

Sheng Zhang

List of Publications by Year in descending order

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101
papers

6,808
citations

76326

40
h-index

66911

78
g-index

105
all docs

105
docs citations

105
times ranked

9935
citing authors

#	ARTICLE	IF	CITATIONS
1	Sirt5 Is a NAD-Dependent Protein Lysine Demalonylase and Desuccinylase. <i>Science</i> , 2011, 334, 806-809.	12.6	1,165
2	ER Stress Sensor XBP1 Controls Anti-tumor Immunity by Disrupting Dendritic Cell Homeostasis. <i>Cell</i> , 2015, 161, 1527-1538.	28.9	639
3	A Fully Integrated Monolithic Microchip Electrospray Device for Mass Spectrometry. <i>Analytical Chemistry</i> , 2000, 72, 4058-4063.	6.5	340
4	Metabolomics-assisted proteomics identifies succinylation and SIRT5 as important regulators of cardiac function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 4320-4325.	7.1	263
5	IRE1 β -XBP1 controls T cell function in ovarian cancer by regulating mitochondrial activity. <i>Nature</i> , 2018, 562, 423-428.	27.8	252
6	Proinflammatory IgG Fc structures in patients with severe COVID-19. <i>Nature Immunology</i> , 2021, 22, 67-73.	14.5	239
7	Quantitative Determination of Noncovalent Binding Interactions Using Automated Nanoelectrospray Mass Spectrometry. <i>Analytical Chemistry</i> , 2003, 75, 3010-3018.	6.5	157
8	The <i>Penium margaritaceum</i> Genome: Hallmarks of the Origins of Land Plants. <i>Cell</i> , 2020, 181, 1097-1111.e12.	28.9	153
9	Physiological and proteomic responses of two contrasting <i>Populus cathayana</i> populations to drought stress. <i>Physiologia Plantarum</i> , 2009, 136, 150-168.	5.2	149
10	Production of Secretory and Extracellular N-Linked Glycoproteins in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 2011, 77, 871-881.	3.1	112
11	Quantitative Proteomic Analysis Reveals that Antioxidation Mechanisms Contribute to Cold Tolerance in Plantain (<i>Musa paradisiaca</i> L.; ABB Group) Seedlings. <i>Molecular and Cellular Proteomics</i> , 2012, 11, 1853-1869.	3.8	110
12	Evaluation of Different Multidimensional LC-MS/MS Pipelines for Isobaric Tags for Relative and Absolute Quantitation (iTRAQ)-Based Proteomic Analysis of Potato Tubers in Response to Cold Storage. <i>Journal of Proteome Research</i> , 2011, 10, 4647-4660.	3.7	108
13	Comparative transcriptomics analysis reveals difference of key gene expression between banana and plantain in response to cold stress. <i>BMC Genomics</i> , 2015, 16, 446.	2.8	105
14	Alpha-ketoglutarate dehydrogenase complex-dependent succinylation of proteins in neurons and neuronal cell lines. <i>Journal of Neurochemistry</i> , 2015, 134, 86-96.	3.9	96
15	Development of an integrated approach for evaluation of 2-D gel image analysis: Impact of multiple proteins in single spots on comparative proteomics in conventional 2-D gel/MALDI workflow. <i>Electrophoresis</i> , 2007, 28, 2080-2094.	2.4	94
16	Automated chip-based nanoelectrospray-mass spectrometry for rapid identification of proteins separated by two-dimensional gel electrophoresis. <i>Electrophoresis</i> , 2003, 24, 3620-3632.	2.4	92
17	Proteomic analysis reveals dynamic regulation of fruit development and sugar and acid accumulation in apple. <i>Journal of Experimental Botany</i> , 2016, 67, 5145-5157.	4.8	84
18	Adaption of Roots to Nitrogen Deficiency Revealed by 3D Quantification and Proteomic Analysis. <i>Plant Physiology</i> , 2019, 179, 329-347.	4.8	81

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19	Physiological and proteome analysis suggest critical roles for the photosynthetic system for high water-use efficiency under drought stress in <i>Malus</i> . <i>Plant Science</i> , 2015, 236, 44-60.	3.6	77
20	A fully automated nano electrospray tandem mass spectrometric method for analysis of Caco-2 samples. <i>Rapid Communications in Mass Spectrometry</i> , 2003, 17, 1573-1578.	1.5	75
21	Melatonin regulates proteomic changes during leaf senescence in <i>Malus hupehensis</i> . <i>Journal of Pineal Research</i> , 2014, 57, 291-307.	7.4	74
22	Early non-neutralizing, afucosylated antibody responses are associated with COVID-19 severity. <i>Science Translational Medicine</i> , 2022, 14, eabm7853.	12.4	71
23	Single Mutations in the VP2 300 Loop Region of the Three-Fold Spike of the Carnivore Parvovirus Capsid Can Determine Host Range. <i>Journal of Virology</i> , 2016, 90, 753-767.	3.4	65
24	Engineered oligosaccharyltransferases with greatly relaxed acceptor-site specificity. <i>Nature Chemical Biology</i> , 2014, 10, 816-822.	8.0	63
25	Enabling proteomic studies with RNA-seq: The proteome of tomato pollen as a test case. <i>Proteomics</i> , 2012, 12, 761-774.	2.2	62
26	Cerebral ischemia induces the aggregation of proteins linked to neurodegenerative diseases. <i>Scientific Reports</i> , 2018, 8, 2701.	3.3	62
27	Absolute quantification of <i>Dehalococcoides</i> proteins: enzyme bioindicators of chlorinated ethene dehalorespiration. <i>Environmental Microbiology</i> , 2009, 11, 2687-2697.	3.8	56
28	Akt3 is a privileged first responder in isozyme-specific electrophile response. <i>Nature Chemical Biology</i> , 2017, 13, 333-338.	8.0	56
29	A Comparative Study of Lectin Affinity Based Plant N-Glycoproteome Profiling Using Tomato Fruit as a Model. <i>Molecular and Cellular Proteomics</i> , 2014, 13, 566-579.	3.8	55
30	FcRn, but not FcγRs, drives maternal-fetal transplacental transport of human IgG antibodies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12943-12951.	7.1	55
31	Host-induced gene silencing of <i>FocTR4</i> <i>ERG6/11</i> genes exhibits superior resistance to Fusarium wilt of banana. <i>Plant Biotechnology Journal</i> , 2020, 18, 11-13.	8.3	53
32	Proteomic Comparison of Historic and Recently Emerged Hypervirulent <i>Clostridium difficile</i> Strains. <i>Journal of Proteome Research</i> , 2013, 12, 1151-1161.	3.7	52
33	In Planta Processing and Glycosylation of a Nematode CLAVATA3/ENDOSPERM SURROUNDING REGION-Like Effector and Its Interaction with a Host CLAVATA2-Like Receptor to Promote Parasitism. <i>Plant Physiology</i> , 2015, 167, 262-272.	4.8	52
34	Proteomic analysis of conidia germination in <i>Fusarium oxysporum</i> f. sp. <i>cubense</i> tropical race 4 reveals new targets in ergosterol biosynthesis pathway for controlling Fusarium wilt of banana. <i>Applied Microbiology and Biotechnology</i> , 2015, 99, 7189-7207.	3.6	52
35	Evaluation of six sample preparation procedures for qualitative and quantitative proteomics analysis of milk fat globule membrane. <i>Electrophoresis</i> , 2018, 39, 2332-2339.	2.4	52
36	Ube2V2 Is a Rosetta Stone Bridging Redox and Ubiquitin Codes, Coordinating DNA Damage Responses. <i>ACS Central Science</i> , 2018, 4, 246-259.	11.3	51

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37	The proteomic profiling of multiple tissue damage in chickens for a selenium deficiency biomarker discovery. <i>Food and Function</i> , 2020, 11, 1312-1321.	4.6	51
38	Regulation of Phenylalanine Biosynthesis. Studies on the Mechanism of Phenylalanine Binding and Feedback Inhibition in the <i>Escherichia coli</i> P-Protein. <i>Biochemistry</i> , 1999, 38, 12212-12217.	2.5	48
39	Ao38, a new cell line from eggs of the black witch moth, <i>Ascalapha odorata</i> (Lepidoptera: Noctuidae), is permissive for AcMNPV infection and produces high levels of recombinant proteins. <i>BMC Biotechnology</i> , 2010, 10, 50.	3.3	46
40	The Cysteine-rich Domain of the DHHC3 Palmitoyltransferase Is Palmitoylated and Contains Tightly Bound Zinc. <i>Journal of Biological Chemistry</i> , 2015, 290, 29259-29269.	3.4	46
41	Challenges and Opportunities in Clinical Applications of Blood-Based Proteomics in Cancer. <i>Cancers</i> , 2020, 12, 2428.	3.7	46
42	Label-free Quantitative Analysis of Changes in Broiler Liver Proteins under Heat Stress using SWATH-MS Technology. <i>Scientific Reports</i> , 2015, 5, 15119.	3.3	44
43	Proteomic characterization of outer membrane vesicles from gut mucosa-derived fusobacterium nucleatum. <i>Journal of Proteomics</i> , 2019, 195, 125-137.	2.4	44
44	Maternal Anti-Dengue IgG Fucosylation Predicts Susceptibility to Dengue Disease in Infants. <i>Cell Reports</i> , 2020, 31, 107642.	6.4	44
45	Chip-based nanoelectrospray mass spectrometry for protein characterization. <i>Expert Review of Proteomics</i> , 2004, 1, 449-468.	3.0	43
46	Identification and characterization of glycation adducts on osteocalcin. <i>Analytical Biochemistry</i> , 2017, 525, 46-53.	2.4	43
47	Altered succinylation of mitochondrial proteins, APP and tau in Alzheimer's disease. <i>Nature Communications</i> , 2022, 13, 159.	12.8	42
48	Comparative characterization of the glycosylation profiles of an influenza hemagglutinin produced in plant and insect hosts. <i>Proteomics</i> , 2012, 12, 1269-1288.	2.2	41
49	Substitute sweeteners: diverse bacterial oligosaccharyltransferases with unique N-glycosylation site preferences. <i>Scientific Reports</i> , 2015, 5, 15237.	3.3	41
50	Application of wide selected-ion monitoring data-independent acquisition to identify tomato fruit proteins regulated by the CUTIN DEFICIENT2 transcription factor. <i>Proteomics</i> , 2016, 16, 2081-2094.	2.2	40
51	Comparative Phosphoproteomics Reveals an Important Role of MKK2 in Banana (<i>Musa spp.</i>) Cold Signal Network. <i>Scientific Reports</i> , 2017, 7, 40852.	3.3	40
52	Mapping and Profiling Lipid Distribution in a 3D Model of Breast Cancer Progression. <i>ACS Central Science</i> , 2019, 5, 768-780.	11.3	40
53	Early Cold-Induced Peroxidases and Aquaporins Are Associated With High Cold Tolerance in Dajiao (<i>Musa spp.</i> 'Dajiao'). <i>Frontiers in Plant Science</i> , 2018, 9, 282.	3.6	38
54	MaXLinker: Proteome-wide Cross-link Identifications with High Specificity and Sensitivity. <i>Molecular and Cellular Proteomics</i> , 2020, 19, 554-568.	3.8	38

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55	Probing the Catalytic Mechanism of Prephenate Dehydratase by Site-Directed Mutagenesis of the <i>Escherichia coli</i> P-Protein Dehydratase Domain. <i>Biochemistry</i> , 2000, 39, 4722-4728.	2.5	37
56	Estrogen receptor beta modulates permeability transition in brain mitochondria. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2018, 1859, 423-433.	1.0	37
57	Parallel comparative proteomics and phosphoproteomics reveal that cattle <i>myostatin</i> regulates phosphorylation of key enzymes in glycogen metabolism and glycolysis pathway. <i>Oncotarget</i> , 2018, 9, 11352-11370.	1.8	33
58	Cell-derived nanovesicles prepared by membrane extrusion are good substitutes for natural extracellular vesicles. <i>Nature Communications</i> , 2022, 13, 100004.		29
59	Spirochaete flagella hook proteins self-catalyse a lysinoalanine covalent crosslink for motility. <i>Nature Microbiology</i> , 2016, 1, 16134.	13.3	27
60	The ubiquitin ligase HERC3 attenuates NF- κ B-dependent transcription independently of its enzymatic activity by delivering the RelA subunit for degradation. <i>Nucleic Acids Research</i> , 2015, 43, gkv1064.	14.5	26
61	Characterization of a fully automated nanoelectrospray system with mass spectrometric detection for proteomic analyses. <i>Journal of Biomolecular Techniques</i> , 2002, 13, 72-84.	1.5	26
62	Aryl Hydrocarbon Receptor Activation by Dioxin Targets Phosphoenolpyruvate Carboxykinase (PEPCK) for ADP-ribosylation via 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)-inducible Poly(ADP-ribose) Polymerase (TiPARP). <i>Journal of Biological Chemistry</i> , 2013, 288, 21514-21525.	3.4	25
63	Integrated proteomic and metabolomic analysis suggests high rates of glycolysis are likely required to support high carotenoid accumulation in banana pulp. <i>Food Chemistry</i> , 2019, 297, 125016.	8.2	25
64	Proteomics insights into the effects of MSTN on muscle glucose and lipid metabolism in genetically edited cattle. <i>General and Comparative Endocrinology</i> , 2020, 291, 113237.	1.8	25
65	Signaling to the apical membrane and to the paracellular pathway: changes in the cytosolic proteome of <i>Aedes</i> Malpighian tubules. <i>Journal of Experimental Biology</i> , 2009, 212, 329-340.	1.7	24
66	Heat treatment of bovine colostrum: I. Effects on bacterial and somatic cell counts, immunoglobulin, insulin, and IGF-I concentrations, as well as the colostrum proteome. <i>Journal of Dairy Science</i> , 2020, 103, 9368-9383.	3.4	24
67	Characterization of protein glycosylation using chip-based infusion nanoelectrospray linear ion trap tandem mass spectrometry. <i>Journal of Biomolecular Techniques</i> , 2004, 15, 120-33.	1.5	23
68	Analytical technologies for identification and characterization of the plant N-glycoproteome. <i>Frontiers in Plant Science</i> , 2012, 3, 150.	3.6	22
69	Atmospheric Ammonia Affects Myofiber Development and Lipid Metabolism in Growing Pig Muscle. <i>Animals</i> , 2020, 10, 2.	2.3	22
70	Heat treatment of bovine colostrum: II. Effects on calf serum immunoglobulin, insulin, and IGF-I concentrations, and the serum proteome. <i>Journal of Dairy Science</i> , 2020, 103, 9384-9406.	3.4	20
71	The Secretome and N-Glycosylation Profiles of the Charophycean Green Alga, <i>Penium margaritaceum</i> , Resemble Those of Embryophytes. <i>Proteomes</i> , 2018, 6, 14.	3.5	17
72	Structure and chemistry of lysinoalanine crosslinking in the spirochaete flagella hook. <i>Nature Chemical Biology</i> , 2019, 15, 959-965.	8.0	17

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73	Both gut microbiota and cytokines act to atherosclerosis in ApoE ^{-/-} mice. <i>Microbial Pathogenesis</i> , 2020, 138, 103827.	2.9	17
74	A workflow for large-scale empirical identification of cell wall α -linked glycoproteins of tomato (<i>Solanum lycopersicum</i>) fruit by tandem mass spectrometry. <i>Electrophoresis</i> , 2013, 34, 2417-2431.	2.4	15
75	Reduction of the canonical function of a glycolytic enzyme enolase triggers immune responses that further affect metabolism and growth in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2022, 34, 1745-1767.	6.6	15
76	Temporal Differential Proteomes of <i>Clostridium difficile</i> in the Pig Ileal-Ligated Loop Model. <i>PLoS ONE</i> , 2012, 7, e45608.	2.5	13
77	MaMAPK3-MaICE1-MaPOD P7 pathway, a positive regulator of cold tolerance in banana. <i>BMC Plant Biology</i> , 2021, 21, 97.	3.6	13
78	HIF1 α stabilization in hypoxia is not oxidant-initiated. <i>ELife</i> , 2021, 10, .	6.0	13
79	Characterization of protein glycosylation using chip-based nanoelectrospray with precursor ion scanning quadrupole linear ion trap mass spectrometry. <i>Journal of Biomolecular Techniques</i> , 2005, 16, 209-19.	1.5	13
80	Serum Metabolomic and Lipidomic Profiling Reveals Novel Biomarkers of Efficacy for Benfotiamine in Alzheimer's Disease. <i>International Journal of Molecular Sciences</i> , 2021, 22, 13188.	4.1	13
81	The human brain acetylome reveals that decreased acetylation of mitochondrial proteins associates with Alzheimer's disease. <i>Journal of Neurochemistry</i> , 2021, 158, 282-296.	3.9	11
82	OsNOA1 functions in a threshold-dependent manner to regulate chloroplast proteins in rice at lower temperatures. <i>BMC Plant Biology</i> , 2018, 18, 44.	3.6	10
83	Engineered chemotaxis core signaling units indicate a constrained kinase-off state. <i>Science Signaling</i> , 2020, 13, .	3.6	10
84	Proteomic Analysis and Cell Viability of Nine Amnion, Chorion, Umbilical Cord, and Amniotic Fluid-Derived Products. <i>Cartilage</i> , 2021, 13, 495S-507S.	2.7	10
85	Serum Proteomics on the Basis of Discovery of Predictive Biomarkers of Response to Androgen Deprivation Therapy in Advanced Prostate Cancer. <i>Clinical Genitourinary Cancer</i> , 2019, 17, 248-253.e7.	1.9	9
86	Shotgun scanning glycomutagenesis: A simple and efficient strategy for constructing and characterizing neoglycoproteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	9
87	Overexpression of a CPYC-Type Glutaredoxin, OsGrxC2.2, Causes Abnormal Embryos and an Increased Grain Weight in Rice. <i>Frontiers in Plant Science</i> , 2019, 10, 848.	3.6	8
88	Secreted sphingomyelins modulate low mammary cancer incidence observed in certain mammals. <i>Scientific Reports</i> , 2020, 10, 20580.	3.3	8
89	Identification of ADP-ribosylation sites of CD38 mutants by precursor ion scanning mass spectrometry. <i>Analytical Biochemistry</i> , 2013, 433, 218-226.	2.4	7
90	Multi-omics analyses of red blood cell reveal antioxidation mechanisms associated with hemolytic toxicity of gossypol. <i>Oncotarget</i> , 2017, 8, 103693-103709.	1.8	7

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91	Probing the molecular regulation of lipopolysaccharide stress in piglet liver by comparative proteomics analysis. <i>Electrophoresis</i> , 2018, 39, 2321-2331.	2.4	7
92	Prenatal choline supplementation improves biomarkers of maternal docosahexaenoic acid (DHA) status among pregnant participants consuming supplemental DHA: a randomized controlled trial. <i>American Journal of Clinical Nutrition</i> , 2022, 116, 820-832.	4.7	7
93	Comparison of MS2, synchronous precursor selection MS3, and real-time search MS3 methodologies for lung proteomes of hydrogen sulfide treated swine. <i>Analytical and Bioanalytical Chemistry</i> , 2021, 413, 419-429.	3.7	6
94	Metabolism and global protein glycosylation are differentially expressed in healthy and osteoarthritic equine carpal synovial fluid. <i>Equine Veterinary Journal</i> , 2022, 54, 323-333.	1.7	6
95	Use of a stable-isotope-labeled reporter peptide and antioxidants for reliable quantification of methionine oxidation in a monoclonal antibody by liquid chromatography/mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 1734-1742.	1.5	3
96	Vitamin D kinetics in nonpregnant and pregnant women after a single oral dose of trideuterated vitamin D3. <i>Journal of Steroid Biochemistry and Molecular Biology</i> , 2022, 216, 106034.	2.5	3
97	Oxygen level regulates N-terminal translation elongation of selected proteins through deoxyhypusine hydroxylation. <i>Cell Reports</i> , 2022, 39, 110855.	6.4	3
98	Proteomics Analysis Reveals Altered Nutrients in the Whey Proteins of Dairy Cow Milk with Different Thermal Treatments. <i>Molecules</i> , 2021, 26, 4628.	3.8	2
99	Role of Four Conserved Active-Site Aspartic Acid Residues in <i>Thermobifida fusca</i> Endoglucanase Cel6A. <i>ACS Symposium Series</i> , 2000, , 28-38.	0.5	0
100	Aerial ammonia exposure induces the perturbation of the interorgan ammonia disposal and branched-chain amino acid catabolism in growing pigs. <i>Animal Nutrition</i> , 2021, 7, 947-958.	5.1	0
101	Quantitative proteomics reveals tissue-specific toxic mechanisms for acute hydrogen sulfide-induced injury of diverse organs in pig. <i>Science of the Total Environment</i> , 2022, 806, 150365.	8.0	0