Ronan Sulpice

List of Publications by Year
in descending order

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114 papers	9,622 citations	31949 53 h-index	39638 94 g-index
118 all docs	118 docs citations	118 times ranked	10844 citing authors

#	Article	IF	Citations
1	Genomic and metabolic prediction of complex heterotic traits in hybrid maize. Nature Genetics, 2012, 44, 217-220.	9.4	532
2	Starch as a major integrator in the regulation of plant growth. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10348-10353.	3.3	467
3	Arabidopsis Plants Acclimate to Water Deficit at Low Cost through Changes of Carbon Usage: An Integrated Perspective Using Growth, Metabolite, Enzyme, and Gene Expression Analysis Â Â Â. Plant Physiology, 2010, 154, 357-372.	2.3	374
4	Genome-wide association mapping of leaf metabolic profiles for dissecting complex traits in maize. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8872-8877.	3.3	340
5	Adjustment of growth, starch turnover, protein content and central metabolism to a decrease of the carbon supply when Arabidopsis is grown in very short photoperiods. Plant, Cell and Environment, 2009, 32, 859-874.	2.8	312
6	Deficiency of mitochondrial fumarase activity in tomato plants impairs photosynthesis via an effect on stomatal function. Plant Journal, 2007, 50, 1093-1106.	2.8	294
7	Multilevel Analysis of Primary Metabolism Provides New Insights into the Role of Potassium Nutrition for Glycolysis and Nitrogen Assimilation in Arabidopsis Roots Â Â. Plant Physiology, 2009, 150, 772-785.	2.3	293
8	Variation of Enzyme Activities and Metabolite Levels in 24 Arabidopsis Accessions Growing in Carbon-Limited Conditions. Plant Physiology, 2006, 142, 1574-1588.	2.3	270
9	Highâ€density kinetic analysis of the metabolomic and transcriptomic response of Arabidopsis to eight environmental conditions. Plant Journal, 2011, 67, 869-884.	2.8	251
10	Arabidopsis Coordinates the Diurnal Regulation of Carbon Allocation and Growth across a Wide Range of Photoperiods. Molecular Plant, 2014, 7, 137-155.	3.9	244
11	Disruption of the Arabidopsis Circadian Clock Is Responsible for Extensive Variation in the Cold-Responsive Transcriptome Â Â Â. Plant Physiology, 2008, 147, 263-279.	2.3	234
12	EZâ€R<scp>hizo</scp>: integrated software for the fast and accurate measurement of root system architecture. Plant Journal, 2009, 57, 945-956.	2.8	228
13	RNA Interference of LIN5 in Tomato Confirms Its Role in Controlling Brix Content, Uncovers the Influence of Sugars on the Levels of Fruit Hormones, and Demonstrates the Importance of Sucrose Cleavage for Normal Fruit Development and Fertility Â Â. Plant Physiology, 2009, 150, 1204-1218.	2.3	226
14	Increased Leaf Size: Different Means to an End Â Â. Plant Physiology, 2010, 153, 1261-1279.	2.3	222
15	Use of reverseâ€phase liquid chromatography, linked to tandem mass spectrometry, to profile the Calvin cycle and other metabolic intermediates in Arabidopsis rosettes at different carbon dioxide concentrations. Plant Journal, 2009, 59, 826-839.	2.8	216
16	Systemsâ€based analysis of Arabidopsis leaf growth reveals adaptation to water deficit. Molecular Systems Biology, 2012, 8, 606.	3.2	191
17	Metabolic Networks: How to Identify Key Components in the Regulation of Metabolism and Growth. Plant Physiology, 2010, 152, 428-444.	2.3	155
18	Circadian control of root elongation and C partitioning in Arabidopsis thaliana. Plant, Cell and Environment, 2011, 34, 877-894.	2.8	145

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19	Characterization of a recently evolved flavonol-phenylacyltransferase gene provides signatures of natural light selection in Brassicaceae. Nature Communications, 2016, 7, 12399.	5.8	145
20	Diurnal Changes of Polysome Loading Track Sucrose Content in the Rosette of Wild-Type Arabidopsis and the Starchless pgm Mutant Â Â. Plant Physiology, 2013, 162, 1246-1265.	2.3	133
21	Quantifying Protein Synthesis and Degradation in Arabidopsis by Dynamic ¹³CO₂ Labeling and Analysis of Enrichment in Individual Amino Acids in Their Free Pools and in Protein. Plant Physiology, 2015, 168, 74-93.	2.3	132
22	Network Analysis of Enzyme Activities and Metabolite Levels and Their Relationship to Biomass in a Large Panel ofArabidopsisAccessions Â Â. Plant Cell, 2010, 22, 2872-2893.	3.1	131
23	Metabolic analysis of kiwifruit (Actinidia deliciosa) berries from extreme genotypes reveals hallmarks for fruit starch metabolism. Journal of Experimental Botany, 2013, 64, 5049-5063.	2.4	124
24	Low levels of ribosomal <scp>RNA</scp> partly account for the very high photosynthetic phosphorusâ€use efficiency of <scp>P</scp>roteaceae species. Plant, Cell and Environment, 2014, 37, 1276-1298.	2.8	121
25	Enhanced formation of flowers in salt-stressedArabidopsisafter genetic engineering of the synthesis of glycine betaine. Plant Journal, 2003, 36, 165-176.	2.8	116
26	Fibrillin expression is regulated by abscisic acid response regulators and is involved in abscisic acid-mediated photoprotection. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 6061-6066.	3.3	115
27	Disordered Cold Regulated15 Proteins Protect Chloroplast Membranes during Freezing through Binding and Folding, But Do Not Stabilize Chloroplast Enzymes in Vivo. Plant Physiology, 2014, 166, 190-201.	2.3	108
28	Capsaicinoids: Pungency beyond Capsicum. Trends in Plant Science, 2019, 24, 109-120.	4.3	108
29	GC-EI-TOF-MS analysis of in vivo carbon-partitioning into soluble metabolite pools of higher plants by monitoring isotope dilution after 13CO2 labelling. Phytochemistry, 2007, 68, 2258-2272.	1.4	105
30	Metabolism and Growth in Arabidopsis Depend on the Daytime Temperature but Are Temperature-Compensated against Cool Nights. Plant Cell, 2012, 24, 2443-2469.	3.1	105
31	The enigmatic contribution of mitochondrial function in photosynthesis. Journal of Experimental Botany, 2007, 59, 1675-1684.	2.4	104
32	Glucosylglycerol, a Compatible Solute, Sustains Cell Division under Salt Stress. Plant Physiology, 2003, 131, 1628-1637.	2.3	103
33	Arbuscular Mycorrhizal Fungi Alter Fractal Dimension Characteristics of Robinia pseudoacacia L. Seedlings Through Regulating Plant Growth, Leaf Water Status, Photosynthesis, and Nutrient Concentration Under Drought Stress. Journal of Plant Growth Regulation, 2014, 33, 612-625.	2.8	101
34	An Atypical Mitogen-activated Protein Kinase (MAPK) Homologue Expressed in Gametocytes of the Human Malaria Parasite Plasmodium falciparum. Journal of Biological Chemistry, 1999, 274, 29912-29920.	1.6	97
35	Integrative analyses of genetic variation in enzyme activities of primary carbohydrate metabolism reveal distinct modes of regulation in Arabidopsis thaliana. Genome Biology, 2008, 9, R129.	13.9	90
36	Mild Reductions in Mitochondrial Citrate Synthase Activity Result in a Compromised Nitrate Assimilation and Reduced Leaf Pigmentation But Have No Effect on Photosynthetic Performance or Growth Â. Plant Physiology, 2008, 147, 115-127.	2.3	89

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37	Impact of the Carbon and Nitrogen Supply on Relationships and Connectivity between Metabolism and Biomass in a Broad Panel of Arabidopsis Accessions Â Â. Plant Physiology, 2013, 162, 347-363.	2.3	87
38	Description and applications of a rapid and sensitive non-radioactive microplate-based assay for maximum and initial activity of D-ribulose-1,5-bisphosphate carboxylase/oxygenase. Plant, Cell and Environment, 2007, 30, 1163-1175.	2.8	82
39	Photosynthate partitioning to starch in <scp>Arabidopsis thaliana</scp> is insensitive to light intensity but sensitive to photoperiod due to a restriction on growth in the light in short photoperiods. Plant, Cell and Environment, 2017, 40, 2608-2627.	2.8	82
40	The Influence of Fruit Load on the Tomato Pericarp Metabolome in aSolanum chmielewskiiIntrogression Line Population. Plant Physiology, 2010, 154, 1128-1142.	2.3	80
41	<scp>TIME FOR COFFEE</scp> is an essential component in the maintenance of metabolic homeostasis in <scp>A</scp>rabidopsis thaliana. Plant Journal, 2013, 76, 188-200.	2.8	79
42	A rapid approach for phenotypeâ€screening and database independent detection of cSNP/protein polymorphism using mass accuracy precursor alignment. Proteomics, 2008, 8, 4214-4225.	1.3	78
43	Regulatory Properties of ADP Glucose Pyrophosphorylase Are Required for Adjustment of Leaf Starch Synthesis in Different Photoperiods Â Â. Plant Physiology, 2014, 166, 1733-1747.	2.3	78
44	Nitrogen metabolism in cyanobacteria: metabolic and molecular control, growth consequences and biotechnological applications. Critical Reviews in Microbiology, 2018, 44, 541-560.	2.7	78
45	Overexpression of Plastid Transketolase in Tobacco Results in a Thiamine Auxotrophic Phenotype. Plant Cell, 2015, 27, 432-447.	3.1	76
46	Expression of Sucrose Transporter cDNAs Specifically in Companion Cells Enhances Phloem Loading and Long-Distance Transport of Sucrose but Leads to an Inhibition of Growth and the Perception of a Phosphate Limitation Â Â. Plant Physiology, 2014, 165, 715-731.	2.3	72
47	Variability of candidate genes, genetic structure and association with sugar accumulation and climacteric behavior in a broad germplasm collection of melon (Cucumis melo L.). BMC Genetics, 2015, 16, 28.	2.7	72
48	Mild Reductions in Mitochondrial NAD-Dependent Isocitrate Dehydrogenase Activity Result in Altered Nitrate Assimilation and Pigmentation But Do Not Impact Growth. Molecular Plant, 2010, 3, 156-173.	3.9	68
49	Photoperiodâ€dependent changes in the phase of core clock transcripts and global transcriptional outputs at dawn and dusk in Arabidopsis. Plant, Cell and Environment, 2016, 39, 1955-1981.	2.8	60
50	The genetic architecture of photosynthesis and plant growthâ€related traits in tomato. Plant, Cell and Environment, 2018, 41, 327-341.	2.8	59
51	Dissecting the Subcellular Compartmentation of Proteins and Metabolites in Arabidopsis Leaves Using Non-aqueous Fractionation. Molecular and Cellular Proteomics, 2014, 13, 2246-2259.	2.5	58
52	Growth rate correlates negatively with protein turnover in Arabidopsis accessions. Plant Journal, 2017, 91, 416-429.	2.8	58
53	Determining novel functions of Arabidopsis14-3-3 proteins in central metabolic processes. BMC Systems Biology, 2011, 5, 192.	3.0	55
54	Adjustment of carbon fluxes to light conditions regulates the daily turnover of starch in plants: a computational model. Molecular BioSystems, 2014, 10, 613-627.	2.9	55

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55	Natural genetic variation for morphological and molecular determinants of plant growth and yield. Journal of Experimental Botany, 2016, 67, 2989-3001.	2.4	55
56	Integrated analysis of rice transcriptomic and metabolomic responses to elevated night temperatures identifies sensitivityâ€•and toleranceâ€•related profiles. Plant, Cell and Environment, 2017, 40, 121-137.	2.8	54
57	Proline accumulation in canola leaf discs subjected to osmotic stress is related to the loss of chlorophylls and to the decrease of mitochondrial activity. Physiologia Plantarum, 2000, 110, 469-476.	2.6	50
58	Multiple circadian clock outputs regulate diel turnover of carbon and nitrogen reserves. Plant, Cell and Environment, 2019, 42, 549-573.	2.8	49
59	Salt-induced accumulation of glycine betaine is inhibited by high light in durum wheat. Functional Plant Biology, 2011, 38, 139.	1.1	48
60	Disaggregating polyploidy, parental genome dosage and hybridity contributions to heterosis in Arabidopsis thaliana. New Phytologist, 2016, 209, 590-599.	3.5	46
61	Genetic modification of the fatty acid unsaturation of phosphatidylglycerol in chloroplasts alters the sensitivity of tobacco plants to cold stress. Plant, Cell and Environment, 2004, 27, 99-105.	2.8	42
62	Defining the robust behaviour of the plant clock gene circuit with absolute RNA timeseries and open infrastructure. Open Biology, 2015, 5, 150042.	1.5	42
63	Lipid Biosynthesis and Protein Concentration Respond Uniquely to Phosphate Supply during Leaf Development in Highly Phosphorus-Efficient Hakea prostrata. Plant Physiology, 2014, 166, 1891-1911.	2.3	38
64	Green tides select for fast expanding Ulva strains. Science of the Total Environment, 2020, 698, 134337.	3.9	38
65	Extensive Variations in Diurnal Growth Patterns and Metabolism Among Ulva spp. Strains. Plant Physiology, 2019, 180, 109-123.	2.3	37
66	Mild reductions in cytosolic NADP-dependent isocitrate dehydrogenase activity result in lower amino acid contents and pigmentation without impacting growth. Amino Acids, 2010, 39, 1055-1066.	1.2	34
67	Exogenously supplied glycine betaine in spinach and rapeseed leaf discs: compatibility or non-compatibility?. Plant, Cell and Environment, 1998, 21, 1285-1292.	2.8	33
68	Moving Toward a Comprehensive Map of Central Plant Metabolism. Annual Review of Plant Biology, 2015, 66, 187-210.	8.6	33
69	An assessment of the physiological properties of the so-called compatible solutes using in vitro experiments with leaf discs. Plant Physiology and Biochemistry, 2003, 41, 657-666.	2.8	32
70	Genome-Wide Association Mapping Reveals That Specific and Pleiotropic Regulatory Mechanisms Fine-Tune Central Metabolism and Growth in Arabidopsis. Plant Cell, 2017, 29, 2349-2373.	3.1	32
71	Structured patterns in geographic variability of metabolic phenotypes in Arabidopsis thaliana. Nature Communications, 2012, 3, 1319.	5.8	31
72	Genetic Analysis of Central Carbon Metabolism Unveils an Amino Acid Substitution That Alters Maize NAD-Dependent Isocitrate Dehydrogenase Activity. PLoS ONE, 2010, 5, e9991.	1.1	30

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73	Phytochrome A and B Regulate Primary Metabolism in Arabidopsis Leaves in Response to Light. Frontiers in Plant Science, 2017, 8, 1394.	1.7	30
74	Gene dosage compensation of rRNA transcript levels inArabidopsis thalianalines with reduced ribosomal gene copy number. Plant Cell, 2021, 33, 1135-1150.	3.1	28
75	A long photoperiod relaxes energy management in Arabidopsis leaf six. Current Plant Biology, 2015, 2, 34-45.	2.3	27
76	Nitrogen differentially modulates photosynthesis, carbon allocation and yield related traits in two contrasting Capsicum chinense cultivars. Plant Science, 2019, 283, 224-237.	1.7	26
77	Seasonal plasticity of the polar lipidome of Ulva rigida cultivated in a sustainable integrated multi-trophic aquaculture. Algal Research, 2020, 49, 101958.	2.4	25
78	Emerging molecular mechanisms for biotechnological harnessing of heterosis in crops. Trends in Biotechnology, 2013, 31, 549-551.	4.9	24
79	The interplay between carbon availability and growth in different zones of the growing maize leaf. Plant Physiology, 2016, 172, pp.00994.2016.	2.3	24
80	Foliose Ulva Species Show Considerable Interâ€Specific Genetic Diversity, Low Intraâ€Specific Genetic Variation, and the Rare Occurrence of Interâ€Specific Hybrids in the Wild. Journal of Phycology, 2021, 57, 219-233.	1.0	24
81	Exhaustive reanalysis of barcode sequences from public repositories highlights ongoing misidentifications and impacts taxa diversity and distribution. Molecular Ecology Resources, 2022, 22, 86-101.	2.2	24
82	Metabolic efficiency underpins performance trade-offs in growth of Arabidopsis thaliana. Nature Communications, 2014, 5, 3537.	5.8	23
83	Reduced levels of NADH-dependent glutamate dehydrogenase decrease the glutamate content of ripe tomato fruit but have no effect on green fruit or leaves. Journal of Experimental Botany, 2015, 66, 3381-3389.	2.4	23
84	Magnetic beads, a particularly effective novel method for extraction of NGS-ready DNA from macroalgae. Algal Research, 2018, 32, 308-313.	2.4	21
85	Allelic differences in a vacuolar invertase affect Arabidopsis growth at early plant development. Journal of Experimental Botany, 2016, 67, 4091-4103.	2.4	20
86	Exploring natural variation of photosynthetic, primary metabolism and growth parameters in a large panel of Capsicum chinense accessions. Planta, 2015, 242, 677-691.	1.6	19
87	Venomics Approach Reveals a High Proportion of Lactrodectus-Like Toxins in the Venom of the Noble False Widow Spider Steatoda nobilis. Toxins, 2020, 12, 402.	1.5	19
88	Analysis of Short-Term Metabolic Alterations in Arabidopsis Following Changes in the Prevailing Environmental Conditions. Molecular Plant, 2014, 7, 893-911.	3.9	17
89	Envenomation by the noble false widow spider Steatoda nobilis (Thorell, 1875) â€“ five new cases of steatodism from Ireland and Great Britain. Clinical Toxicology, 2018, 56, 433-435.	0.8	17
90	Interaction between exogenous glycine betaine and the photorespiratory pathway in canola leaf discs. Physiologia Plantarum, 2002, 116, 460-467.	2.6	16

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91	The kiss of (cell) death: can venom-induced immune response contribute to dermal necrosis following arthropod envenomations?. Clinical Toxicology, 2019, 57, 677-685.	0.8	16
92	A Solanum lycopersicoides reference genome facilitates insights into tomato specialized metabolism and immunity. Plant Journal, 2022, 110, 1791-1810.	2.8	16
93	A Novel Mechanism, Linked to Cell Density, Largely Controls Cell Division in Synechocystis. Plant Physiology, 2017, 174, 2166-2182.	2.3	15
94	Spatially resolved metabolic analysis reveals a central role for transcriptional control in carbon allocation to wood. Journal of Experimental Botany, 2017, 68, 3529-3539.	2.4	15
95	The suppression of osmoinduced proline response of Brassica napus L. var oleifera leaf discs by polyunsaturated fatty acids and methyl-jasmonate. Plant Science, 2003, 164, 119-127.	1.7	14
96	Closing the yield gap: can metabolomics be of help?. Journal of Experimental Botany, 2020, 71, 461-464.	2.4	12
97	Physiological and metabolic bases of increased growth in the tomato ethylene-insensitive mutant Never ripe: extending ethylene signaling functions. Plant Cell Reports, 2021, 40, 1377-1393.	2.8	12
98	Bites by the noble false widow spider Steatoda nobilis can induce Latrodectus-like symptoms and vector-borne bacterial infections with implications for public health: a case series. Clinical Toxicology, 2022, 60, 59-70.	0.8	12
99	Single feature polymorphism (SFP)-based selective sweep identification and association mapping of growth-related metabolic traits in Arabidopsis thaliana. BMC Genomics, 2010, 11, 188.	1.2	11
100	Occurrence, reproductive rate and identification of the non-native Noble false widow spider Steatoda nobilis (Thorell, 1875) in Ireland. Biology and Environment, 2017, 117B, 77.	0.2	10
101	A sequencing-free assay for foliose Ulva species identification, hybrid detection and bulk biomass characterisation. Algal Research, 2021, 55, 102280.	2.4	8
102	The role of natural variation in dissecting genetic regulation of primary metabolism. Plant Signaling and Behavior, 2009, 4, 244-246.	1.2	7
103	Specific leaf area is modulated by nitrogen via changes in primary metabolism and parenchymal thickness in pepper. Planta, 2021, 253, 16.	1.6	7
104	Source Strength Modulates Fruit Set by Starch Turnover and Export of Both Sucrose and Amino Acids in Pepper. Plant and Cell Physiology, 2019, 60, 2319-2330.	1.5	5
105	Metabolic shifts during fruit development in pungent and non-pungent peppers. Food Chemistry, 2022, 375, 131850.	4.2	5
106	Lipidome in-depth characterization highlights the nutritional value and species-specific idiosyncrasies of different Ulva species. Algal Research, 2022, 64, 102694.	2.4	5
107	Photoperiod-dependent transcriptional modifications in key metabolic pathways in Coffea arabica. Tree Physiology, 2021, 41, 302-316.	1.4	4
108	Kinship networks of seed exchange shape spatial patterns of plant virus diversity. Nature Communications, 2021, 12, 4505.	5.8	4

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109	Analysis of Arabidopsis natural variation in biomass accumulation and metabolism. New Biotechnology, 2009, 25, S307.	2.4	2
110	Transient Carbon Reserves in Barley: Malate, Sucrose and Starch Are the Main Players, Their Quantitative Involvement Being Light Intensity Dependant. Frontiers in Plant Science, 2020, 11, 209.	1.7	1
111	Diurnal patterns of growth and transient reserves of sink and source tissues are affected by cold nights in barley. Plant, Cell and Environment, 2020, 43, 1404-1420.	2.8	1
112	Clinical evidence of necrosis following bites by the Noble false widow spider Steatoda nobilis â€“ a response to Paolino & colleagues. Clinical Toxicology, 2021, , 1-2.	0.8	1
113	A comparative analysis of genomic and phenomic predictions of growth-related traits in 3-way coffee hybrids. G3: Genes, Genomes, Genetics, 0, , .	0.8	1
114	High-Throughput Extraction and Enzymatic Determination of Sugars and Fructans in Fructan-Accumulating Plants. Methods in Molecular Biology, 2022, 2398, 107-119.	0.4	0