Hannes Kollist

List of Publications by Year
in descending order

73 papers	7,593 citations	53660 45 h-index	76769 74 g-index
82 all docs	82 docs citations	82 times ranked	7754 citing authors

#	Article	IF	Citations
1	SLAC1 is required for plant guard cell S-type anion channel function in stomatal signalling. Nature, 2008, 452, 487-491.	13.7	733
2	<i>Arabidopsis</i> PYR/PYL/RCAR Receptors Play a Major Role in Quantitative Regulation of Stomatal Aperture and Transcriptional Response to Abscisic Acid. Plant Cell, 2012, 24, 2483-2496.	3.1	493
3	Signalling and cell death in ozone-exposed plants. Plant, Cell and Environment, 2005, 28, 1021-1036.	2.8	418
4	Closing gaps: linking elements that control stomatal movement. New Phytologist, 2014, 203, 44-62.	3.5	292
5	Impact of ozone on monoterpene emissions and evidence for an isoprene-like antioxidant action of monoterpenes emitted by Quercus ilex leaves. Tree Physiology, 2004, 24, 361-367.	1.4	272
6	Rapid Responses to Abiotic Stress: Priming the Landscape for the Signal Transduction Network. Trends in Plant Science, 2019, 24, 25-37.	4.3	264
7	Ozone-triggered rapid stomatal response involves the production of reactive oxygen species, and is controlled by SLAC1 and OST1. Plant Journal, 2010, 62, 442-453.	2.8	262
8	Defenseâ€related transcription factors <scp>WRKY</scp>70 and <scp>WRKY</scp>54 modulate osmotic stress tolerance by regulating stomatal aperture in <i><scp>A</scp>rabidopsis</i>. New Phytologist, 2013, 200, 457-472.	3.5	223
9	Arabidopsis RADICAL-INDUCED CELL DEATH1 Belongs to the WWE Proteinâ€“Protein Interaction Domain Protein Family and Modulates Abscisic Acid, Ethylene, and Methyl Jasmonate Responses. Plant Cell, 2004, 16, 1925-1937.	3.1	217
10	PYR/RCAR Receptors Contribute to Ozone-, Reduced Air Humidity-, Darkness-, and CO2-Induced Stomatal Regulation Â Â Â. Plant Physiology, 2013, 162, 1652-1668.	2.3	190
11	Nitric oxide modulates ozoneâ€induced cell death, hormone biosynthesis and gene expression in <i>Arabidopsis thaliana</i>. Plant Journal, 2009, 58, 1-12.	2.8	182
12	Central functions of bicarbonate in S-type anion channel activation and OST1 protein kinase in CO₂signal transduction in guard cell. EMBO Journal, 2011, 30, 1645-1658.	3.5	167
13	Large-Scale Phenomics Identifies Primary and Fine-Tuning Roles for CRKs in Responses Related to Oxidative Stress. PLoS Genetics, 2015, 11, e1005373.	1.5	167
14	The PYL4 A194T Mutant Uncovers a Key Role of PYR1-LIKE4/PROTEIN PHOSPHATASE 2CA Interaction for Abscisic Acid Signaling and Plant Drought Resistance Â Â Â. Plant Physiology, 2013, 163, 441-455.	2.3	150
15	Stomatal VPD Response: There Is More to the Story Than ABA. Plant Physiology, 2018, 176, 851-864.	2.3	144
16	Guard cell <scp>SLAC</scp>1â€type anion channels mediate flagellinâ€induced stomatal closure. New Phytologist, 2015, 208, 162-173.	3.5	138
17	The Arabidopsis thaliana cysteine-rich receptor-like kinases CRK6 and CRK7 protect against apoplastic oxidative stress. Biochemical and Biophysical Research Communications, 2014, 445, 457-462.	1.0	121
18	The role of Arabidopsis ABA receptors from the PYR/PYL/RCAR family in stomatal acclimation and closure signal integration. Nature Plants, 2019, 5, 1002-1011.	4.7	115

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19	Natural variation in ozone sensitivity among <i>Arabidopsis thaliana</i> accessions and its relation to stomatal conductance. Plant, Cell and Environment, 2010, 33, 914-925.	2.8	111
20	Identification of Cyclic GMP-Activated Nonselective Ca2+-Permeable Cation Channels and Associated <i>CNGC5</i> and <i>CNGC6</i> Genes in Arabidopsis Guard Cells Â Â. Plant Physiology, 2013, 163, 578-590.	2.3	111
21	The Breakdown of Stored Triacylglycerols Is Required during Light-Induced Stomatal Opening. Current Biology, 2016, 26, 707-712.	1.8	111
22	Mutual antagonism of ethylene and jasmonic acid regulates ozone-induced spreading cell death inArabidopsis. Plant Journal, 2004, 39, 59-69.	2.8	109
23	A specialized histone H1 variant is required for adaptive responses to complex abiotic stress and related DNA methylation in Arabidopsis. Plant Physiology, 2015, 169, pp.00493.2015.	2.3	101
24	The F-box protein MAX2 contributes to resistance to bacterial phytopathogens in Arabidopsis thaliana. BMC Plant Biology, 2015, 15, 53.	1.6	101
25	A novel device detects a rapid ozone-induced transient stomatal closure in intact Arabidopsis and its absence in abi2 mutant. Physiologia Plantarum, 2007, 129, 796-803.	2.6	98
26	Abscisic Acid Transport and Homeostasis in the Context of Stomatal Regulation. Molecular Plant, 2015, 8, 1321-1333.	3.9	98
27	The Role of ABA Recycling and Transporter Proteins in Rapid Stomatal Responses to Reduced Air Humidity, Elevated CO2, and Exogenous ABA. Molecular Plant, 2015, 8, 657-659.	3.9	96
28	The Receptor-like Pseudokinase GHR1 Is Required for Stomatal Closure. Plant Cell, 2018, 30, 2813-2837.	3.1	95
29	Abscisic acid-independent stomatal CO ₂ signal transduction pathway and convergence of CO ₂ and ABA signaling downstream of OST1 kinase. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E9971-E9980.	3.3	91
30	A Dominant Mutation in the HT1 Kinase Uncovers Roles of MAP Kinases and GHR1 in CO₂-Induced Stomatal Closure. Plant Cell, 2016, 28, 2493-2509.	3.1	89
31	Repeatability of condition indices in captive greenfinches (Carduelis chloris). Canadian Journal of Zoology, 2002, 80, 636-643.	0.4	86
32	To open or to close: speciesâ€specific stomatal responses to simultaneously applied opposing environmental factors. New Phytologist, 2014, 202, 499-508.	3.5	86
33	Insights into the Molecular Mechanisms ofÂCO2-Mediated Regulation of Stomatal Movements. Current Biology, 2018, 28, R1356-R1363.	1.8	85
34	A ligand-independent origin of abscisic acid perception. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 24892-24899.	3.3	84
35	Do the capacity and kinetics for modification of xanthophyll cycle pool size depend on growth irradiance in temperate trees?. Plant, Cell and Environment, 2003, 26, 1787-1801.	2.8	83
36	Stomatal action directly feeds back on leaf turgor: new insights into the regulation of the plant water status from non-invasive pressure probe measurements. Plant Journal, 2010, 62, 1072-82.	2.8	82

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37	<i>Arabidopsis</i> GRI is involved in the regulation of cell death induced by extracellular ROS. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5412-5417.	3.3	75
38	Fern Stomatal Responses to ABA and CO₂ Depend on Species and Growth Conditions. Plant Physiology, 2017, 174, 672-679.	2.3	74
39	Complex phenotypic profiles leading to ozone sensitivity in <i>Arabidopsis thaliana</i> mutants. Plant, Cell and Environment, 2008, 31, 1237-1249.	2.8	69
40	Natural Variation in Arabidopsis Cvi-0 Accession Reveals an Important Role of MPK12 in Guard Cell CO2 Signaling. PLoS Biology, 2016, 14, e2000322.	2.6	69
41	FRET kinase sensor development reveals SnRK2/OST1 activation by ABA but not by MeJA and high CO2 during stomatal closure. ELife, 2020, 9, .	2.8	68
42	Calcium signals in guard cells enhance the efficiency by which abscisic acid triggers stomatal closure. New Phytologist, 2019, 224, 177-187.	3.5	62
43	Anion channels in plant cells. FEBS Journal, 2011, 278, 4277-4292.	2.2	57
44	A Rationally Designed Agonist Defines Subfamily IIIA Abscisic Acid Receptors As Critical Targets for Manipulating Transpiration. ACS Chemical Biology, 2017, 12, 2842-2848.	1.6	57
45	Mutations in the <scp>SLAC</scp>1 anion channel slow stomatal opening and severely reduce K⁺ uptake channel activity via enhanced cytosolic [Ca²⁺] and increased Ca²⁺ sensitivity of K⁺ uptake channels. New Phytologist, 2013, 197, 88-98.	3.5	50
46	Mitogenâ€activated protein kinases <scp>MPK</scp>4 and <scp>MPK</scp>12 are key components mediating <scp>CO</scp>₂â€induced stomatal movements. Plant Journal, 2018, 96, 1018-1035.	2.8	49
47	Acclimation of antioxidant pools to the light environment in a natural forest canopy. New Phytologist, 2004, 163, 87-97.	3.5	47
48	Calcium-Dependent and -Independent Stomatal Signaling Network and Compensatory Feedback Control of Stomatal Opening via Ca2+ Sensitivity Priming. Plant Physiology, 2013, 163, 504-513.	2.3	47
49	THESEUS1 modulates cell wall stiffness and abscisic acid production in <i>Arabidopsis thaliana</i>. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	47
50	BODYGUARD is required for the biosynthesis of cutin in Arabidopsis. New Phytologist, 2016, 211, 614-626.	3.5	43
51	Ozone Flux to Plasmalemma in Barley and Wheat is controlled by Stomata rather than by direct Reaction of Ozone with Cell Wall Ascorbate. Journal of Plant Physiology, 2000, 156, 645-651.	1.6	41
52	Phosphorylation of the plasma membrane H+-ATPase AHA2 by BAK1 is required for ABA-induced stomatal closure in Arabidopsis. Plant Cell, 2022, 34, 2708-2729.	3.1	40
53	Reactive Oxygen Species, Photosynthesis, and Environment in the Regulation of Stomata. Antioxidants and Redox Signaling, 2019, 30, 1220-1237.	2.5	38
54	A role for calciumâ€dependent protein kinases in differential CO₂â€•and ABAâ€controlled stomatal closing and low CO₂â€induced stomatal opening in Arabidopsis. New Phytologist, 2021, 229, 2765-2779.	3.5	38

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55	Physiological effects of immune challenge in captive greenfinches (Carduelis chloris). Canadian Journal of Zoology, 2003, 81, 371-379.	0.4	35
56	ERD15â€”An attenuator of plant ABA responses and stomatal aperture. Plant Science, 2012, 182, 19-28.	1.7	34
57	STRESS INDUCED FACTOR 2 Regulates Arabidopsis Stomatal Immunity through Phosphorylation of the Anion Channel SLAC1. Plant Cell, 2020, 32, 2216-2236.	3.1	28
58	Components of apoplastic ascorbate use in Betula pendula leaves exposed to CO 2 and O 3 enrichment. New Phytologist, 2005, 165, 131-142.	3.5	27
59	Ascorbate transport from the apoplast to the symplast in intact leaves. Physiologia Plantarum, 2001, 113, 377-383.	2.6	25
60	Differential role of MAX2 and strigolactones in pathogen, ozone, and stomatal responses. Plant Direct, 2020, 4, e00206.	0.8	25
61	Arabidopsis MLO2 is a negative regulator of sensitivity to extracellular reactive oxygen species. Plant, Cell and Environment, 2018, 41, 782-796.	2.8	24
62	The Role of ENHANCED RESPONSES TO ABA1 (ERA1) in Arabidopsis Stomatal Responses Is Beyond ABA Signaling. Plant Physiology, 2017, 174, 665-671.	2.3	23
63	<scp>ABA</scp>â€mediated regulation of stomatal density is <scp>OST</scp>1â€independent. Plant Direct, 2018, 2, e00082.	0.8	20
64	Jasmonic acid and salicylic acid play minor roles in stomatal regulation by CO₂, abscisic acid, darkness, vapor pressure deficit and ozone. Plant Journal, 2021, 108, 134-150.	2.8	18
65	Combined action of guard cell plasma membrane rapid- and slow-type anion channels in stomatal regulation. Plant Physiology, 2021, 187, 2126-2133.	2.3	15
66	Ozone responses in Arabidopsis: beyond stomatal conductance. Plant Physiology, 2021, 186, 180-192.	2.3	12
67	Enzymatic determination of ascorbic acid in leaf cell walls using acidic buffer during infiltration. Biologia Plantarum, 1996, 38, 229.	1.9	9
68	Rapid stomatal closure triggered by a short ozone pulse is followed by reopening to overshooting values. Plant Signaling and Behavior, 2011, 6, 311-313.	1.2	9
69	Multiparameter in vivo imaging in plants using genetically encoded fluorescent indicator multiplexing. Plant Physiology, 2021, 187, 537-549.	2.3	9
70	Gas exchange-yield relationships of malting barley genotypes treated with fungicides and biostimulants. European Journal of Agronomy, 2018, 99, 129-137.	1.9	8
71	Genetic controls of short- and long-term stomatal CO2 responses in Arabidopsis thaliana. Annals of Botany, 2020, 126, 179-190.	1.4	7
72	Isolation of guard-cell enriched tissue for RNA extraction. Bio-protocol, 2017, 7, e2447.	0.2	4

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73	Rapid depolarization and cytosolic calcium increase go handâ€inâ€hand in mesophyll cellsâ€™ ozone response. New Phytologist, 2021, 232, 1692-1702.	3.5	3