Corey D Broeckling

List of Publications by Year
in descending order

122 papers	5,630 citations	101543 36 h-index	88630 70 g-index
128 all docs	128 docs citations	128 times ranked	9070 citing authors

#	Article	IF	Citations
1	Root Exudates Regulate Soil Fungal Community Composition and Diversity. Applied and Environmental Microbiology, 2008, 74, 738-744.	3.1	659
2	Overexpression of WXP1, a putative Medicago truncatula AP2 domain-containing transcription factor gene, increases cuticular wax accumulation and enhances drought tolerance in transgenic alfalfa (Medicago sativa). Plant Journal, 2005, 42, 689-707.	5.7	388
3	Metabolic profiling of Medicago truncatula cell cultures reveals the effects of biotic and abiotic elicitors on metabolism. Journal of Experimental Botany, 2005, 56, 323-336.	4.8	347
4	MET-IDEA:Â Data Extraction Tool for Mass Spectrometry-Based Metabolomics. Analytical Chemistry, 2006, 78, 4334-4341.	6.5	249
5	Large-scale Metabolomic Profiling Identifies Novel Biomarkers for Incident Coronary Heart Disease. PLoS Genetics, 2014, 10, e1004801.	3.5	225
6	RAMClust: A Novel Feature Clustering Method Enables Spectral-Matching-Based Annotation for Metabolomics Data. Analytical Chemistry, 2014, 86, 6812-6817.	6.5	219
7	Heterologous expression of two Medicago truncatula putative ERF transcription factor genes, WXP1 and WXP2, in Arabidopsis led to increased leaf wax accumulation and improved drought tolerance, but differential response in freezing tolerance. Plant Molecular Biology, 2007, 64, 265-278.	3.9	162
8	Altered Profile of Secondary Metabolites in the Root Exudates of Arabidopsis ATP-Binding Cassette Transporter Mutants. Plant Physiology, 2008, 146, 323-324.	4.8	158
9	Transcriptome analysis of Arabidopsis roots treated with signaling compounds: a focus on signal transduction, metabolic regulation and secretion. New Phytologist, 2008, 179, 209-223.	7.3	112
10	Rice Bran Fermented with Saccharomyces boulardii Generates Novel Metabolite Profiles with Bioactivity. Journal of Agricultural and Food Chemistry, 2011, 59, 1862-1870.	5.2	109
11	Plant neighbor identity influences plant biochemistry and physiology related to defense. BMC Plant Biology, 2010, 10, 115.	3.6	107
12	Resource heterogeneity structures aquatic bacterial communities. ISME Journal, 2019, 13, 2183-2195.	9.8	93
13	Influence of malt source on beer chemistry, flavor, and flavor stability. Food Research International, 2018, 113, 487-504.	6.2	89
14	Upregulation of the Phthiocerol Dimycocerosate Biosynthetic Pathway by Rifampin-Resistant,rpoBMutant Mycobacterium tuberculosis. Journal of Bacteriology, 2012, 194, 6441-6452.	2.2	80
15	Non-targeted Metabolomics in Diverse Sorghum Breeding Lines Indicates Primary and Secondary Metabolite Profiles Are Associated with Plant Biomass Accumulation and Photosynthesis. Frontiers in Plant Science, 2016, 7, 953.	3.6	80
16	Dietary supplementation with rice bran or navy bean alters gut bacterial metabolism in colorectal cancer survivors. Molecular Nutrition and Food Research, 2017, 61, 1500905.	3.3	80
17	Enabling Efficient and Confident Annotation of LCâ''MS Metabolomics Data through MS1 Spectrum and Time Prediction. Analytical Chemistry, 2016, 88, 9226-9234.	6.5	77
18	Pilot Dietary Intervention with Heat-Stabilized Rice Bran Modulates Stool Microbiota and Metabolites in Healthy Adults. Nutrients, 2015, 7, 1282-1300.	4.1	75

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19	Non-targeted metabolomics combined with genetic analyses identifies bile acid synthesis and phospholipid metabolism as being associated with incident type 2 diabetes. Diabetologia, 2016, 59, 2114-2124.	6.3	74
20	Effect of transporters on the secretion of phytochemicals by the roots of Arabidopsis thaliana. Planta, 2006, 225, 301-310.	3.2	68
21	Amino acid profiling in plant cell cultures: An inter-laboratory comparison of CE-MS and GC-MS. Electrophoresis, 2007, 28, 1371-1379.	2.4	66
22	The metaRbolomics Toolbox in Bioconductor and beyond. Metabolites, 2019, 9, 200.	2.9	64
23	The metabolic fingerprint of p,pâ€²-DDE and HCB exposure in humans. Environment International, 2016, 88, 60-66.	10.0	61
24	Comparison of Machine Learning Algorithms for Predictive Modeling of Beef Attributes Using Rapid Evaporative Ionization Mass Spectrometry (REIMS) Data. Scientific Reports, 2019, 9, 5721.	3.3	61
25	Serum Metabolomics Reveals Higher Levels of Polyunsaturated Fatty Acids in Lepromatous Leprosy: Potential Markers for Susceptibility and Pathogenesis. PLoS Neglected Tropical Diseases, 2011, 5, e1303.	3.0	59
26	A Comparative Study of Serum Biochemistry, Metabolome and Microbiome Parameters of Clinically Healthy, Normal Weight, Overweight, and Obese Companion Dogs. Topics in Companion Animal Medicine, 2018, 33, 126-135.	0.9	58
27	Identification of metabolic profiles associated with human exposure to perfluoroalkyl substances. Journal of Exposure Science and Environmental Epidemiology, 2019, 29, 196-205.	3.9	55
28	Evaluating plant immunity using mass spectrometry-based metabolomics workflows. Frontiers in Plant Science, 2014, 5, 291.	3.6	54
29	Antibacterial activity and phytochemical profile of fermented Camellia sinensis (fuzhuan tea). Food Research International, 2013, 53, 945-949.	6.2	51
30	Application of nontargeted metabolite profiling to discover novel markers of quality traits in an advanced population of malting barley. Plant Biotechnology Journal, 2014, 12, 147-160.	8.3	50
31	Impact of inoculum sources on biotransformation of pharmaceuticals and personal care products. Water Research, 2017, 125, 227-236.	11.3	48
32	Retention projection enables accurate calculation of liquid chromatographic retention times across labs and methods. Journal of Chromatography A, 2015, 1412, 43-51.	3.7	47
33	Glucose challenge metabolomics implicates medium-chain acylcarnitines in insulin resistance. Scientific Reports, 2018, 8, 8691.	3.3	47
34	Non-Targeted Metabolomics Reveals Sorghum Rhizosphere-Associated Exudates are Influenced by the Belowground Interaction of Substrate and Sorghum Genotype. International Journal of Molecular Sciences, 2019, 20, 431.	4.1	43
35	A Genome-Wide Assessment of Variability in Human Serum Metabolism. Human Mutation, 2013, 34, 515-524.	2.5	42
36	Phytotoxic Catechin Leached by Seeds of the Tropical Weed Sesbania virgata. Journal of Chemical Ecology, 2008, 34, 681-687.	1.8	41

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37	Metabolomics and Ionomics of Potato Tuber Reveals an Influence of Cultivar and Market Class on Human Nutrients and Bioactive Compounds. Frontiers in Nutrition, 2018, 5, 36.	3.7	39
38	The effector AvrRxo1 phosphorylates NAD in planta. PLoS Pathogens, 2017, 13, e1006442.	4.7	37
39	GC-MS Metabolomics to Evaluate the Composition of Plant Cuticular Waxes for Four Triticum aestivum Cultivars. International Journal of Molecular Sciences, 2018, 19, 249.	4.1	37
40	Phytotoxic polyacetylenes from roots of Russian knapweed (Acroptilon repens (L.) DC.). Phytochemistry, 2008, 69, 2572-2578.	2.9	36
41	Root Secretion of Phytochemicals in Arabidopsis Is Predominantly Not Influenced by Diurnal Rhythms. Molecular Plant, 2010, 3, 491-498.	8.3	36
42	Assigning precursorâ€“product ion relationships in indiscriminant MS/MS data from non-targeted metabolite profiling studies. Metabolomics, 2013, 9, 33-43.	3.0	35
43	Comprehensive Tandem-Mass-Spectrometry Coverage of Complex Samples Enabled by Data-Set-Dependent Acquisition. Analytical Chemistry, 2018, 90, 8020-8027.	6.5	35
44	Metabolomics Data Analysis, Visualization, and Integration. , 2005, 406, 409-436.		33
45	Proteomic analysis of brush-border membrane vesicles isolated from purified proximal convoluted tubules. American Journal of Physiology - Renal Physiology, 2010, 298, F1323-F1331.	2.7	32
46	Metabolomic profiling of beer reveals effect of temperature on non-volatile small molecules during short-term storage. Food Chemistry, 2012, 135, 1284-1289.	8.2	32
47	Large-scale non-targeted metabolomic profiling in three human population-based studies. Metabolomics, 2016, 12, 1.	3.0	29
48	White Kidney Bean (Phaseolus Vulgaris L.) Consumption Reduces Fat Accumulation in a Polygenic Mouse Model of Obesity. Nutrients, 2019, 11, 2780.	4.1	29
49	Metabolic engineering of Arabidopsis for butanetriol production using bacterial genes. Metabolic Engineering, 2013, 20, 109-120.	7.0	28
50	Tryptophan catabolism in acute exacerbations of chronic obstructive pulmonary disease. International Journal of COPD, 2016, Volume 11, 2435-2446.	2.3	27
51	Advances in Nutritional Metabolomics. Current Metabolomics, 2013, 1, 109-120.	0.5	26
52	Model of Chronic Equine Endometritis Involving a Pseudomonas aeruginosa Biofilm. Infection and Immunity, 2017, 85, .	2.2	26
53	High-throughput quantitative analysis of phytohormones in sorghum leaf and root tissue by ultra-performance liquid chromatography-mass spectrometry. Analytical and Bioanalytical Chemistry, 2019, 411, 4839-4848.	3.7	26
54	Comparison between a native and exotic adelgid as hosts forLaricobius rubidus(Coleoptera:) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62 Tc	1.3	25

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55	A novel microflow LCâ¿¿MS method for the quantitation of endocannabinoids in serum. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2016, 1033-1034, 271-277.	2.3	24
56	Roles of rhizobial symbionts in selenium hyperaccumulation in Astragalus (Fabaceae). American Journal of Botany, 2014, 101, 1895-1905.	1.7	23
57	The metabolites urobilin and sphingomyelin (30:1) are associated with incident heart failure in the general population. ESC Heart Failure, 2019, 6, 764-773.	3.1	23
58	Application of Predicted Collisional Cross Section to Metabolome Databases to Probabilistically Describe the Current and Future Ion Mobility Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2021, 32, 661-669.	2.8	23
59	Volatile emissions of eastern hemlock, Tsuga canadensis, and the influence of hemlock woolly adelgid. Phytochemistry, 2003, 62, 175-180.	2.9	22
60	Pregnancy-induced changes in metabolome and proteome in ovine uterine flushingsâ€. Biology of Reproduction, 2017, 97, 273-287.	2.7	22
61	Data Processing for GC-MS- and LC-MS-Based Untargeted Metabolomics. Methods in Molecular Biology, 2019, 1978, 287-299.	0.9	22
62	Unique <i>Francisella</i> Phosphatidylethanolamine Acts as a Potent Anti-Inflammatory Lipid. Journal of Innate Immunity, 2018, 10, 291-305.	3.8	21
63	Direct and Osmolarity-Dependent Effects of Glycine on Preimplantation Bovine Embryos. PLoS ONE, 2016, 11, e0159581.	2.5	21
64	Phytotoxic Allelochemicals From Roots and Root Exudates of Leafy Spurge (Euphorbia esula L.). Plant Signaling and Behavior, 2006, 1, 323-327.	2.4	20
65	Effect of Insulin Resistance on Monounsaturated Fatty Acid Levels: A Multi-cohort Non-targeted Metabolomics and Mendelian Randomization Study. PLoS Genetics, 2016, 12, e1006379.	3.5	20
66	Multi-omics prediction of oat agronomic and seed nutritional traits across environments and in distantly related populations. Theoretical and Applied Genetics, 2021, 134, 4043-4054.	3.6	20
67	â€œRetention Projectionâ€•Enables Reliable Use of Shared Gas Chromatographic Retention Data Across Laboratories, Instruments, and Methods. Analytical Chemistry, 2013, 85, 11650-11657.	6.5	19
68	Metabolomics of the tick-Borrelia interaction during the nymphal tick blood meal. Scientific Reports, 2017, 7, 44394.	3.3	19
69	Stacked Injections of Biphasic Extractions for Improved Metabolomic Coverage and Sample Throughput. Analytical Chemistry, 2018, 90, 1147-1153.	6.5	18
70	Assessing the Chemistry and Bioavailability of Dissolved Organic Matter From Glaciers and Rock Glaciers. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1988-2004.	3.0	18
71	A comprehensive timeâ€course metabolite profiling of the model cyanobacterium Synechocystis sp. PCC 6803 under diurnal light:dark cycles. Plant Journal, 2019, 99, 379-388.	5.7	18
72	Antennal Morphology of Two Specialist Predators of Hemlock Woolly Adelgid, <I>Adelges tsugae</I> Annand (Homoptera: Adelgidae). Annals of the Entomological Society of America, 2003, 96, 153-160.	2.5	17

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73	A first step in understanding an invasive weed through its genes: an EST analysis of invasive Centaurea maculosa. BMC Plant Biology, 2007, 7, 25.	3.6	17
74	Production of Phloroglucinol, a Platform Chemical, in Arabidopsis using a Bacterial Gene. Scientific Reports, 2016, 6, 38483.	3.3	17
75	Leveraging Non-Targeted Metabolite Profiling via Statistical Genomics. PLoS ONE, 2013, 8, e57667.	2.5	17
76	Impact of primary carbon sources on microbiome shaping and biotransformation of pharmaceuticals and personal care products. Biodegradation, 2019, 30, 127-145.	3.0	16
77	Evaluation of non-volatile metabolites in beer stored at high temperature and utility as an accelerated method to predict flavour stability. Food Chemistry, 2016, 200, 301-307.	8.2	15
78	Equine maternal aging affects oocyte lipid content, metabolic function and developmental potential. Reproduction, 2021, 161, 399-409.	2.6	15
79	A selective, sensitive, and rapid in-field assay for soil catechin, an allelochemical of Centaurea maculosa. Soil Biology and Biochemistry, 2008, 40, 1189-1196.	8.8	14
80	Metabolomic Investigation of Tenderness and Aging Response in Beef Longissimus Steaks. Meat and Muscle Biology, 2019, 3, .	1.9	14
81	A Multi-Cohort Metabolomics Analysis Discloses Sphingomyelin (32:1) Levels to be Inversely Related to Incident Ischemic Stroke. Journal of Stroke and Cerebrovascular Diseases, 2020, 29, 104476.	1.6	14
82	Consumption of Cooked Navy Bean Powders Modulate the Canine Fecal and Urine Metabolome. Current Metabolomics, 2015, 3, 90-101.	0.5	14
83	Analysis of the metabolome of Anopheles gambiae mosquito after exposure to Mycobacterium ulcerans. Scientific Reports, 2015, 5, 9242.	3.3	13
84	Impact of Wearing and Washing/Drying of Permethrin-Treated Clothing on Their Contact Irritancy and Toxicity for NymphalIxodes scapularis(Acari: Ixodidae) Ticks. Journal of Medical Entomology, 2019, 56, 199-214.	1.8	13
85	A novel culture medium with reduced nutrient concentrations supports the development and viability of mouse embryos. Scientific Reports, 2020, 10, 9263.	3.3	13
86	Differential Stem Proteomics and Metabolomics Profiles for Four Wheat Cultivars in Response to the Insect Pest Wheat Stem Sawfly. Journal of Proteome Research, 2020, 19, 1037-1051.	3.7	13
87	Multicohort Metabolomics Analysis Discloses 9â€Decenoylcarnitine to Be Associated With Incident Atrial Fibrillation. Journal of the American Heart Association, 2021, 10, e017579.	3.7	12
88	Large Scale Non-targeted Metabolomic Profiling of Serum by Ultra Performance Liquid Chromatography-Mass Spectrometry (UPLC-MS). Journal of Visualized Experiments, 2013, , e50242.	0.3	11
89	Non-targeted urine metabolomics and associations with prevalent and incident type 2 diabetes. Scientific Reports, 2020, 10, 16474.	3.3	11
90	Non-invasive Drug Monitoring of Î²-Lactam Antibiotics Using Sweat Analysisâ€"A Pilot Study. Frontiers in Medicine, 2020, 7, 476.	2.6	11

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91	Assessing Drought and Heat Stress-Induced Changes in the Cotton Leaf Metabolome and Their Relationship With Hyperspectral Reflectance. Frontiers in Plant Science, 2021, 12, 751868.	3.6	11
92	GreenCut protein <scp>CPLD</scp>49 of Chlamydomonas reinhardtii associates with thylakoid membranes and is required for cytochrome b₆f complex accumulation. Plant Journal, 2018, 94, 1023-1037.	5.7	10
93	American <scp>I</scp>ndia <scp>P</scp>ale <scp>A</scp>le matrix rich in xanthohumol is potent in suppressing proliferation and elevating apoptosis of human colon cancer cells. International Journal of Food Science and Technology, 2014, 49, 2464-2471.	2.7	9
94	Metabolic compounds within the porcine uterine environment are unique to the type of conceptus present during the early stages of blastocyst elongation. Molecular Reproduction and Development, 2020, 87, 174-190.	2.0	9
95	Genetic analysis of potato tuber metabolite composition: Genomeâ€wide association studies applied to a nontargeted metabolome. Crop Science, 2021, 61, 591-603.	1.8	9
96	Selection for seed size has uneven effects on specialized metabolite abundance in oat (Avena) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.8	9
97	Metabolome profiling to understand the defense response of sugar beet (Beta vulgaris) to Rhizoctonia solani AG 2-2 IIIB. Physiological and Molecular Plant Pathology, 2016, 94, 108-117.	2.5	7
98	Employing Twoâ€stage Derivatisation and GCâ€“MS to Assay for Cathine and Related Stimulant Alkaloids across the Celastraceae. Phytochemical Analysis, 2017, 28, 257-266.	2.4	7
99	Candida krusei form mycelia along agar surfaces towards each other and other Candida species. BMC Microbiology, 2017, 17, 60.	3.3	7
100	A carnivore embryo's perspective on essential amino acids and ammonium in culture medium: effects on the development of feline embryosâ€. Biology of Reproduction, 2018, 99, 1070-1081.	2.7	7
101	Quantitative Analysis of Ethyl Carbamate in Distillers Grains Co-products and Bovine Plasma by Gas Chromatographyâ€“Mass Spectrometry. Journal of Agricultural and Food Chemistry, 2020, 68, 10984-10991.	5.2	5
102	The Detection of Vancomycin in Sweat: A Next-Generation Digital Surrogate Marker for Antibiotic Tissue Penetration: A Pilot Study. Digital Biomarkers, 2021, 5, 24-28.	4.4	5
103	Importance of manual validation for the identification of phosphopeptides using a linear ion trap mass spectrometer. Journal of Biomolecular Techniques, 2011, 22, 10-20.	1.5	5
104	Ion-neutral Clustering of Bile Acids in Electrospray Ionization Across UPLC Flow Regimes. Journal of the American Society for Mass Spectrometry, 2018, 29, 651-662.	2.8	4
105	Brightly coloured tissues in limid bivalves chemically deter predators. Royal Society Open Science, 2019, 6, 191298.	2.4	4
106	Metabolic disturbances in sugar beet (Beta vulgaris) during infection with Beet necrotic yellow vein virus. Physiological and Molecular Plant Pathology, 2020, 112, 101520.	2.5	4
107	Studying Charge Migration Fragmentation of Sodiated Precursor Ions in Collision-Induced Dissociation at the Library Scale. Journal of the American Society for Mass Spectrometry, 2021, 32, 180-186.	2.8	4
108	Non-targeted Plasma Metabolome of Early and Late Lactation Gilts. Frontiers in Molecular Biosciences, 2016, 3, 77.	3.5	3

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109	Biological variation of major gutâ€derived uremic toxins in the serum of healthy adult cats. Journal of Veterinary Internal Medicine, 2021, 35, 902-911.	1.6	3
110	Chromatographic Methods to Evaluate Nutritional Quality in Oat. Methods in Molecular Biology, 2017, 1536, 115-125.	0.9	3
111	Metabolomic Profiles of Multidrug-Resistant Salmonella Typhimurium from Humans, Bovine, and Porcine Hosts. Animals, 2022, 12, 1518.	2.3	3
112	Metabolites and microbial composition of stool of women with fecal incontinence: Study design and methods. Neurourology and Urodynamics, 2018, 37, 634-641.	1.5	2
113	Fatty acids present in commercial albumin preparations differentially affect development of murine embryos before and during implantation. F&S Science, 2021, 2, 50-58.	0.9	2
114	Non-targeted metabolomics of cooked cowpea (Vigna unguiculata) and pigeon pea (Cajanus cajan) from Ghana using two distinct and complementary analytical platforms. Food Chemistry Molecular Sciences, 2022, 4, 100087.	2.1	2
115	Penicillium raperi, a species isolated from Colorado cropping soils, is a potential biological control agent that produces multiple metabolites and is antagonistic against postharvest phytopathogens. Mycological Progress, 2022, 21, .	1.4	2
116	Associations of Body Mass Index and Obesity-Related Genetic Variants with Serum Metabolites. Current Metabolomics, 2014, 2, 27-36.	0.5	1
117	Metabolomics for Rice Grain Quality. , 2020, , 495-531.		1
118	Influence of Biological and Technical Covariates on Non-targeted Metabolite Profiling in a Large-scale Epidemiological Study. Current Metabolomics, 2013, 1, 220-226.	0.5	0
119	Non-Targeted Metabolite Profiling of Dried Blood Spots in a Field-Based Epidemiologic Study of Household Air Pollution. ISEE Conference Abstracts, 2018, 2018, .	0.0	0
120	62 Sequential nutrient restriction and provision during bovine in vitro embryo culture differentially affect blastocyst development and quality with oocytes from varied sources. Reproduction, Fertility and Development, 2019, 31, 156.	0.4	0
121	Some assembly required. Nature Methods, 0, , .	19.0	0
122	Ecosystem metabolomics of dissolved organic matter from arctic soil pore water across seasonal transitions. , 2022, , 91-106.		0