Ryo Nakabayashi

List of Publications by Year
in descending order

86 papers	6,545 citations	94269 37 h-index	69108 77 g-index
91 all docs	91 docs citations	91 times ranked	8070 citing authors

#	Article	IF	Citations
1	Enhancement of oxidative and drought tolerance in Arabidopsis by overaccumulation of antioxidant flavonoids. Plant Journal, 2014, 77, 367-379.	2.8	911
2	The flavonoid biosynthetic pathway in Arabidopsis: Structural and genetic diversity. Plant Physiology and Biochemistry, 2013, 72, 21-34.	2.8	637
3	Hydrogen Rearrangement Rules: Computational MS/MS Fragmentation and Structure Elucidation Using MS-FINDER Software. Analytical Chemistry, 2016, 88, 7946-7958.	3.2	441
4	Comprehensive Flavonol Profiling and Transcriptome Coexpression Analysis Leading to Decoding Geneâ€“Metabolite Correlations inArabidopsisÂ Â. Plant Cell, 2008, 20, 2160-2176.	3.1	347
5	Integrated metabolomics for abiotic stress responses in plants. Current Opinion in Plant Biology, 2015, 24, 10-16.	3.5	319
6	RIKEN tandem mass spectral database (ReSpect) for phytochemicals: A plant-specific MS/MS-based data resource and database. Phytochemistry, 2012, 82, 38-45.	1.4	284
7	The Origin and Evolution of Plant Flavonoid Metabolism. Frontiers in Plant Science, 2019, 10, 943.	1.7	269
8	A cheminformatics approach to characterize metabolomes in stable-isotope-labeled organisms. Nature Methods, 2019, 16, 295-298.	9.0	194
9	Dissection of genotypeâ€“phenotype associations in rice grains using metabolome quantitative trait loci analysis. Plant Journal, 2012, 70, 624-636.	2.8	173
10	Two glycosyltransferases involved in anthocyanin modification delineated by transcriptome independent component analysis in Arabidopsis thaliana. Plant Journal, 2012, 69, 154-167.	2.8	164
11	Metabolomeâ€genomeâ€wide association study dissects genetic architecture for generating natural variation in rice secondary metabolism. Plant Journal, 2015, 81, 13-23.	2.8	152
12	Characterization of a recently evolved flavonol-phenylacyltransferase gene provides signatures of natural light selection in Brassicaceae. Nature Communications, 2016, 7, 12399.	5.8	145
13	Alternation of flavonoid accumulation under drought stress inArabidopsis thaliana. Plant Signaling and Behavior, 2014, 9, e29518.	1.2	129
14	Using Metabolomic Approaches to Explore Chemical Diversity in Rice. Molecular Plant, 2015, 8, 58-67.	3.9	119
15	Jasmonate-Responsive ERF Transcription Factors Regulate Steroidal Glycoalkaloid Biosynthesis in Tomato. Plant and Cell Physiology, 2016, 57, 961-975.	1.5	112
16	Metabolomics-oriented isolation and structure elucidation of 37 compounds including two anthocyanins from Arabidopsis thaliana. Phytochemistry, 2009, 70, 1017-1029.	1.4	111
17	Metabolomics for unknown plant metabolites. Analytical and Bioanalytical Chemistry, 2013, 405, 5005-5011.	1.9	93
18	Coupling Deep Transcriptome Analysis with Untargeted Metabolic Profiling in Ophiorrhiza pumila to Further the Understanding of the Biosynthesis of the Anti-Cancer Alkaloid Camptothecin and Anthraquinones. Plant and Cell Physiology, 2013, 54, 686-696.	1.5	88

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19	A flavonoid 3â€Oâ€glucoside:2â€³â€Oâ€glucosyltransferase responsible for terminal modification of pollenâ€specific flavonols in <scp>A</scp>rabidopsis thaliana. Plant Journal, 2014, 79, 769-782.	2.8	79
20	Combination of Liquid Chromatographyâ€“Fourier Transform Ion Cyclotron Resonance-Mass Spectrometry with ¹³C-Labeling for Chemical Assignment of Sulfur-Containing Metabolites in Onion Bulbs. Analytical Chemistry, 2013, 85, 1310-1315.	3.2	77
21	Metabolic Reprogramming in Leaf Lettuce Grown Under Different Light Quality and Intensity Conditions Using Narrow-Band LEDs. Scientific Reports, 2018, 8, 7914.	1.6	77
22	Chromosome-level genome assembly of Ophiorrhiza pumila reveals the evolution of camptothecin biosynthesis. Nature Communications, 2021, 12, 405.	5.8	77
23	Toward better annotation in plant metabolomics: isolation and structure elucidation of 36 specialized metabolites from Oryza sativa (rice) by using MS/MS and NMR analyses. Metabolomics, 2014, 10, 543-555.	1.4	76
24	Metabolic Profiling of Developing Pear Fruits Reveals Dynamic Variation in Primary and Secondary Metabolites, Including Plant Hormones. PLoS ONE, 2015, 10, e0131408.	1.1	69
25	Multiomics in Grape Berry Skin Revealed Specific Induction of the Stilbene Synthetic Pathway by Ultraviolet-C Irradiation. Plant Physiology, 2015, 168, 47-59.	2.3	60
26	The Structural Integrity of Lignin Is Crucial for Resistance against Striga hermonthica Parasitism in Rice. Plant Physiology, 2019, 179, 1796-1809.	2.3	60
27	Retrograde sulfur flow from glucosinolates to cysteine in Arabidopsis thaliana. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	60
28	Identification of a flavinâ€containing Sâ€oxygenating monooxygenase involved in alliin biosynthesis in garlic. Plant Journal, 2015, 83, 941-951.	2.8	56
29	Function of AP2/ERF Transcription Factors Involved in the Regulation of Specialized Metabolism in Ophiorrhiza pumila Revealed by Transcriptomics and Metabolomics. Frontiers in Plant Science, 2016, 7, 1861.	1.7	54
30	Direct isolation of flavonoids from plants using ultraâ€small anatase <scp>TiO</scp>₂ nanoparticles. Plant Journal, 2014, 77, 443-453.	2.8	53
31	Top-down Targeted Metabolomics Reveals a Sulfur-Containing Metabolite with Inhibitory Activity against Angiotensin-Converting Enzyme in Asparagus officinalis. Journal of Natural Products, 2015, 78, 1179-1183.	1.5	52
32	Biosynthesis of riccionidins and marchantins is regulated by R2R3-MYB transcription factors in Marchantia polymorpha. Journal of Plant Research, 2018, 131, 849-864.	1.2	50
33	Integrating transcriptome and target metabolome variability in doubled haploids of Allium cepa for abiotic stress protection. Molecular Breeding, 2015, 35, 1.	1.0	49
34	Assessing metabolomic and chemical diversity of a soybean lineage representing 35Âyears of breeding. Metabolomics, 2015, 11, 261-270.	1.4	48
35	Metabolomics and complementary techniques to investigate the plant phytochemical cosmos. Natural Product Reports, 2021, 38, 1729-1759.	5.2	46
36	Effects of freezeâ€drying of samples on metabolite levels in metabolome analyses. Journal of Separation Science, 2011, 34, 3561-3567.	1.3	43

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37	Linkage mapping, molecular cloning and functional analysis of soybean gene Fg2 encoding flavonol 3-O-glucoside (1Ââ†'Â6) rhamnosyltransferase. Plant Molecular Biology, 2014, 84, 287-300.	2.0	42
38	Mutations in jasmonoyl-L-isoleucine-12-hydroxylases suppress multiple JA-dependent wound responses in Arabidopsis thaliana. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 1396-1408.	1.2	38
39	Improvement of memory recall by quercetin in rodent contextual fear conditioning and human early-stage Alzheimerâ€™s disease patients. NeuroReport, 2016, 27, 671-676.	0.6	36
40	Metabolomic Evaluation of the Quality of Leaf Lettuce Grown in Practical Plant Factory to Capture Metabolite Signature. Frontiers in Plant Science, 2018, 9, 665.	1.7	36
41	Defective cytokinin signaling reprograms lipid and flavonoid gene-to-metabolite networks to mitigate high salinity in Arabidopsis. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	34
42	Ultrahigh resolution metabolomics for S-containing metabolites. Current Opinion in Biotechnology, 2017, 43, 8-16.	3.3	31
43	Mass Spectra-Based Framework for Automated Structural Elucidation of Metabolome Data to Explore Phytochemical Diversity. Frontiers in Plant Science, 2011, 2, 40.	1.7	30
44	Linkage mapping, molecular cloning and functional analysis of soybean gene Fg3 encoding flavonol 3-O-glucoside/galactoside (1â€‰â†'â€‰2) glucosyltransferase. BMC Plant Biology, 2015, 15, 126.	1.6	30
45	Chemical Assignment of Structural Isomers of Sulfur-Containing Metabolites in Garlic by Liquid Chromatographyâ^'Fourier Transform Ion Cyclotron Resonanceâ^'Mass Spectrometry. Journal of Nutrition, 2016, 146, 397S-402S.	1.3	28
46	Inhibition of CUTIN DEFICIENT 2 Causes Defects in Cuticle Function and Structure and Metabolite Changes in Tomato Fruit. Plant and Cell Physiology, 2013, 54, 1535-1548.	1.5	27
47	Cloning and characterization of soybean gene Fg1 encoding flavonol 3-O-glucoside/galactoside (1â†'6) glucosyltransferase. Plant Molecular Biology, 2016, 92, 445-456.	2.0	27
48	Keeping the shape of plant tissue for visualizing metabolite features in segmentation and correlation analysis of imaging mass spectrometry in Asparagus officinalis. Metabolomics, 2019, 15, 24.	1.4	26
49	Top-down Metabolomic Approaches for Nitrogen-Containing Metabolites. Analytical Chemistry, 2017, 89, 2698-2703.	3.2	25
50	Transgenic rice seed expressing flavonoid biosynthetic genes accumulate glycosylated and/or acylated flavonoids in protein bodies. Journal of Experimental Botany, 2016, 67, 95-106.	2.4	24
51	UGT79B31 is responsible for the final modification step of pollen-specific flavonoid biosynthesis in Petunia hybrida. Planta, 2018, 247, 779-790.	1.6	23
52	Metabolome Analysis of <i>Oryza sativa</i> (Rice) Using Liquid Chromatography-Mass Spectrometry for Characterizing Organ Specificity of Flavonoids with Anti-inflammatory and Anti-oxidant Activity. Chemical and Pharmaceutical Bulletin, 2016, 64, 952-956.	0.6	19
53	Metabolomics with ¹⁵N Labeling for Characterizing Missing Monoterpene Indole Alkaloids in Plants. Analytical Chemistry, 2020, 92, 5670-5675.	3.2	19
54	Revisiting anabasine biosynthesis in tobacco hairy roots expressing plant lysine decarboxylase gene by using ¹⁵N-labeled lysine. Plant Biotechnology, 2014, 31, 511-518.	0.5	18

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55	Higher dimensional metabolomics using stable isotope labeling for identifying the missing specialized metabolism in plants. Current Opinion in Plant Biology, 2020, 55, 84-92.	3.5	18
56	Food Lipidomics for 155 Agricultural Plant Products. Journal of Agricultural and Food Chemistry, 2021, 69, 8981-8990.	2.4	18
57	Comparative Metabolome and Transcriptome Analyses of Susceptible Asparagus officinalis and Resistant Wild A. kiusianus Reveal Insights into Stem Blight Disease Resistance. Plant and Cell Physiology, 2020, 61, 1464-1476.	1.5	17
58	Expression and functional analyses of a putative phenylcoumaran benzylic ether reductase in Arabidopsis thaliana. Plant Cell Reports, 2016, 35, 513-526.	2.8	16
59	Effects of Combined Low Glutathione with Mild Oxidative and Low Phosphorus Stress on the Metabolism of Arabidopsis thaliana. Frontiers in Plant Science, 2017, 8, 1464.	1.7	16
60	A Highly Specific Genome-Wide Association Study Integrated with Transcriptome Data Reveals the Contribution of Copy Number Variations to Specialized Metabolites in Arabidopsis thaliana Accessions. Molecular Biology and Evolution, 2017, 34, 3111-3122.	3.5	14
61	A polyhedral approach for understanding flavonoid biosynthesis in Arabidopsis. New Biotechnology, 2010, 27, 829-836.	2.4	13
62	Seed-coat protective neolignans are produced by the dirigent protein AtDP1 and the laccase AtLAC5 in Arabidopsis. Plant Cell, 2021, 33, 129-152.	3.1	13
63	Automation of chemical assignment for identifying molecular formula of S-containing metabolites by combining metabolomics and chemoinformatics with 34S labeling. Metabolomics, 2016, 12, 1.	1.4	12
64	Successful expression of a novel bacterial gene for pinoresinol reductase and its effect on lignan biosynthesis in transgenic Arabidopsis thaliana. Applied Microbiology and Biotechnology, 2014, 98, 8165-8177.	1.7	10
65	New otonecine-type pyrrolizidine alkaloid from Petasites japonicus. Journal of Natural Medicines, 2019, 73, 602-607.	1.1	10
66	Boosting Sensitivity in Liquid Chromatographyâ€“Fourier Transform Ion Cyclotron Resonanceâ€“Tandem Mass Spectrometry for Product Ion Analysis of Monoterpene Indole Alkaloids. Frontiers in Plant Science, 2015, 6, 1127.	1.7	9
67	Producing the sulfur-containing metabolite asparaptine in <i>Asparagus</i> calluses and a suspension cell line. Plant Biotechnology, 2019, 36, 265-267.	0.5	9
68	Multiomics-based characterization of specialized metabolites biosynthesis in Cornus Officinalis. DNA Research, 2020, 27, .	1.5	8
69	Temporal lag between gene expression and metabolite accumulation in flavonol biosynthesis of Arabidopsis roots. Phytochemistry Letters, 2017, 22, 44-48.	0.6	7
70	A multimodal metabolomics approach using imaging mass spectrometry and liquid chromatography-tandem mass spectrometry for spatially characterizing monoterpene indole alkaloids secreted from roots. Plant Biotechnology, 2021, 38, 305-310.	0.5	7
71	Changes in Primary and Secondary Metabolite Levels in Response to Gene Targeting-Mediated Site-Directed Mutagenesis of the Anthranilate Synthase Gene in Rice. Metabolites, 2012, 2, 1123-1138.	1.3	6
72	Changes intrans-S-1-Propenyl-l-cysteine Sulfoxide and Related Sulfur-Containing Amino Acids during Onion Storage. Journal of Agricultural and Food Chemistry, 2016, 64, 9063-9071.	2.4	6

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73	Spatial metabolomics using imaging mass spectrometry to identify the localization of asparaptine A in <i>Asparagus officinalis</i>. Plant Biotechnology, 2021, 38, 311-315.	0.5	6
74	The metabolic profile of grape berry skin and a comparison of metabolomes before veraison and at harvest. Plant Biotechnology, 2015, 32, 267-272.	0.5	5
75	Development of methodology of probabilistic safety assessment for radioactive waste disposal in consideration of epistemic uncertainty and aleatory uncertainty. Journal of Nuclear Science and Technology, 2016, 53, 2006-2017.	0.7	5
76	Methodology to optimize radiation protection in radioactive waste disposal after closure of a disposal facility based on probabilistic approach. Journal of Nuclear Science and Technology, 2018, 55, 335-347.	0.7	4
77	Development of calculation methodology for estimation of radionuclide composition in wastes generated at Fukushima Daiichi nuclear power station. Journal of Nuclear Science and Technology, 2019, 56, 881-890.	0.7	4
78	Tandem Mass Spectrum Similarity-Based Network Analysis Using ¹³C-Labeled and Non-labeled Metabolome Data to Identify the Biosynthetic Pathway of the Blood Pressure-Lowering Asparagus Metabolite Asparaptine A. Journal of Agricultural and Food Chemistry, 2021, 69, 8571-8577.	2.4	4
79	Using metabolomic approaches to explore chemical diversity in rice. Molecular Plant, 2014, , .	3.9	3
80	Stochastic estimation of radionuclide composition in wastes generated at Fukushima Daiichi nuclear power station using Bayesian inference. Journal of Nuclear Science and Technology, 2021, 58, 493-506.	0.7	3
81	Transcriptomic, Hormonomic and Metabolomic Analyses Highlighted the Common Modules Related to Photosynthesis, Sugar Metabolism and Cell Division in Parthenocarpic Tomato Fruits during Early Fruit Set. Cells, 2022, 11, 1420.	1.8	3
82	Identification of Chemical Form of Carbon Released from SUS304 and SUS316 in Alkaline Solution under Low-oxygen Condition. MRS Advances, 2017, 2, 597-602.	0.5	2
83	Identification of chemical form of stable carbon released from type 304L and 316L stainless-steel powders in alkaline and acidic solutions under low-oxygen conditions. Radiocarbon, 2018, 60, 1691-1710.	0.8	1
84	Metabolomic Determination of Specialized Metabolites Using Liquid Chromatography-Tandem Mass Spectrometry in the Traditional Chinese Medicines Astragali Radix and Hedysari Radix. Natural Product Communications, 2020, 15, 1934578X1990119.	0.2	1
85	Top-Down Metabolomics Approaches: Nitrogen- and Sulfur-Omics by Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance-Mass Spectrometry. , 2020, , 138-155.		0
86	Phytochemical map leads to local omics world. Plant Morphology, 2020, 32, 31-37.	0.1	0