Toshihiro Obata

List of Publications by Year
in descending order

86	6,005	40	74
papers	citations	h-index	g-index
		76326	76900

95	95	95	8070
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The use of metabolomics to dissect plant responses to abiotic stresses. Cellular and Molecular Life Sciences, 2012, 69, 3225-3243.	5.4	680
2	Identification of the 2-Hydroxyglutarate and Isovaleryl-CoA Dehydrogenases as Alternative Electron Donors Linking Lysine Catabolism to the Electron Transport Chain of <i>Arabidopsis</i> Mitochondria Â. Plant Cell, 2010, 22, 1549-1563.	6.6	296
3	SALT-RESPONSIVE ERF1 Regulates Reactive Oxygen Species-Dependent Signaling during the Initial Response to Salt Stress in Rice. Plant Cell, 2013, 25, 2115-2131.	6.6	289
4	Developmental Stage Specificity and the Role of Mitochondrial Metabolism in the Response of Arabidopsis Leaves to Prolonged Mild Osmotic Stress Â Â Â. Plant Physiology, 2009, 152, 226-244.	4.8	269
5	Metabolite profiles of maize leaves in drought, heat and combined stress field trials reveal the relationship between metabolism and grain yield. Plant Physiology, 2015, 169, pp.01164.2015.	4.8	233
6	Thioredoxin, a master regulator of the tricarboxylic acid cycle in plant mitochondria. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E1392-400.	7.1	179
7	Molecular mechanisms of desiccation tolerance in the resurrection glacial relic Haberlea rhodopensis. Cellular and Molecular Life Sciences, 2013, 70, 689-709.	5.4	168
8	The Metabolic Response of Arabidopsis Roots to Oxidative Stress is Distinct from that of Heterotrophic Cells in Culture and Highlights a Complex Relationship between the Levels of Transcripts, Metabolites, and Flux. Molecular Plant, 2009, 2, 390-406.	8.3	155
9	Regulation of the mitochondrial tricarboxylic acid cycle. Current Opinion in Plant Biology, 2013, 16, 335-343.	7.1	141
10	<i>PLGG1</i> , a plastidic glycolate glycerate transporter, is required for photorespiration and defines a unique class of metabolite transporters. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3185-3190.	7.1	141
11	Rice Shaker Potassium Channel OsKAT1 Confers Tolerance to Salinity Stress on Yeast and Rice Cells. Plant Physiology, 2007, 144, 1978-1985.	4.8	138
12	Diurnal Changes of Polysome Loading Track Sucrose Content in the Rosette of Wild-Type Arabidopsis and the Starchless <i>pgm</i> Mutant Â Â. Plant Physiology, 2013, 162, 1246-1265.	4.8	133
13	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.	4.8	132
14	Transcriptional Orchestration of the Global Cellular Response of a Model Pennate Diatom to Diel Light Cycling under Iron Limitation. PLoS Genetics, 2016, 12, e1006490.	3.5	129
15	Complete Mitochondrial Complex I Deficiency Induces an Up-Regulation of Respiratory Fluxes That Is Abolished by Traces of Functional Complex I. Plant Physiology, 2015, 168, 1537-1549.	4.8	113
16	Regulation of Primary Metabolism in Response to Low Oxygen Availability as Revealed by Carbon and Nitrogen Isotope Redistribution. Plant Physiology, 2016, 170, 43-56.	4.8	105
17	Metabolite pools and carbon flow during C₄photosynthesis in maize:¹³CO₂labeling kinetics and cell type fractionation. Journal of Experimental Botany, 2017, 68, 283-298.	4.8	104
18	The life of plant mitochondrial complex I. Mitochondrion, 2014, 19, 295-313.	3.4	103

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19	Protein-protein interactions and metabolite channelling in the plant tricarboxylic acid cycle. Nature Communications, 2017, 8, 15212.	12.8	103
20	Carbon balance and sourceâ€sink metabolic changes in winter wheat exposed to high nightâ€time temperature. Plant, Cell and Environment, 2019, 42, 1233-1246.	5.7	91
21	Investigating mixotrophic metabolism in the model diatom <i>Phaeodactylum tricornutum</i>. Philosophical Transactions of the Royal Society B: Biological Sciences, 2017, 372, 20160404.	4.0	85
22	The Role of Abscisic Acid Signaling in Maintaining the Metabolic Balance Required for Arabidopsis Growth under Nonstress Conditions. Plant Cell, 2019, 31, 84-105.	6.6	84
23	Uncoupling proteins 1 and 2 (UCP1 and UCP2) from Arabidopsis thaliana are mitochondrial transporters of aspartate, glutamate, and dicarboxylates. Journal of Biological Chemistry, 2018, 293, 4213-4227.	3.4	81
24	The Extra-Pathway Interactome of the TCA Cycle: Expected and Unexpected Metabolic Interactions. Plant Physiology, 2018, 177, 966-979.	4.8	81
25	<i><scp>TIME FOR COFFEE</scp></i> is an essential component in the maintenance of metabolic homeostasis in <i><scp>A</scp>rabidopsis thaliana</i>. Plant Journal, 2013, 76, 188-200.	5.7	79
26	<scp>MULTIPASS</scp>, a rice R2R3â€type <scp>MYB</scp> transcription factor, regulates adaptive growth by integrating multiple hormonal pathways. Plant Journal, 2013, 76, 258-273.	5.7	74
27	Smart PEGylation of Trypsin. Biomacromolecules, 2010, 11, 2130-2135.	5.4	67
28	Alteration of mitochondrial protein complexes in relation to metabolic regulation under short-term oxidative stress in Arabidopsis seedlings. Phytochemistry, 2011, 72, 1081-1091.	2.9	66
29	Downregulation of the Î´-Subunit Reduces Mitochondrial ATP Synthase Levels, Alters Respiration, and Restricts Growth and Gametophyte Development in <i>Arabidopsis</i>. Plant Cell, 2012, 24, 2792-2811.	6.6	66
30	The transcription factor bZIP14 regulates the TCA cycle in the diatom <i>Phaeodactylum tricornutum</i>. EMBO Journal, 2017, 36, 1559-1576.	7.8	64
31	The Central Carbon and Energy Metabolism of Marine Diatoms. Metabolites, 2013, 3, 325-346.	2.9	59
32	On the metabolic interactions of (photo)respiration. Journal of Experimental Botany, 2016, 67, 3003-3014.	4.8	59
33	Growth rate correlates negatively with protein turnover in Arabidopsis accessions. Plant Journal, 2017, 91, 416-429.	5.7	58
34	Metabolic recovery of Arabidopsis thaliana roots following cessation of oxidative stress. Metabolomics, 2012, 8, 143-153.	3.0	57
35	Comparative metabolic profiling of Haberlea rhodopensis, Thellungiella halophyla, and Arabidopsis thaliana exposed to low temperature. Frontiers in Plant Science, 2013, 4, 499.	3.6	57
36	Selective Homo- and Heteromer Interactions between the Multiple Organellar RNA Editing Factor (MORF) Proteins in Arabidopsis thaliana. Journal of Biological Chemistry, 2015, 290, 6445-6456.	3.4	53

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37	Metabolons in plant primary and secondary metabolism. Phytochemistry Reviews, 2019, 18, 1483-1507.	6.5	52
38	Metabolic Dynamics of Developing Rice Seeds Under High Night-Time Temperature Stress. Frontiers in Plant Science, 2019, 10, 1443.	3.6	50
39	<i>MADS78</i> and <i>MADS79</i> Are Essential Regulators of Early Seed Development in Rice. Plant Physiology, 2020, 182, 933-948.	4.8	49
40	Metabolite profiles reveal interspecific variation in operation of the Calvinâ€"Benson cycle in both C4 and C3 plants. Journal of Experimental Botany, 2019, 70, 1843-1858.	4.8	47
41	A Novel Eukaryotic Selenoprotein in the Haptophyte Alga Emiliania huxleyi. Journal of Biological Chemistry, 2005, 280, 18462-18468.	3.4	46
42	The conserved domain in MORF proteins has distinct affinities to the PPR and E elements in PPR RNA editing factors. Biochimica Et Biophysica Acta - Gene Regulatory Mechanisms, 2017, 1860, 813-828.	1.9	42
43	Systems analysis of metabolic phenotypes: what have we learnt?. Trends in Plant Science, 2014, 19, 222-230.	8.8	40
44	Antisense Suppression of the Small Chloroplast Protein CP12 in Tobacco Alters Carbon Partitioning and Severely Restricts Growth Â. Plant Physiology, 2011, 157, 620-631.	4.8	39
45	Chloroplast competition is controlled by lipid biosynthesis in evening primroses. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5665-5674.	7.1	39
46	A Reciprocal ¹⁵N-Labeling Proteomic Analysis of Expanding <i>Arabidopsis</i> Leaves Subjected to Osmotic Stress Indicates Importance of Mitochondria in Preserving Plastid Functions. Journal of Proteome Research, 2011, 10, 1018-1029.	3.7	38
47	Bioconcentration Mechanism of Selenium by a Coccolithophorid, Emiliania huxleyi. Plant and Cell Physiology, 2004, 45, 1434-1441.	3.1	35
48	The Lack of Mitochondrial Thioredoxin TRXo1 Affects In Vivo Alternative Oxidase Activity and Carbon Metabolism under Different Light Conditions. Plant and Cell Physiology, 2019, 60, 2369-2381.	3.1	35
49	Assessing durum wheat ear and leaf metabolomes in the field through hyperspectral data. Plant Journal, 2020, 102, 615-630.	5.7	35
50	The mitochondrial <scp>NAD</scp>⁺ transporter (<scp>NDT</scp>1) plays important roles in cellular <scp>NAD</scp>⁺ homeostasis in <i>Arabidopsis thaliana</i>. Plant Journal, 2019, 100, 487-504.	5.7	34
51	Functional characterization and organ distribution of three mitochondrial ATPâ€"Mg/Pi carriers in Arabidopsis thaliana. Biochimica Et Biophysica Acta - Bioenergetics, 2015, 1847, 1220-1230.	1.0	33
52	Kresoxim-methyl primes<i>Medicago truncatula</i>plants against abiotic stress factors via altered reactive oxygen and nitrogen species signalling leading to downstream transcriptional and metabolic readjustment. Journal of Experimental Botany, 2016, 67, 1259-1274.	4.8	33
53	Gas-Chromatography Mass-Spectrometry (GC-MS) Based Metabolite Profiling Reveals Mannitol as a Major Storage Carbohydrate in the Coccolithophorid Alga Emiliania huxleyi. Metabolites, 2013, 3, 168-184.	2.9	32
54	Metabolic responses of Arabidopsis thaliana roots and leaves to sublethal cadmium exposure are differentially influenced by ALTERNATIVE OXIDASE1a. Environmental and Experimental Botany, 2016, 124, 64-78.	4.2	32

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55	Vision, challenges and opportunities for a Plant Cell Atlas. ELife, 2021, 10, .	6.0	31
56	Starch Granule Re-Structuring by Starch Branching Enzyme and Glucan Water Dikinase Modulation Affects Caryopsis Physiology and Metabolism. PLoS ONE, 2016, 11, e0149613.	2.5	30
57	Inhibition of TOR Represses Nutrient Consumption, Which Improves Greening after Extended Periods of Etiolation. Plant Physiology, 2018, 178, 101-117.	4.8	27
58	Metabolic profiles of six African cultivars of cassava (<i>Manihot esculenta</i> Crantz) highlight bottlenecks of root yield. Plant Journal, 2020, 102, 1202-1219.	5.7	27
59	Appropriate Thiamin Pyrophosphate Levels Are Required for Acclimation to Changes in Photoperiod. Plant Physiology, 2019, 180, 185-197.	4.8	24
60	Leveraging metabolomics for functional investigations in sequenced marine diatoms. Trends in Plant Science, 2012, 17, 395-403.	8.8	23
61	A sucrose transporterâ€interacting protein disulphide isomerase affects redox homeostasis and links sucrose partitioning with abiotic stress tolerance. Plant, Cell and Environment, 2016, 39, 1366-1380.	5.7	21
62	Synthetic analogues of 2-oxo acids discriminate metabolic contribution of the 2-oxoglutarate and 2-oxoadipate dehydrogenases in mammalian cells and tissues. Scientific Reports, 2020, 10, 1886.	3.3	21
63	Allelic differences in a vacuolar invertase affect Arabidopsis growth at early plant development. Journal of Experimental Botany, 2016, 67, 4091-4103.	4.8	20
64	Metabolome Profiling Supports the Key Role of the Spike in Wheat Yield Performance. Cells, 2020, 9, 1025.	4.1	20
65	Downregulation of a Mitochondrial NAD+ Transporter (NDT2) Alters Seed Production and Germination in Arabidopsis. Plant and Cell Physiology, 2020, 61, 897-908.	3.1	19
66	NTRC Plays a Crucial Role in Starch Metabolism, Redox Balance, and Tomato Fruit Growth. Plant Physiology, 2019, 181, 976-992.	4.8	18
67	Consequences of induced brassinosteroid deficiency in Arabidopsis leaves. BMC Plant Biology, 2014, 14, 309.	3.6	17
68	Cassava Metabolomics and Starch Quality. Current Protocols in Plant Biology, 2019, 4, e20102.	2.8	16
69	Toward an evaluation of metabolite channeling in vivo. Current Opinion in Biotechnology, 2020, 64, 55-61.	6.6	16
70	A Novel Mechanism, Linked to Cell Density, Largely Controls Cell Division in <i>Synechocystis</i>. Plant Physiology, 2017, 174, 2166-2182.	4.8	15
71	Enhanced Nâ€metabolites, <scp>ABA</scp> and <scp>IAA</scp>â€conjugate in anthers instigate heat sensitivity in spring wheat. Physiologia Plantarum, 2020, 169, 501-514.	5.2	15
72	Systems biology reveals key tissue-specific metabolic and transcriptional signatures involved in the response of Medicago truncatula plant genotypes to salt stress. Computational and Structural Biotechnology Journal, 2021, 19, 2133-2147.	4.1	15

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73	Decreasing the Mitochondrial Synthesis of Malate in Potato Tubers Does Not Affect Plastidial Starch Synthesis, Suggesting That the Physiological Regulation of ADPglucose Pyrophosphorylase Is Context Dependent Â Â. Plant Physiology, 2012, 160, 2227-2238.	4.8	14
74	Biochemical and functional characterization of a mitochondrial citrate carrier in <i>Arabidopsis thaliana</i>. Biochemical Journal, 2020, 477, 1759-1777.	3.7	13
75	A novel seed plants gene regulates oxidative stress tolerance in Arabidopsis thaliana. Cellular and Molecular Life Sciences, 2020, 77, 705-718.	5.4	11
76	Analysis of Kinetic Labeling of Amino Acids and Organic Acids by GC-MS. Methods in Molecular Biology, 2014, 1090, 107-119.	0.9	9
77	Biosynthesis of the Essential Respiratory Cofactor Ubiquinone from Phenylalanine in Plants. Molecular Plant, 2014, 7, 1403-1405.	8.3	8
78	Coupling Radiotracer Experiments with Chemical Fractionation for the Estimation of Respiratory Fluxes. Methods in Molecular Biology, 2017, 1670, 17-30.	0.9	8
79	Association of the malate dehydrogenase-citrate synthase metabolon is modulated by intermediates of the Krebs tricarboxylic acid cycle. Scientific Reports, 2021, 11, 18770.	3.3	8
80	Genome-wide mediation analysis: an empirical study to connect phenotype with genotype via intermediate transcriptomic data in maize. Genetics, 2022, 221, .	2.9	8
81	Metabolic diversity in tuber tissues of native ChiloÃ© potatoes and commercial cultivars of Solanum tuberosum ssp. tuberosum L.. Metabolomics, 2018, 14, 138.	3.0	7
82	Combined drought and virus infection trigger aspects of respiratory metabolism related to grapevine physiological responses. Journal of Plant Physiology, 2018, 231, 19-30.	3.5	7
83	Dissecting metabolic flux in C4 plants: experimental and theoretical approaches. Phytochemistry Reviews, 2018, 17, 1253-1274.	6.5	6
84	Phytochromes control metabolic flux, and their action at the seedling stage determines adult plant biomass. Journal of Experimental Botany, 2021, 72, 3263-3278.	4.8	6
85	An L,L-diaminopimelate aminotransferase mutation leads to metabolic shifts and growth inhibition in Arabidopsis. Journal of Experimental Botany, 2018, 69, 5489-5506.	4.8	5
86	Quantification of Photorespiratory Intermediates by Mass Spectrometry-Based Approaches. Methods in Molecular Biology, 2017, 1653, 97-104.	0.9	2