Chengshu Wang

List of Publications by Year
in descending order

127 papers	13,703 citations	38742 50 h-index	21540 114 g-index
130 all docs	130 docs citations	130 times ranked	20042 citing authors

#	Article	IF	Citations
1	Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). Autophagy, 2016, 12, 1-222.	9.1	4,701
2	Genome Sequencing and Comparative Transcriptomics of the Model Entomopathogenic Fungi Metarhizium anisopliae and M. acridum. PLoS Genetics, 2011, 7, e1001264.	3.5	542
3	Genomic perspectives on the evolution of fungal entomopathogenicity in Beauveria bassiana. Scientific Reports, 2012, 2, 483.	3.3	512
4	Dual Detection of Fungal Infections in Drosophila via Recognition of Glucans and Sensing of Virulence Factors. Cell, 2006, 127, 1425-1437.	28.9	394
5	Genome sequence of the insect pathogenic fungus Cordyceps militaris, a valued traditional chinese medicine. Genome Biology, 2011, 12, R116.	9.6	359
6	Insect Pathogenic Fungi: Genomics, Molecular Interactions, and Genetic Improvements. Annual Review of Entomology, 2017, 62, 73-90.	11.8	288
7	The MAD1 Adhesin of Metarhizium anisopliae Links Adhesion with Blastospore Production and Virulence to Insects, and the MAD2 Adhesin Enables Attachment to Plants. Eukaryotic Cell, 2007, 6, 808-816.	3.4	265
8	A collagenous protective coat enables Metarhizium anisopliae to evade insect immune responses. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 6647-6652.	7.1	251
9	Trajectory and genomic determinants of fungal-pathogen speciation and host adaptation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16796-16801.	7.1	246
10	A scorpion neurotoxin increases the potency of a fungal insecticide. Nature Biotechnology, 2007, 25, 1455-1456.	17.5	203
11	Unveiling the biosynthetic puzzle of destruxins in <i>Metarhizium</i> species. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1287-1292.	7.1	203
12	Genetic engineering of fungal biocontrol agents to achieve greater efficacy against insect pests. Applied Microbiology and Biotechnology, 2010, 85, 901-907.	3.6	201
13	Fungal biosynthesis of the bibenzoquinone oosporein to evade insect immunity. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11365-11370.	7.1	182
14	Nutrition influences growth and virulence of the insect-pathogenic fungusMetarhizium anisopliae. FEMS Microbiology Letters, 2005, 251, 259-266.	1.8	181
15	The Metarhizium anisopliae Perilipin Homolog MPL1 Regulates Lipid Metabolism, Appressorial Turgor Pressure, and Virulence. Journal of Biological Chemistry, 2007, 282, 21110-21115.	3.4	175
16	Genomic and Secretomic Analyses Reveal Unique Features of the Lignocellulolytic Enzyme System of Penicillium decumbens. PLoS ONE, 2013, 8, e55185.	2.5	159
17	Divergent and Convergent Evolution of Fungal Pathogenicity. Genome Biology and Evolution, 2016, 8, 1374-1387.	2.5	157
18	Fungal Cordycepin Biosynthesis Is Coupled with the Production of the Safeguard Molecule Pentostatin. Cell Chemical Biology, 2017, 24, 1479-1489.e4.	5.2	145

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19	Differential gene expression by Metarhizium anisopliae growing in root exudate and host (Manduca) Tj ETQq1 1 0.784314 rgBT /Overlo Biology, 2005, 42, 704-718.	2.1	142
20	Developmental and Transcriptional Responses to Host and Nonhost Cuticles by the Specific Locust Pathogen Metarhizium anisopliae var. acridum. Eukaryotic Cell, 2005, 4, 937-947.	3.4	136
21	Genome survey uncovers the secrets of sex and lifestyle in caterpillar fungus. Science Bulletin, 2013, 58, 2846-2854.	1.7	126
22	Advances in fundamental and applied studies in China of fungal biocontrol agents for use against arthropod pests. Biological Control, 2014, 68, 129-135.	3.0	125
23	Improvement of cellulase activity in Trichoderma reesei by heterologous expression of a beta-glucosidase gene from Penicillium decumbens. Enzyme and Microbial Technology, 2011, 49, 366-371.	3.2	120
24	Construction of a cellulase hyper-expression system in Trichoderma reesei by promoter and enzyme engineering. Microbial Cell Factories, 2012, 11, 21.	4.0	105
25	Long-term strain improvements accumulate mutations in regulatory elements responsible for hyper-production of cellulolytic enzymes. Scientific Reports, 2013, 3, 1569.	3.3	104
26	Genomic and transcriptomic analysis of the endophytic fungus Pestalotiopsis fici reveals its lifestyle and high potential for synthesis of natural products. BMC Genomics, 2015, 16, 28.	2.8	102
27	High throughput profiling of the cotton bollworm Helicoverpa armigera immunotranscriptome during the fungal and bacterial infections. BMC Genomics, 2015, 16, 321.	2.8	100
28	Hindgut Innate Immunity and Regulation of Fecal Microbiota through Melanization in Insects. Journal of Biological Chemistry, 2012, 287, 14270-14279.	3.4	99
29	Origin and evolution of carnivorism in the Ascomycota (fungi). Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 10960-10965.	7.1	99
30	Divergent LysM effectors contribute to the virulence of Beauveria bassiana by evasion of insect immune defenses. PLoS Pathogens, 2017, 13, e1006604.	4.7	95
31	Investigations on the destruxin production of the entomopathogenic fungus Metarhizium anisopliae. Journal of Invertebrate Pathology, 2004, 85, 168-174.	3.2	93
32	Linkage of autophagy to fungal development, lipid storage and virulence in<i><i>Metarhizium robertsii</i></i>. Autophagy, 2013, 9, 538-549.	9.1	88
33	Comparison of mitochondrial genomes provides insights into intron dynamics and evolution in the caterpillar fungus Cordyceps militaris. Fungal Genetics and Biology, 2015, 77, 95-107.	2.1	86
34	Genomics-driven discovery of the pneumocandin biosynthetic gene cluster in the fungus Glarea lozoyensis. BMC Genomics, 2013, 14, 339.	2.8	83
35	MOS1 Osmosensor of <i>Metarhizium anisopliae</i> Is Required for Adaptation to Insect Host Hemolymph. Eukaryotic Cell, 2008, 7, 302-309.	3.4	82
36	<scp>MrpacC</scp> regulates sporulation, insect cuticle penetration and immune evasion in <scp><i>M</i></scp><i>etarhizium robertsii</i>. Environmental Microbiology, 2015, 17, 994-1008.	3.8	81

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37	Increased pathogenicity against coffee berry borer, Hypothenemus hampei (Coleoptera: Curculionidae) by Metarhizium anisopliae expressing the scorpion toxin (AaIT) gene. Journal of Invertebrate Pathology, 2008, 99, 220-226.	3.2	80
38	Advances in Genomics of Entomopathogenic Fungi. Advances in Genetics, 2016, 94, 67-105.	1.8	78
39	Fungi That Infect Insects: Altering Host Behavior and Beyond. PLoS Pathogens, 2015, 11, e1005037.	4.7	75
40	Cyclosporine Biosynthesis in <i>Tolypocladium inflatum</i> Benefits Fungal Adaptation to the Environment. MBio, 2018, 9, .	4.1	73
41	Colony sectorization of Metarhizium anisopliae is a sign of ageing. Microbiology (United Kingdom), 2005, 151, 3223-3236.	1.8	71
42	Molecular monitoring and evaluation of the application of the insect-pathogenic fungus Beauveria bassiana in southeast China. Journal of Applied Microbiology, 2004, 96, 861-870.	3.1	68
43	Recent developments and applications of metabolomics in microbiological investigations. TrAC - Trends in Analytical Chemistry, 2014, 56, 37-48.	11.4	68
44	Insecticidal evaluation of Beauveria bassiana engineered to express a scorpion neurotoxin and a cuticle degrading protease. Applied Microbiology and Biotechnology, 2008, 81, 515-522.	3.6	67
45	Concurrence of losing a chromosome and the ability to produce destruxins in a mutant ofMetarhizium anisopliae. FEMS Microbiology Letters, 2003, 226, 373-378.	1.8	66
46	Detection and characterisation ofpr1virulent gene deficiencies in the insect pathogenic fungusMetarhizium anisopliae. FEMS Microbiology Letters, 2002, 213, 251-255.	1.8	65
47	Insertion of an Esterase Gene into a Specific Locust Pathogen (Metarhizium acridum) Enables It to Infect Caterpillars. PLoS Pathogens, 2011, 7, e1002097.	4.7	64
48	Glycerol-3-Phosphate Acyltransferase Contributes to Triacylglycerol Biosynthesis, Lipid Droplet Formation, and Host Invasion in Metarhizium robertsii. Applied and Environmental Microbiology, 2013, 79, 7646-7653.	3.1	59
49	Improving UV resistance and virulence of Beauveria bassiana by genetic engineering with an exogenous tyrosinase gene. Journal of Invertebrate Pathology, 2012, 109, 105-109.	3.2	54
50	Genetics of Cordyceps and related fungi. Applied Microbiology and Biotechnology, 2013, 97, 2797-2804.	3.6	54
51	Molecular investigation on strain genetic relatedness and population structure of Beauveria bassiana. Environmental Microbiology, 2003, 5, 908-915.	3.8	50
52	Comparative Genomics and Transcriptomics Analyses Reveal Divergent Lifestyle Features of Nematode Endoparasitic Fungus Hirsutella minnesotensis. Genome Biology and Evolution, 2014, 6, 3077-3093.	2.5	50
53	Metabolomics reveals insect metabolic responses associated with fungal infection. Analytical and Bioanalytical Chemistry, 2015, 407, 4815-4821.	3.7	50
54	DEGENERATION OF ENTOMOGENOUS FUNGI. , 2006, , 213-226.		49

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55	Increasing oxidative stress tolerance and subculturing stability of Cordyceps militaris by overexpression of a glutathione peroxidase gene. Applied Microbiology and Biotechnology, 2013, 97, 2009-2015.	3.6	46
56	A small secreted protein triggers a TLR2/4-dependent inflammatory response during invasive Candida albicans infection. Nature Communications, 2019, 10, 1015.	12.8	45
57	Structure and biosynthesis of fumosorinone, a new protein tyrosine phosphatase 1B inhibitor firstly isolated from the entomogenous fungus Isaria fumosorosea. Fungal Genetics and Biology, 2015, 81, 191-200.	2.1	43
58	New perspectives on insect pathogens. Fungal Biology Reviews, 2011, 25, 84-88.	4.7	42
59	Transcriptional Profiling of Midgut Immunity Response and Degeneration in the Wandering Silkworm, Bombyx mori. PLoS ONE, 2012, 7, e43769.	2.5	42
60	Phylogeography and evolution of a fungalâ€“insect association on the <scp>T</scp>ibetan <scp>P</scp>lateau. Molecular Ecology, 2014, 23, 5337-5355.	3.9	42
61	<i>N</i>â€glycosylation affects the proper folding, enzymatic characteristics and production of a fungal Î²â€glucosidase. Biotechnology and Bioengineering, 2013, 110, 3075-3084.	3.3	41
62	Linkage of Oxidative Stress and Mitochondrial Dysfunctions to Spontaneous Culture Degeneration in Aspergillus nidulans. Molecular and Cellular Proteomics, 2014, 13, 449-461.	3.8	41
63	A phosphoketolase Mpk1 of bacterial origin is adaptively required for full virulence in the insectâ€pathogenic fungus <i>Metarhizium anisopliae</i>. Environmental Microbiology, 2009, 11, 2351-2360.	3.8	39
64	Biosynthesis of non-melanin pigment by a divergent polyketide synthase in Metarhizium robertsii. Fungal Genetics and Biology, 2015, 81, 142-149.	2.1	39
65	Basic Leucine Zipper (bZIP) Domain Transcription Factor MBZ1 Regulates Cell Wall Integrity, Spore Adherence, and Virulence in Metarhizium robertsii. Journal of Biological Chemistry, 2015, 290, 8218-8231.	3.4	39
66	Synergistic effect of <i>Aspergillus niger</i> and <i>Trichoderma reesei</i> enzyme sets on the saccharification of wheat straw and sugarcane bagasse. Biotechnology Journal, 2014, 9, 1329-1338.	3.5	38
67	Prophenoloxidase-Mediated Ex Vivo Immunity to Delay Fungal Infection after Insect Ecdysis. Frontiers in Immunology, 2017, 8, 1445.	4.8	37
68	Unveiling of Swainsonine Biosynthesis via a Multibranched Pathway in Fungi. ACS Chemical Biology, 2020, 15, 2476-2484.	3.4	37
69	A M35 family metalloprotease is required for fungal virulence against insects by inactivating host prophenoloxidases and beyond. Virulence, 2020, 11, 222-237.	4.4	37
70	Identification of a key G-protein coupled receptor in mediating appressorium formation and fungal virulence against insects. Science China Life Sciences, 2021, 64, 466-477.	4.9	36
71	Introgression and gene family contraction drive the evolution of lifestyle and host shifts of hypocrealean fungi. Mycology, 2018, 9, 176-188.	4.4	35
72	Duplication of a Pks gene cluster and subsequent functional diversification facilitate environmental adaptation in Metarhizium species. PLoS Genetics, 2018, 14, e1007472.	3.5	34

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73	Associated links among mtDNA glycation, oxidative stress and colony sectorization in Metarhizium anisopliae. Fungal Genetics and Biology, 2008, 45, 1300-1306.	2.1	32
74	The distinctive regulatory roles of PrtT in the cell metabolism of Penicillium oxalicum. Fungal Genetics and Biology, 2014, 63, 42-54.	2.1	32
75	Functional convergence and divergence of mating-type genes fulfilling in Cordyceps militaris. Fungal Genetics and Biology, 2016, 88, 35-43.	2.1	32
76	Molecular studies of co-formulated strains of the entomopathogenic fungus, Beauveria bassiana. Journal of Invertebrate Pathology, 2002, 80, 29-34.	3.2	30
77	Nuclear large subunit rDNA group I intron distribution in a population of Beauveria bassiana strains: phylogenetic implications. Mycological Research, 2003, 107, 1189-1200.	2.5	30
78	Developmental stage-specific gene expression profiling for a medicinal fungus<i>Cordyceps militaris</i>. Mycology, 2010, 1, 25-66.	4.4	30
79	Metabolic Conservation and Diversification of Metarhizium Species Correlate with Fungal Host-Specificity. Frontiers in Microbiology, 2016, 7, 2020.	3.5	29
80	Bioactive Metabolites and Potential Mycotoxins Produced by Cordyceps Fungi: A Review of Safety. Toxins, 2020, 12, 410.	3.4	27
81	MrSkn7 Controls Sporulation, Cell Wall Integrity, Autolysis, and Virulence in Metarhizium robertsii. Eukaryotic Cell, 2015, 14, 396-405.	3.4	26
82	Differentially expressed genes in resistant and susceptible Bombyx mori strains infected with a densonucleosis virus. Insect Biochemistry and Molecular Biology, 2008, 38, 853-861.	2.7	25
83	Phospholipid homeostasis maintains cell polarity, development and virulence in <i>metarhizium robertsii</i>. Environmental Microbiology, 2016, 18, 3976-3990.	3.8	25
84	Omics data reveal the unusual asexual-fruiting nature and secondary metabolic potentials of the medicinal fungus Cordyceps cicadae. BMC Genomics, 2017, 18, 668.	2.8	25
85	Diverse effect of phosphatidylcholine biosynthetic genes on phospholipid homeostasis, cell autophagy and fungal developments in <i>Metarhizium robertsii</i>. Environmental Microbiology, 2018, 20, 293-304.	3.8	25
86	Population genomics and evolution of a fungal pathogen after releasing exotic strains to control insect pests for 20 years. ISME Journal, 2020, 14, 1422-1434.	9.8	25
87	<i>Ophiocordyceps sinensis</i> , the flagship fungus of China: terminology, life strategy and ecology. Mycology, 2012, 3, 2-10.	4.4	25
88	Enhancing saccharification of wheat straw by mixing enzymes from genetically-modified Trichoderma reesei and Aspergillus niger. Biotechnology Letters, 2016, 38, 65-70.	2.2	24
89	Unveiling the function and regulation control of the DUF3129 family proteins in fungal infection of hosts. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180321.	4.0	23
90	Conservative production of galactosaminogalactan in Metarhizium is responsible for appressorium mucilage production and topical infection of insect hosts. PLoS Pathogens, 2021, 17, e1009656.	4.7	23

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91	Transgenic plants expressing the AaIT/GNA fusion protein show increased resistance and toxicity to both chewing and sucking pests. Insect Science, 2016, 23, 265-276.	3.0	22
92	Microbiome assembly on Drosophila body surfaces benefits the flies to combat fungal infections. IScience, 2022, 25, 104408.	4.1	21
93	Tryptamine accumulation caused by deletion of MrMao-1ÂinÂMetarhiziumÂgenome significantly enhances insecticidal virulence. PLoS Genetics, 2020, 16, e1008675.	3.5	20
94	The Bax inhibitor MrBI-1 regulates heat tolerance, apoptotic-like cell death and virulence in Metarhizium robertsii. Scientific Reports, 2015, 5, 10625.	3.3	20
95	Mass spectrometry as a tool for the selective profiling of destruxins; their first identification in <i>Lecanicillium longisporum</i>. Rapid Communications in Mass Spectrometry, 2009, 23, 1426-1434.	1.5	19
96	MrHex1 is Required for Woronin Body Formation, Fungal Development and Virulence in Metarhizium robertsii. Journal of Fungi (Basel, Switzerland), 2020, 6, 172.	3.5	17
97	Entomopathonic fungi and the genomics era.. , 2009, , 365-400.		16
98	Assessing the cytotoxic and mutagenic effects of secondary metabolites produced by several fungal biological control agents with the Ames assay and the VITOTOXÂ® test. Mutation Research - Genetic Toxicology and Environmental Mutagenesis, 2011, 722, 1-6.	1.7	15
99	Functional Operons in Secondary Metabolic Gene Clusters in <i>Glarea lozoyensis</i> (Fungi,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 1	4.1	15
100	China's fungal genomics initiative: a whitepaper. Mycology, 2010, 1, 1-8.	4.4	14
101	Nitrogen-starvation triggers cellular accumulation of triacylglycerol in Metarhizium robertsii. Fungal Biology, 2018, 122, 410-419.	2.5	14
102	Empirical Support for the Pattern of Competitive Exclusion between Insect Parasitic Fungi. Journal of Fungi (Basel, Switzerland), 2021, 7, 385.	3.5	14
103	Activation of microlipophagy during early infection of insect hosts by <i>Metarhizium robertsii</i>. Autophagy, 2022, 18, 608-623.	9.1	14
104	Mass spectrometric studies on the intrinsic stability of destruxin E fromMetarhizium anisopliae. Rapid Communications in Mass Spectrometry, 2004, 18, 2577-2586.	1.5	12
105	Production of Diverse Beauveriolide Analogs in Closely Related Fungi: a Rare Case of Fungal Chemodiversity. MSphere, 2020, 5, .	2.9	12
106	Inductive Production of the Iron-Chelating 2-Pyridones Benefits the Producing Fungus To Compete for Diverse Niches. MBio, 2021, 12, e0327921.	4.1	12
107	Sexuality Control and Sex Evolution in Fungi. Scientia Sinica Vitae, 2013, 43, 1090-1097.	0.3	10
108	Tolypocladamide H and the Proposed Tolypocladamide NRPS in <i>Tolypocladium</i> Species. Journal of Natural Products, 2022, 85, 1363-1373.	3.0	10

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109	The Stress-Responsive and Host-Oriented Role of Nonribosomal Peptide Synthetases in an Entomopathogenic Fungus, Beauveria bassiana. Journal of Microbiology and Biotechnology, 2017, 27, 439-449.	2.1	9
110	A vision for the innovative study of fungal biology in China: Presidential address. Mycology, 2015, 6, 1-3.	4.4	7
111	Phylogenetic and Exon?Intron Structure Analysis of Fungal Subtilisins: Support for a Mixed Model of Intron Evolution. Journal of Molecular Evolution, 2005, 60, 238-246.	1.8	6
112	Grand Challenges in the Research of Fungal Interactions With Animals. Frontiers in Fungal Biology, 2020, 1, .	2.0	6
113	Metatranscriptomics analysis of the fruiting caterpillar fungus collected from the Qinghai-Tibetan plateau. Scientia Sinica Vitae, 2018, 48, 562-570.	0.3	5
114	DEGENERATION OF ENTOMOGENOUS FUNGI. , 2006, , 213-226.		3
115	From taxonomy and industry to genetics: Fungal Biology in China. Fungal Genetics and Biology, 2015, 81, 110-112.	2.1	2
116	Congruence Amidst Discordance between Sequence and Protein-Content Based Phylogenies of Fungi. Journal of Fungi (Basel, Switzerland), 2020, 6, 134.	3.5	1
117	Preface to the Special Issue. Archives of Insect Biochemistry and Physiology, 2015, 88, 1-3.	1.5	0
118	Age-Dependent Increase of Bacterial Loads on <i>Drosophila</i> Surface Benefits the Flies to Combat Fungal Infections. SSRN Electronic Journal, 0, , .	0.4	0
119	Genomic and molecular features in fungi to interact with insects. , 2016, , .		0
120	Clarification of Swainsonine Biosynthesis by a Multi-Branched Pathway and Non-Accumulation of Mycotoxin in Plants after Fungal Colonization. SSRN Electronic Journal, 0, , .	0.4	0
121	Title is missing!. , 2020, 16, e1008675.		0
122	Title is missing!. , 2020, 16, e1008675.		0
123	Title is missing!. , 2020, 16, e1008675.		0
124	Title is missing!. , 2020, 16, e1008675.		0
125	Title is missing!. , 2020, 16, e1008675.		0
126	Title is missing!. , 2020, 16, e1008675.		0

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127	Detection and characterisation of pr1 virulent gene deficiencies in the insect pathogenic fungus Metarhizium anisopliae. FEMS Microbiology Letters, 2002, 213, 251-255.	1.8	0