

Alisdair R Fernie

List of Publications by Citations

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596
papers

42,481
citations

109
h-index

186
g-index

704
ext. papers

53,091
ext. citations

8.7
avg, IF

7.82
L-index

#	Paper	IF	Citations
596	Gas chromatography mass spectrometry-based metabolite profiling in plants. <i>Nature Protocols</i> , 2006 , 1, 387-96	18.8	1409
595	GMD@CSB.DB: the Golm Metabolome Database. <i>Bioinformatics</i> , 2005 , 21, 1635-8	7.2	1064
594	Metabolic profiling allows comprehensive phenotyping of genetically or environmentally modified plant systems. <i>Plant Cell</i> , 2001 , 13, 11-29	11.6	877
593	Sucrose efflux mediated by SWEET proteins as a key step for phloem transport. <i>Science</i> , 2012 , 335, 207-11	35.3	714
592	Metabolite profiling: from diagnostics to systems biology. <i>Nature Reviews Molecular Cell Biology</i> , 2004 , 5, 763-9	48.7	622
591	Comprehensive metabolic profiling and phenotyping of interspecific introgression lines for tomato improvement. <i>Nature Biotechnology</i> , 2006 , 24, 447-54	44.5	619
590	Not just a circle: flux modes in the plant TCA cycle. <i>Trends in Plant Science</i> , 2010 , 15, 462-70	13.1	516
589	The use of metabolomics to dissect plant responses to abiotic stresses. <i>Cellular and Molecular Life Sciences</i> , 2012 , 69, 3225-43	10.3	505
588	GC-MS libraries for the rapid identification of metabolites in complex biological samples. <i>FEBS Letters</i> , 2005 , 579, 1332-7	3.8	504
587	Highway or byway: the metabolic role of the GABA shunt in plants. <i>Trends in Plant Science</i> , 2008 , 13, 14-9	13.1	471
586	On the origins of nitric oxide. <i>Trends in Plant Science</i> , 2011 , 16, 160-8	13.1	450
585	Metabolic and signaling aspects underpinning the regulation of plant carbon nitrogen interactions. <i>Molecular Plant</i> , 2010 , 3, 973-96	14.4	445
584	The flavonoid biosynthetic pathway in Arabidopsis: structural and genetic diversity. <i>Plant Physiology and Biochemistry</i> , 2013 , 72, 21-34	5.4	440
583	Photorespiration: players, partners and origin. <i>Trends in Plant Science</i> , 2010 , 15, 330-6	13.1	423
582	Zooming in on a quantitative trait for tomato yield using interspecific introgressions. <i>Science</i> , 2004 , 305, 1786-9	33.3	407
581	Starch as a major integrator in the regulation of plant growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 10348-53	11.5	381
580	Metabolomics-assisted breeding: a viable option for crop improvement?. <i>Trends in Genetics</i> , 2009 , 25, 39-48	8.5	379

579	Mercator: a fast and simple web server for genome scale functional annotation of plant sequence data. <i>Plant, Cell and Environment</i> , 2014 , 37, 1250-8	8.4	373
578	Metabolic priming by a secreted fungal effector. <i>Nature</i> , 2011 , 478, 395-8	50.4	371
577	JUNGBRUNNEN1, a reactive oxygen species-responsive NAC transcription factor, regulates longevity in Arabidopsis. <i>Plant Cell</i> , 2012 , 24, 482-506	11.6	363
576	Integrated analysis of metabolite and transcript levels reveals the metabolic shifts that underlie tomato fruit development and highlight regulatory aspects of metabolic network behavior. <i>Plant Physiology</i> , 2006 , 142, 1380-96	6.6	361
575	Rewiring of the Fruit Metabolome in Tomato Breeding. <i>Cell</i> , 2018 , 172, 249-261.e12	56.2	337
574	Plant metabolomics: towards biological function and mechanism. <i>Trends in Plant Science</i> , 2006 , 11, 508-163.1	3.1	319
573	Arabidopsis seed development and germination is associated with temporally distinct metabolic switches. <i>Plant Physiology</i> , 2006 , 142, 839-54	6.6	305
572	Enzymes of glycolysis are functionally associated with the mitochondrion in Arabidopsis cells. <i>Plant Cell</i> , 2003 , 15, 2140-51	11.6	305
571	Enhanced photosynthetic performance and growth as a consequence of decreasing mitochondrial malate dehydrogenase activity in transgenic tomato plants. <i>Plant Physiology</i> , 2005 , 137, 611-22	6.6	300
570	Metabolic profiling of transgenic tomato plants overexpressing hexokinase reveals that the influence of hexose phosphorylation diminishes during fruit development. <i>Plant Physiology</i> , 2003 , 133, 84-99	6.6	298
569	Tomato aromatic amino acid decarboxylases participate in synthesis of the flavor volatiles 2-phenylethanol and 2-phenylacetaldehyde. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 8287-92	11.5	297
568	PageMan: an interactive ontology tool to generate, display, and annotate overview graphs for profiling experiments. <i>BMC Bioinformatics</i> , 2006 , 7, 535	3.6	276
567	The genome of the stress-tolerant wild tomato species <i>Solanum pennellii</i> . <i>Nature Genetics</i> , 2014 , 46, 1034-8	36.3	269
566	Transcriptome and metabolite profiling show that APETALA2a is a major regulator of tomato fruit ripening. <i>Plant Cell</i> , 2011 , 23, 923-41	11.6	269
565	Protein degradation - an alternative respiratory substrate for stressed plants. <i>Trends in Plant Science</i> , 2011 , 16, 489-98	13.1	261
564	Comparative transcriptomics reveals patterns of selection in domesticated and wild tomato. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, E2655-62	11.5	260
563	Molecular regulation of seed and fruit set. <i>Trends in Plant Science</i> , 2012 , 17, 656-65	13.1	250
562	Identification of the 2-hydroxyglutarate and isovaleryl-CoA dehydrogenases as alternative electron donors linking lysine catabolism to the electron transport chain of Arabidopsis mitochondria. <i>Plant Cell</i> , 2010 , 22, 1549-63	11.6	245

561	Systems biology of tomato fruit development: combined transcript, protein, and metabolite analysis of tomato transcription factor (nor, rin) and ethylene receptor (Nr) mutants reveals novel regulatory interactions. <i>Plant Physiology</i> , 2011 , 157, 405-25	6.6	245
560	PlaNet: combined sequence and expression comparisons across plant networks derived from seven species. <i>Plant Cell</i> , 2011 , 23, 895-910	11.6	245
559	Metabolic regulation underlying tomato fruit development. <i>Journal of Experimental Botany</i> , 2006 , 57, 1883-97	7	245
558	Recommendations for reporting metabolite data. <i>Plant Cell</i> , 2011 , 23, 2477-82	11.6	238
557	Deficiency of mitochondrial fumarase activity in tomato plants impairs photosynthesis via an effect on stomatal function. <i>Plant Journal</i> , 2007 , 50, 1093-106	6.9	236
556	Metabolic fluxes in an illuminated <i>Arabidopsis</i> rosette. <i>Plant Cell</i> , 2013 , 25, 694-714	11.6	226
555	Developmental stage specificity and the role of mitochondrial metabolism in the response of <i>Arabidopsis</i> leaves to prolonged mild osmotic stress. <i>Plant Physiology</i> , 2010 , 152, 226-44	6.6	223
554	Reconfiguration of the achene and receptacle metabolic networks during strawberry fruit development. <i>Plant Physiology</i> , 2008 , 148, 730-50	6.6	222
553	Molecular and Biochemical Triggers of Potato Tuber Development. <i>Plant Physiology</i> , 2001 , 127, 1459-1465	6.6	219
552	Glycolytic enzymes associate dynamically with mitochondria in response to respiratory demand and support substrate channeling. <i>Plant Cell</i> , 2007 , 19, 3723-38	11.6	215
551	Metabolic profiling of leaves and fruit of wild species tomato: a survey of the <i>Solanum lycopersicum</i> complex. <i>Journal of Experimental Botany</i> , 2005 , 56, 297-307	7	208
550	AtABCG29 is a monolignol transporter involved in lignin biosynthesis. <i>Current Biology</i> , 2012 , 22, 1207-1263	6.3	204
549	High-density kinetic analysis of the metabolomic and transcriptomic response of <i>Arabidopsis</i> to eight environmental conditions. <i>Plant Journal</i> , 2011 , 67, 869-84	6.9	204
548	Multi-level engineering facilitates the production of phenylpropanoid compounds in tomato. <i>Nature Communications</i> , 2015 , 6, 8635	17.4	203
547	Seed desiccation: a bridge between maturation and germination. <i>Trends in Plant Science</i> , 2010 , 15, 211-8	13.1	201
546	Regulatory features underlying pollination-dependent and -independent tomato fruit set revealed by transcript and primary metabolite profiling. <i>Plant Cell</i> , 2009 , 21, 1428-52	11.6	200
545	Shikimate and phenylalanine biosynthesis in the green lineage. <i>Frontiers in Plant Science</i> , 2013 , 4, 62	6.2	198
544	Comprehensive dissection of spatiotemporal metabolic shifts in primary, secondary, and lipid metabolism during developmental senescence in <i>Arabidopsis</i> . <i>Plant Physiology</i> , 2013 , 162, 1290-310	6.6	196

543	Mitochondrial uncoupling protein is required for efficient photosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 19587-92	11.5	196
542	Metabolic control and regulation of the tricarboxylic acid cycle in photosynthetic and heterotrophic plant tissues. <i>Plant, Cell and Environment</i> , 2012 , 35, 1-21	8.4	193
541	The critical role of Arabidopsis electron-transfer flavoprotein:ubiquinone oxidoreductase during dark-induced starvation. <i>Plant Cell</i> , 2005 , 17, 2587-600	11.6	191
540	Metabolic and phenotypic responses of greenhouse-grown maize hybrids to experimentally controlled drought stress. <i>Molecular Plant</i> , 2012 , 5, 401-17	14.4	186
539	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. <i>Plant Physiology</i> , 2009 , 150, 1204-18	6.6	185
538	Fructose 2,6-bisphosphate activates pyrophosphate: fructose-6-phosphate 1-phosphotransferase and increases triose phosphate to hexose phosphate cycling in heterotrophic cells. <i>Planta</i> , 2001 , 212, 250-63	4.7	184
537	Evolution, structure and function of mitochondrial carriers: a review with new insights. <i>Plant Journal</i> , 2011 , 66, 161-81	6.9	181
536	Antisense inhibition of the iron-sulphur subunit of succinate dehydrogenase enhances photosynthesis and growth in tomato via an organic acid-mediated effect on stomatal aperture. <i>Plant Cell</i> , 2011 , 23, 600-27	11.6	179
535	Analysis of PRODUCTION OF FLAVONOL GLYCOSIDES-dependent flavonol glycoside accumulation in Arabidopsis thaliana plants reveals MYB11-, MYB12- and MYB111-independent flavonol glycoside accumulation. <i>New Phytologist</i> , 2010 , 188, 985-1000	9.8	179
534	Sucrose transporter LeSUT1 and LeSUT2 inhibition affects tomato fruit development in different ways. <i>Plant Journal</i> , 2006 , 45, 180-92	6.9	179
533	Mode of inheritance of primary metabolic traits in tomato. <i>Plant Cell</i> , 2008 , 20, 509-23	11.6	177
532	Natural genetic variation for improving crop quality. <i>Current Opinion in Plant Biology</i> , 2006 , 9, 196-202	9.9	177
531	Reduced expression of aconitase results in an enhanced rate of photosynthesis and marked shifts in carbon partitioning in illuminated leaves of wild species tomato. <i>Plant Physiology</i> , 2003 , 133, 1322-35	6.6	175
530	Malate plays a crucial role in starch metabolism, ripening, and soluble solid content of tomato fruit and affects postharvest softening. <i>Plant Cell</i> , 2011 , 23, 162-84	11.6	174
529	Vitamin deficiencies in humans: can plant science help?. <i>Plant Cell</i> , 2012 , 24, 395-414	11.6	171
528	Adjustment of growth and central metabolism to a mild but sustained nitrogen-limitation in Arabidopsis. <i>Plant, Cell and Environment</i> , 2009 , 32, 300-18	8.4	170
527	Combining genetic diversity, informatics and metabolomics to facilitate annotation of plant gene function. <i>Nature Protocols</i> , 2010 , 5, 1210-27	18.8	169
526	Metabolic profiling during peach fruit development and ripening reveals the metabolic networks that underpin each developmental stage. <i>Plant Physiology</i> , 2011 , 157, 1696-710	6.6	169

525	The role of dynamic enzyme assemblies and substrate channelling in metabolic regulation. <i>Nature Communications</i> , 2018 , 9, 2136	17.4	166
524	Tissue- and cell-type specific transcriptome profiling of expanding tomato fruit provides insights into metabolic and regulatory specialization and cuticle formation. <i>Plant Cell</i> , 2011 , 23, 3893-910	11.6	162
523	Comparative analyses of C ₃ and C ₄ photosynthesis in developing leaves of maize and rice. <i>Nature Biotechnology</i> , 2014 , 32, 1158-65	44.5	160
522	A cytosolic pathway for the conversion of hydroxypyruvate to glycerate during photorespiration in Arabidopsis. <i>Plant Cell</i> , 2008 , 20, 2848-59	11.6	160
521	Current understanding of the pathways of flavonoid biosynthesis in model and crop plants. <i>Journal of Experimental Botany</i> , 2017 , 68, 4013-4028	7	157
520	High-Resolution Metabolic Phenotyping of Genetically and Environmentally Diverse Potato Tuber Systems. Identification of Phenocopies. <i>Plant Physiology</i> , 2001 , 127, 749-764	6.6	157
519	Starch content and yield increase as a result of altering adenylate pools in transgenic plants. <i>Nature Biotechnology</i> , 2002 , 20, 1256-60	44.5	156
518	De Novo Domestication: An Alternative Route toward New Crops for the Future. <i>Molecular Plant</i> , 2019 , 12, 615-631	14.4	155
517	The evolution of phenylpropanoid metabolism in the green lineage. <i>Critical Reviews in Biochemistry and Molecular Biology</i> , 2013 , 48, 123-52	8.7	155
516	Systemic analysis of inducible target of rapamycin mutants reveal a general metabolic switch controlling growth in Arabidopsis thaliana. <i>Plant Journal</i> , 2013 , 73, 897-909	6.9	153
515	The spatial organization of metabolism within the plant cell. <i>Annual Review of Plant Biology</i> , 2013 , 64, 723-46	30.7	153
514	Silencing of the mitochondrial ascorbate synthesizing enzyme L-galactono-1,4-lactone dehydrogenase affects plant and fruit development in tomato. <i>Plant Physiology</i> , 2007 , 145, 1408-22	6.6	153
513	Metabolite Profiles of Maize Leaves in Drought, Heat, and Combined Stress Field Trials Reveal the Relationship between Metabolism and Grain Yield. <i>Plant Physiology</i> , 2015 , 169, 2665-83	6.6	152
512	Dynamic plastid redox signals integrate gene expression and metabolism to induce distinct metabolic states in photosynthetic acclimation in Arabidopsis. <i>Plant Cell</i> , 2009 , 21, 2715-32	11.6	152
511	The Regulation of Essential Amino Acid Synthesis and Accumulation in Plants. <i>Annual Review of Plant Biology</i> , 2016 , 67, 153-78	30.7	147
510	Genome-Wide Association in Tomato Reveals 44 Candidate Loci for Fruit Metabolic Traits. <i>Plant Physiology</i> , 2014 , 165, 1120-1132	6.6	146
509	On the discordance of metabolomics with proteomics and transcriptomics: coping with increasing complexity in logic, chemistry, and network interactions scientific correspondence. <i>Plant Physiology</i> , 2012 , 158, 1139-45	6.6	146
508	Molecular regulation of fruit ripening. <i>Frontiers in Plant Science</i> , 2013 , 4, 198	6.2	143

507	Identification and mode of inheritance of quantitative trait loci for secondary metabolite abundance in tomato. <i>Plant Cell</i> , 2015 , 27, 485-512	11.6	140
506	De Novo Assembly of a New Accession Using Nanopore Sequencing. <i>Plant Cell</i> , 2017 , 29, 2336-2348	11.6	138
505	Reduced expression of succinyl-coenzyme A ligase can be compensated for by up-regulation of the gamma-aminobutyrate shunt in illuminated tomato leaves. <i>Plant Physiology</i> , 2007 , 145, 626-39	6.6	133
504	Thioredoxin, a master regulator of the tricarboxylic acid cycle in plant mitochondria. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, E1392-400	11.5	132
503	Integrative comparative analyses of transcript and metabolite profiles from pepper and tomato ripening and development stages uncovers species-specific patterns of network regulatory behavior. <i>Plant Physiology</i> , 2012 , 159, 1713-29	6.6	131
502	Molecular mechanisms of desiccation tolerance in the resurrection glacial relic <i>Haberlea rhodopensis</i> . <i>Cellular and Molecular Life Sciences</i> , 2013 , 70, 689-709	10.3	130
501	Natural occurring epialleles determine vitamin E accumulation in tomato fruits. <i>Nature Communications</i> , 2014 , 5, 3027	17.4	128
500	Molecular identification and functional characterization of <i>Arabidopsis thaliana</i> mitochondrial and chloroplastic NAD ⁺ carrier proteins. <i>Journal of Biological Chemistry</i> , 2009 , 284, 31249-59	5.4	126
499	Antisense inhibition of plastidial phosphoglucomutase provides compelling evidence that potato tuber amyloplasts import carbon from the cytosol in the form of glucose-6-phosphate. <i>Plant Journal</i> , 2000 , 23, 43-53	6.9	123
498	The Unprecedented Versatility of the Plant? Thioredoxin System. <i>Trends in Plant Science</i> , 2017 , 22, 249-263	3.1	122
497	Haplotype-resolved sweet potato genome traces back its hexaploidization history. <i>Nature Plants</i> , 2017 , 3, 696-703	11.5	121
496	A bypass of sucrose synthase leads to low internal oxygen and impaired metabolic performance in growing potato tubers. <i>Plant Physiology</i> , 2003 , 132, 2058-72	6.6	121
495	Network analysis of enzyme activities and metabolite levels and their relationship to biomass in a large panel of <i>Arabidopsis</i> accessions. <i>Plant Cell</i> , 2010 , 22, 2872-93	11.6	119
494	Flavonoids are determinants of freezing tolerance and cold acclimation in <i>Arabidopsis thaliana</i> . <i>Scientific Reports</i> , 2016 , 6, 34027	4.9	118
493	Glycine decarboxylase controls photosynthesis and plant growth. <i>FEBS Letters</i> , 2012 , 586, 3692-7	3.8	117
492	PLGG1, a plastidic glycolate glycerate transporter, is required for photorespiration and defines a unique class of metabolite transporters. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 3185-90	11.5	116
491	The mitochondrial electron transfer flavoprotein complex is essential for survival of <i>Arabidopsis</i> in extended darkness. <i>Plant Journal</i> , 2006 , 47, 751-60	6.9	116
490	Kinetics of labelling of organic and amino acids in potato tubers by gas chromatography-mass spectrometry following incubation in (13)C labelled isotopes. <i>Plant Journal</i> , 2004 , 39, 668-79	6.9	113

489	Fruit carbohydrate metabolism in an introgression line of tomato with increased fruit soluble solids. <i>Plant and Cell Physiology</i> , 2005 , 46, 425-37	4.9	113
488	Conversion of MapMan to allow the analysis of transcript data from Solanaceous species: effects of genetic and environmental alterations in energy metabolism in the leaf. <i>Plant Molecular Biology</i> , 2006 , 60, 773-92	4.6	110
487	Metabolic variation between japonica and indica rice cultivars as revealed by non-targeted metabolomics. <i>Scientific Reports</i> , 2014 , 4, 5067	4.9	109
486	Global analysis of the role of autophagy in cellular metabolism and energy homeostasis in Arabidopsis seedlings under carbon starvation. <i>Plant Cell</i> , 2015 , 27, 306-22	11.6	106
485	Diurnal changes of polysome loading track sucrose content in the rosette of wild-type arabidopsis and the starchless pgm mutant. <i>Plant Physiology</i> , 2013 , 162, 1246-65	6.6	106
484	Genetic Determinants of the Network of Primary Metabolism and Their Relationships to Plant Performance in a Maize Recombinant Inbred Line Population. <i>Plant Cell</i> , 2015 , 27, 1839-56	11.6	105
483	Metabolic control of redox and redox control of metabolism in plants. <i>Antioxidants and Redox Signaling</i> , 2014 , 21, 1389-421	8.4	105
482	Regulation of the mitochondrial tricarboxylic acid cycle. <i>Current Opinion in Plant Biology</i> , 2013 , 16, 335-43	9.9	105
481	Nonsupervised construction and application of mass spectral and retention time index libraries from time-of-flight gas chromatography-mass spectrometry metabolite profiles. <i>Methods in Molecular Biology</i> , 2007 , 358, 19-38	1.4	104
480	The Structure and Function of Major Plant Metabolite Modifications. <i>Molecular Plant</i> , 2019 , 12, 899-919	14.4	103
479	Altering trehalose-6-phosphate content in transgenic potato tubers affects tuber growth and alters responsiveness to hormones during sprouting. <i>Plant Physiology</i> , 2011 , 156, 1754-71	6.6	103
478	Exploring the Diversity of Plant Metabolism. <i>Trends in Plant Science</i> , 2019 , 24, 83-98	13.1	103
477	Overexpression of the vascular brassinosteroid receptor BRL3 confers drought resistance without penalizing plant growth. <i>Nature Communications</i> , 2018 , 9, 4680	17.4	103
476	Multiple strategies to prevent oxidative stress in Arabidopsis plants lacking the malate valve enzyme NADP-malate dehydrogenase. <i>Journal of Experimental Botany</i> , 2012 , 63, 1445-59	7	102
475	Cytosolic pyruvate,orthophosphate dikinase functions in nitrogen remobilization during leaf senescence and limits individual seed growth and nitrogen content. <i>Plant Journal</i> , 2010 , 62, 641-52	6.9	100
474	Mitochondrial Dihydrolipoyl Dehydrogenase Activity Shapes Photosynthesis and Photorespiration of Arabidopsis thaliana. <i>Plant Cell</i> , 2015 , 27, 1968-84	11.6	99
473	Relationships of Leaf Net Photosynthesis, Stomatal Conductance, and Mesophyll Conductance to Primary Metabolism: A Multispecies Meta-Analysis Approach. <i>Plant Physiology</i> , 2016 , 171, 265-79	6.6	99
472	Differentially evolved glucosyltransferases determine natural variation of rice flavone accumulation and UV-tolerance. <i>Nature Communications</i> , 2017 , 8, 1975	17.4	99

471	Combined transcription factor profiling, microarray analysis and metabolite profiling reveals the transcriptional control of metabolic shifts occurring during tomato fruit development. <i>Plant Journal</i> , 2011 , 68, 999-1013	6.9	98
470	Heard it through the grapevine? ABA and sugar cross-talk: the ASR story. <i>Trends in Plant Science</i> , 2004 , 9, 57-9	13.1	96
469	Quantifying protein synthesis and degradation in Arabidopsis by dynamic ¹³ CO ₂ labeling and analysis of enrichment in individual amino acids in their free pools and in protein. <i>Plant Physiology</i> , 2015 , 168, 74-93	6.6	95
468	Metabolic profiling of a mapping population exposes new insights in the regulation of seed metabolism and seed, fruit, and plant relations. <i>PLoS Genetics</i> , 2012 , 8, e1002612	6	94
467	Alteration of organic acid metabolism in Arabidopsis overexpressing the maize C4 NADP-malic enzyme causes accelerated senescence during extended darkness. <i>Plant Physiology</i> , 2007 , 145, 640-52	6.6	94
466	Opportunities for improving leaf water use efficiency under climate change conditions. <i>Plant Science</i> , 2014 , 226, 108-19	5.3	93
465	Targeting mitochondrial metabolism and machinery as a means to enhance photosynthesis. <i>Plant Physiology</i> , 2011 , 155, 101-7	6.6	92
464	Targeted enhancement of glutamate-to- α -aminobutyrate conversion in Arabidopsis seeds affects carbon-nitrogen balance and storage reserves in a development-dependent manner. <i>Plant Physiology</i> , 2011 , 157, 1026-42	6.6	91
463	Tomato fruit photosynthesis is seemingly unimportant in primary metabolism and ripening but plays a considerable role in seed development. <i>Plant Physiology</i> , 2011 , 157, 1650-63	6.6	91
462	Proteogenomic analysis reveals alternative splicing and translation as part of the abscisic acid response in Arabidopsis seedlings. <i>Plant Journal</i> , 2017 , 91, 518-533	6.9	90
461	An In Vivo Perspective of the Role(s) of the Alternative Oxidase Pathway. <i>Trends in Plant Science</i> , 2018 , 23, 206-219	13.1	90
460	Manipulating photorespiration to increase plant productivity: recent advances and perspectives for crop improvement. <i>Journal of Experimental Botany</i> , 2016 , 67, 2977-88	7	90
459	Metabolomics 20 years on: what have we learned and what hurdles remain?. <i>Plant Journal</i> , 2018 , 94, 933-942	6.9	90
458	The form of nitrogen nutrition affects resistance against <i>Pseudomonas syringae</i> pv. <i>phaseolicola</i> in tobacco. <i>Journal of Experimental Botany</i> , 2013 , 64, 553-68	7	90
457	Robin: an intuitive wizard application for R-based expression microarray quality assessment and analysis. <i>Plant Physiology</i> , 2010 , 153, 642-51	6.6	90
456	Characterization of a recently evolved flavonol-phenylacyltransferase gene provides signatures of natural light selection in Brassicaceae. <i>Nature Communications</i> , 2016 , 7, 12399	17.4	90
455	Metabolic analysis of kiwifruit (<i>Actinidia deliciosa</i>) berries from extreme genotypes reveals hallmarks for fruit starch metabolism. <i>Journal of Experimental Botany</i> , 2013 , 64, 5049-63	7	88
454	Induction of the AOX1D isoform of alternative oxidase in <i>A. thaliana</i> T-DNA insertion lines lacking isoform AOX1A is insufficient to optimize photosynthesis when treated with antimycin A. <i>Molecular Plant</i> , 2009 , 2, 284-97	14.4	88

453	Combined transcript and metabolite profiling of Arabidopsis leaves reveals fundamental effects of the thiol-disulfide status on plant metabolism. <i>Plant Physiology</i> , 2006 , 141, 412-22	6.6	88
452	The Arabidopsis onset of leaf death5 mutation of quinolinate synthase affects nicotinamide adenine dinucleotide biosynthesis and causes early ageing. <i>Plant Cell</i> , 2008 , 20, 2909-25	11.6	87
451	A topological map of the compartmentalized Arabidopsis thaliana leaf metabolome. <i>PLoS ONE</i> , 2011 , 6, e17806	3.7	84
450	Mass spectrometry-based metabolomics: a guide for annotation, quantification and best reporting practices. <i>Nature Methods</i> , 2021 , 18, 747-756	21.6	83
449	Serine acts as a metabolic signal for the transcriptional control of photorespiration-related genes in Arabidopsis. <i>Plant Physiology</i> , 2013 , 162, 379-89	6.6	82
448	Identification of genes in the phenylalanine metabolic pathway by ectopic expression of a MYB transcription factor in tomato fruit. <i>Plant Cell</i> , 2011 , 23, 2738-53	11.6	82
447	Toward the storage metabolome: profiling the barley vacuole. <i>Plant Physiology</i> , 2011 , 157, 1469-82	6.6	82
446	Vitamin B1 biosynthesis in plants requires the essential iron sulfur cluster protein, THIC. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 19637-42	11.5	82
445	Ethylene is involved in strawberry fruit ripening in an organ-specific manner. <i>Journal of Experimental Botany</i> , 2013 , 64, 4421-39	7	81
444	Revisiting the Basal Role of ABA - Roles Outside of Stress. <i>Trends in Plant Science</i> , 2019 , 24, 625-635	13.1	79
443	Protein-protein interactions and metabolite channelling in the plant tricarboxylic acid cycle. <i>Nature Communications</i> , 2017 , 8, 15212	17.4	78
442	The life of plant mitochondrial complex I. <i>Mitochondrion</i> , 2014 , 19 Pt B, 295-313	4.9	78
441	Natural variation in flavonol and anthocyanin metabolism during cold acclimation in Arabidopsis thaliana accessions. <i>Plant, Cell and Environment</i> , 2015 , 38, 1658-72	8.4	77
440	Complete Mitochondrial Complex I Deficiency Induces an Up-Regulation of Respiratory Fluxes That Is Abolished by Traces of Functional Complex I. <i>Plant Physiology</i> , 2015 , 168, 1537-49	6.6	76
439	Decreased Nucleotide and Expression Diversity and Modified Coexpression Patterns Characterize Domestication in the Common Bean. <i>Plant Cell</i> , 2014 , 26, 1901-1912	11.6	76
438	Impact of the carbon and nitrogen supply on relationships and connectivity between metabolism and biomass in a broad panel of Arabidopsis accessions. <i>Plant Physiology</i> , 2013 , 162, 347-63	6.6	76
437	The Genetics of Plant Metabolism. <i>Annual Review of Genetics</i> , 2017 , 51, 287-310	14.5	75
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435	Regulation of Primary Metabolism in Response to Low Oxygen Availability as Revealed by Carbon and Nitrogen Isotope Redistribution. <i>Plant Physiology</i> , 2016 , 170, 43-56	6.6	72
434	Gibberellin biosynthesis and signalling during development of the strawberry receptacle. <i>New Phytologist</i> , 2011 , 191, 376-390	9.8	72
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432	The Photorespiratory Metabolite 2-Phosphoglycolate Regulates Photosynthesis and Starch Accumulation in Arabidopsis. <i>Plant Cell</i> , 2017 , 29, 2537-2551	11.6	71
431	The Role of SWI/SNF Chromatin Remodeling Complexes in Hormone Crosstalk. <i>Trends in Plant Science</i> , 2016 , 21, 594-608	13.1	71
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429	The NAC Transcription Factor SINAP2 Regulates Leaf Senescence and Fruit Yield in Tomato. <i>Plant Physiology</i> , 2018 , 177, 1286-1302	6.6	71
428	Mapping the Arabidopsis Metabolic Landscape by Untargeted Metabolomics at Different Environmental Conditions. <i>Molecular Plant</i> , 2018 , 11, 118-134	14.4	70
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424	NAD-dependent isocitrate dehydrogenase mutants of Arabidopsis suggest the enzyme is not limiting for nitrogen assimilation. <i>Plant Physiology</i> , 2007 , 144, 1546-58	6.6	69
423	High-Throughput CRISPR/Cas9 Mutagenesis Streamlines Trait Gene Identification in Maize. <i>Plant Cell</i> , 2020 , 32, 1397-1413	11.6	68
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4 ¹⁴	Decreased mitochondrial activities of malate dehydrogenase and fumarase in tomato lead to altered root growth and architecture via diverse mechanisms. <i>Plant Physiology</i> , 2009 , 149, 653-69	6.6	65
4 ¹³	Catabolism of branched chain amino acids supports respiration but not volatile synthesis in tomato fruits. <i>Molecular Plant</i> , 2012 , 5, 366-75	14.4	65
4 ¹²	Tobacco guard cells fix CO ₂ by both Rubisco and PEPcase while sucrose acts as a substrate during light-induced stomatal opening. <i>Plant, Cell and Environment</i> , 2015 , 38, 2353-71	8.4	64
4 ¹¹	De novo amino acid biosynthesis in potato tubers is regulated by sucrose levels. <i>Plant Physiology</i> , 2003 , 133, 683-92	6.6	64
4 ¹⁰	Roles of sucrose in guard cell regulation. <i>New Phytologist</i> , 2016 , 211, 809-18	9.8	64
4 ⁰⁹	Evolutionary Metabolomics Reveals Domestication-Associated Changes in Tetraploid Wheat Kernels. <i>Molecular Biology and Evolution</i> , 2016 , 33, 1740-53	8.3	64
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4 ⁰⁶	Photorespiration Is Crucial for Dynamic Response of Photosynthetic Metabolism and Stomatal Movement to Altered CO Availability. <i>Molecular Plant</i> , 2017 , 10, 47-61	14.4	61
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4 ⁰⁴	Mild reductions in mitochondrial NAD-dependent isocitrate dehydrogenase activity result in altered nitrate assimilation and pigmentation but do not impact growth. <i>Molecular Plant</i> , 2010 , 3, 156-73	14.4	61
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4 ⁰²	ADP-glucose pyrophosphorylase-deficient pea embryos reveal specific transcriptional and metabolic changes of carbon-nitrogen metabolism and stress responses. <i>Plant Physiology</i> , 2009 , 149, 395-411	6.6	60
4 ⁰¹	Sulfur deficiency-induced repressor proteins optimize glucosinolate biosynthesis in plants. <i>Science Advances</i> , 2016 , 2, e1601087	14.3	59
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