cell Reports, 2008, 27, 845-853.	2.8	91
24	NO signalling in cytokinin-induced programmed cell death. Plant, Cell and Environment, 2005, 28, 1171-1178.	2.8	80
25	Analyses of Ca2+ Accumulation and Dynamics in the Endoplasmic Reticulum of Arabidopsis Root Cells Using a Genetically Encoded Cameleon Sensor Â Â. Plant Physiology, 2013, 163, 1230-1241.	2.3	80
26	MIZ1 regulates ECA1 to generate a slow, long-distance phloem-transmitted Ca²⁺signal essential for root water tracking in<i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8031-8036.	3.3	76
27	Calcium Dynamics in Root Cells of Arabidopsis thaliana Visualized with Selective Plane Illumination Microscopy. PLoS ONE, 2013, 8, e75646.	1.1	75
28	Ca2+-dependent phosphoregulation of the plasma membrane Ca2+-ATPase ACA8 modulates stimulus-induced calcium signatures. Journal of Experimental Botany, 2017, 68, 3215-3230.	2.4	72
29	Chloroplast-Specific in Vivo Ca²⁺ Imaging Using Yellow Cameleon Fluorescent Protein Sensors Reveals Organelle-Autonomous Ca²⁺ Signatures in the Stroma. Plant Physiology, 2016, 171, 2317-2330.	2.3	71
30	The structural bases for agonist diversity in an <i>Arabidopsis thaliana</i> glutamate receptor-like channel. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 752-760.	3.3	70
31	Alternative Splicing-Mediated Targeting of the Arabidopsis GLUTAMATE RECEPTOR3.5 to Mitochondria Affects Organelle Morphology. Plant Physiology, 2015, 167, 216-227.	2.3	69
32	Characterization of a Developmental Root Response Caused by External Ammonium Supply in <i>Lotus japonicus</i> Â Â Â. Plant Physiology, 2010, 154, 784-795.	2.3	66
33	Production of reactive oxygen species and wound-induced resistance in Arabidopsis thaliana against Botrytis cinereaare preceded and depend on a burst of calcium. BMC Plant Biology, 2013, 13, 160.	1.6	64
34	The phosphoinositide PI(3,5)P2 mediates activation of mammalian but not plant TPC proteins: functional expression of endolysosomal channels in yeast and plant cells. Cellular and Molecular Life Sciences, 2014, 71, 4275-4283.	2.4	63
35	Endoplasmic reticulum-localized CCX2 is required for osmotolerance by regulating ER and cytosolic Ca ²⁺ dynamics in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 3966-3971.	3.3	61
36	Two putative-aquaporin genes are differentially expressed during arbuscular mycorrhizal symbiosis in Lotus japonicus. BMC Plant Biology, 2012, 12, 186.	1.6	60

#	Article	IF	Citations
37	Physiological Characterization of a Plant Mitochondrial Calcium Uniporter in Vitro and in Vivo. Plant Physiology, 2017, 173, 1355-1370.	2.3	54
38	Auxin-Responsive Genes <i>AIR12</i> Code for a New Family of Plasma Membrane b-Type Cytochromes Specific to Flowering Plants Â Â Â. Plant Physiology, 2009, 150, 606-620.	2.3	50
39	Unique resistance traits against downy mildew from the center of origin of grapevine (Vitis vinifera). Scientific Reports, 2018, 8, 12523.	1.6	50
40	The Arabidopsis thaliana transcription factor MYB59 regulates calcium signalling during plant growth and stress response. Plant Molecular Biology, 2019, 99, 517-534.	2.0	47
41	An <scp>AM</scp>â€induced, <i><scp>MYB</scp></i>â€family gene of <i>Lotus japonicus</i> (<i>Lj<scp>MAMI</scp></i>) affects root growth in an <scp>AM</scp>â€independent manner. Plant Journal, 2013, 73, 442-455.	2.8	46
42	Light Sheet Fluorescence Microscopy Quantifies Calcium Oscillations in Root Hairs of<i>Arabidopsis thaliana</i>. Plant and Cell Physiology, 2017, 58, 1161-1172.	1.5	46
43	GUN1 influences the accumulation of NEPâ€dependent transcripts and chloroplast protein import in Arabidopsis cotyledons upon perturbation of chloroplast protein homeostasis. Plant Journal, 2020, 101, 1198-1220.	2.8	44
44	Phosphate Starvation Alters Abiotic-Stress-Induced Cytosolic Free Calcium Increases in Roots. Plant Physiology, 2019, 179, 1754-1767.	2.3	43
45	Illuminating the hidden world of calcium ions in plants with a universe of indicators. Plant Physiology, 2021, 187, 550-571.	2.3	37
46	Structural insights into longâ€distance signal transduction pathways mediated by plant glutamate receptorâ€like channels. New Phytologist, 2021, 229, 1261-1267.	3.5	36
47	The <i>Arabidopsis</i> central vacuole as an expression system for intracellular transporters: functional characterization of the Cl^{âˆ’}/H⁺ exchanger CLCâ€7. Journal of Physiology, 2012, 590, 3421-3430.	1.3	34
48	Limits in the use of cPTIO as nitric oxide scavenger and EPR probe in plant cells and seedlings. Frontiers in Plant Science, 2013, 4, 340.	1.7	34
49	Pharmacological Strategies for Manipulating Plant Ca2+ Signalling. International Journal of Molecular Sciences, 2018, 19, 1506.	1.8	34
50	The signatures of organellar calcium. Plant Physiology, 2021, 187, 1985-2004.	2.3	33
51	OsHKT2;2/1-mediated Na+ influx over K+ uptake in roots potentially increases toxic Na+ accumulation in a salt-tolerant landrace of rice Nona Bokra upon salinity stress. Journal of Plant Research, 2016, 129, 67-77.	1.2	32
52	Genetic buffering of cyclic <scp>AMP</scp> in <i>Arabidopsis thaliana</i> compromises the plant immune response triggered by an avirulent strain of <i>Pseudomonas syringae</i> pv. <i>tomato</i>. Plant Journal, 2019, 98, 590-606.	2.8	32
53	KDC1, a carrot Shaker-like potassium channel, reveals its role as a silent regulatory subunit when expressed in plant cells. Plant Molecular Biology, 2008, 66, 61-72.	2.0	31
54	The Kinase ERULUS Controls Pollen Tube Targeting and Growth in Arabidopsis thaliana. Frontiers in Plant Science, 2017, 8, 1942.	1.7	31

#	Article	IF	Citations
55	A procedure for localisation and electrophysiological characterisation of ion channels heterologously expressed in a plant context. Plant Methods, 2005, 1, 14.	1.9	30
56	Constitutive cyclic GMP accumulation in Arabidopsis thaliana compromises systemic acquired resistance induced by an avirulent pathogen by modulating local signals. Scientific Reports, 2016, 6, 36423.	1.6	27
57	Simultaneous imaging of ER and cytosolic Ca2+ dynamics reveals long-distance ER Ca2+ waves in plants. Plant Physiology, 2021, 187, 603-617.	2.3	25
58	DKT1, a novel K+channel from carrot, forms functional heteromeric channels with KDC1. FEBS Letters, 2004, 573, 61-67.	1.3	23
59	Analysis of Plant Mitochondrial Function Using Fluorescent Protein Sensors. Methods in Molecular Biology, 2015, 1305, 241-252.	0.4	23
60	Colorful Insights: Advances in Imaging Drive Novel Breakthroughs in Ca2+ Signaling. Molecular Plant, 2015, 8, 352-355.	3.9	22
61	Direct Recording of Trans-Plasma Membrane Electron Currents Mediated by a Member of the Cytochrome <i>b</i>561 Family of Soybean. Plant Physiology, 2015, 169, 986-995.	2.3	21
62	Mutual Influence of ROS, pH, and CLIC1 Membrane Protein in the Regulation of G1â€“S Phase Progression in Human Glioblastoma Stem Cells. Molecular Cancer Therapeutics, 2018, 17, 2451-2461.	1.9	21
63	Raf-like kinases and receptor-like (pseudo)kinase GHR1 are required for stomatal vapor pressure difference response. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
64	Histidines Are Responsible for Zinc Potentiation of the Current in KDC1 Carrot Channels. Biophysical Journal, 2004, 86, 224-234.	0.2	20
65	FISSION1A, an Arabidopsis Tail-Anchored Protein, Is Localized to Three Subcellular Compartments. Molecular Plant, 2014, 7, 1393-1396.	3.9	19
66	Trans-splicing of plastid rps12 transcripts, mediated by AtPPR4, is essential for embryo patterning in Arabidopsis thaliana. Planta, 2018, 248, 257-265.	1.6	19
67	Systemic Calcium Wave Propagation in Physcomitrella patens. Plant and Cell Physiology, 2018, 59, 1377-1384.	1.5	19
68	Identification of the Arabidopsis Calmodulin-Dependent NAD⁺ Kinase That Sustains the Elicitor-Induced Oxidative Burst. Plant Physiology, 2019, 181, 1449-1458.	2.3	19
69	The D3cpv Cameleon reports Ca²⁺ dynamics in plant mitochondria with similar kinetics of the YC3.6 Cameleon, but with a lower sensitivity. Journal of Microscopy, 2013, 249, 8-12.	0.8	18
70	Ca²⁺ Imaging in Plants Using Genetically Encoded Yellow Cameleon Ca²⁺ Indicators. Cold Spring Harbor Protocols, 2013, 2013, pdb.top066183.	0.2	18
71	Identification of Novel Inhibitors of Auxin-Induced Ca²⁺ Signaling via a Plant-Based Chemical Screen. Plant Physiology, 2019, 180, 480-496.	2.3	18
72	CRP1 Protein: (dis)similarities between Arabidopsis thaliana and Zea mays. Frontiers in Plant Science, 2017, 8, 163.	1.7	17

#	Article	IF	Citations
73	Harnessing the new emerging imaging technologies to uncover the role of Ca²⁺ signalling in plant nutrient homeostasis. Plant, Cell and Environment, 2019, 42, 2885-2901.	2.8	16
74	Ectopic Expression of PII Induces Stomatal Closure in Lotus japonicus. Frontiers in Plant Science, 2017, 8, 1299.	1.7	15
75	Signaling by plant glutamate receptor-like channels: What else!. Current Opinion in Plant Biology, 2022, 68, 102253.	3.5	14
76	Imaging of Mitochondrial and Nuclear Ca²⁺ Dynamics in <i>Arabidopsis</i> Roots. Cold Spring Harbor Protocols, 2013, 2013, pdb.prot073049.	0.2	13
77	Calcium Flux across Plant Mitochondrial Membranes: Possible Molecular Players. Frontiers in Plant Science, 2016, 7, 354.	1.7	13
78	Potassium and carrot embryogenesis: Are K+ channels necessary for development?. Plant Molecular Biology, 2004, 54, 837-852.	2.0	12
79	The p23 co-chaperone protein is a novel substrate of CK2 in Arabidopsis. Molecular and Cellular Biochemistry, 2011, 356, 245-254.	1.4	10
80	AIR12, a b -type cytochrome of the plasma membrane of Arabidopsis thaliana is a negative regulator of resistance against Botrytis cinerea. Plant Science, 2015, 233, 32-43.	1.7	10
81	cROStalk for Life: Uncovering ROS Signaling in Plants and Animal Systems, from Gametogenesis to Early Embryonic Development. Genes, 2021, 12, 525.	1.0	10
82	Salicylic acid differentially affects suspension cell cultures of Lotus japonicus and one of its non-symbiotic mutants. Plant Molecular Biology, 2010, 72, 469-483.	2.0	9
83	In Vivo Analysis of Calcium Levels and Glutathione Redox Status in Arabidopsis Epidermal Leaf Cells Infected with the Hypersensitive Response-Inducing Bacteria Pseudomonas syringae pv. tomato AvrB (PstAvrB). Methods in Molecular Biology, 2018, 1743, 125-141.	0.4	9
84	Peroxisome Ca2+ Homeostasis in Animal and Plant Cells. Sub-Cellular Biochemistry, 2013, 69, 111-133.	1.0	8
85	Calcium Ion Dynamics in Roots: Imaging and Analysis. Methods in Molecular Biology, 2018, 1761, 115-130.	0.4	7
86	In Vivo Light Sheet Fluorescence Microscopy of Calcium Oscillations in Arabidopsis thaliana. Methods in Molecular Biology, 2019, 1925, 87-101.	0.4	7
87	Current Methods to Unravel the Functional Properties of Lysosomal Ion Channels and Transporters. Cells, 2022, 11, 921.	1.8	7
88	A Prototypical Conjugated Polymer Regulating Signaling in Plants. Advanced Sustainable Systems, 2022, 6, 2100048.	2.7	6
89	Three-dimensional bright-field microscopy with isotropic resolution based on multi-view acquisition and image fusion reconstruction. Scientific Reports, 2020, 10, 12771.	1.6	5
90	Auxin analog-induced Ca2+ signaling is independent of inhibition of endosomal aggregation in Arabidopsis roots. Journal of Experimental Botany, 2022, , .	2.4	4

#	Article	IF	Citations
91	Green Tea Catechins, (âˆ')â€Catechin Gallate, and (âˆ')â€Gallocatechin Gallate are Potent Inhibitors ofÂABAâ€Induced Stomatal Closure. Advanced Science, 2022, 9, e2201403.	5.6	4
92	Functional imaging in living plantsÃ¢â,¬â€cell biology meets physiology. Frontiers in Plant Science, 2014, 5, 740.	1.7	3
93	Electron current recordings in living cells. Biophysical Chemistry, 2017, 229, 57-61.	1.5	3
94	Dissecting the susceptibility/resistance mechanism of <i>Vitis vinifera</i> for the future control of downy mildew. BIO Web of Conferences, 2022, 44, 04002.	0.1	2
95	Modulation of Plant Slow Vacuolar (sv) Channel by Flavonoid Naringenin. Biophysical Journal, 2010, 98, 534a-535a.	0.2	1
96	Distinct Functions of the Atypical Terminal Hydrophilic Domain of the HKT Transporter in the Liverwort <i>Marchantia polymorpha</i>. Plant and Cell Physiology, 2022, , .	1.5	1
97	Arabidopsis thaliana Glyceraldehyde-3-Phosphate Dehydrogenase As An Oxidative Stress Sensor. Journal of Biotechnology, 2010, 150, 488-488.	1.9	0