

Wolfgang H Schwarz

List of Publications by Year in descending order

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100
papers

5,220
citations

81900

39
h-index

91884

69
g-index

102
all docs

102
docs citations

102
times ranked

4537
citing authors

#	ARTICLE	IF	CITATIONS
1	The cellulosome and cellulose degradation by anaerobic bacteria. <i>Applied Microbiology and Biotechnology</i> , 2001, 56, 634-649.	3.6	565
2	Biofuels from microbes. <i>Applied Microbiology and Biotechnology</i> , 2007, 77, 23-35.	3.6	463
3	Bacterial acetone and butanol production by industrial fermentation in the Soviet Union: use of hydrolyzed agricultural waste for biorefinery. <i>Applied Microbiology and Biotechnology</i> , 2006, 71, 587-597.	3.6	282
4	Activity staining of cellulases in polyacrylamide gels containing mixed linkage β -glucans. <i>Analytical Biochemistry</i> , 1987, 164, 72-77.	2.4	171
5	Reconstructing the clostridial n-butanol metabolic pathway in <i>Lactobacillus brevis</i> . <i>Applied Microbiology and Biotechnology</i> , 2010, 87, 635-646.	3.6	156
6	Genomics of cellulolytic bacteria. <i>Current Opinion in Biotechnology</i> , 2014, 29, 171-183.	6.6	140
7	Unraveling the microbiome of a thermophilic biogas plant by metagenome and metatranscriptome analysis complemented by characterization of bacterial and archaeal isolates. <i>Biotechnology for Biofuels</i> , 2016, 9, 171.	6.2	134
8	Functional subgenomics of <i>Clostridium thermocellum</i> cellulosomal genes: Identification of the major catalytic components in the extracellular complex and detection of three new enzymes. <i>Proteomics</i> , 2005, 5, 3646-3653.	2.2	128
9	Tracing residual recombinant feed molecules during digestion and rumen bacterial diversity in cattle fed transgene maize. <i>European Food Research and Technology</i> , 2004, 218, 269-273.	3.3	114
10	Properties of a <i>Clostridium thermocellum</i> Endoglucanase Produced in <i>Escherichia coli</i> . <i>Applied and Environmental Microbiology</i> , 1986, 51, 1293-1299.	3.1	102
11	Two noncellulosomal cellulases of <i>Clostridium thermocellum</i> , Cel9I and Cel48Y, hydrolyse crystalline cellulose synergistically. <i>FEMS Microbiology Letters</i> , 2007, 268, 194-201.	1.8	94
12	The thermostable alpha-l-rhamnosidase RamA of <i>Clostridium stercorarium</i> : biochemical characterization and primary structure of a bacterial alpha-l-rhamnoside hydrolase, a new type of inverting glycoside hydrolase. <i>Molecular Microbiology</i> , 2000, 35, 173-179.	2.5	91
13	Nucleotide sequence of the celC gene encoding endoglucanase C of <i>Clostridium thermocellum</i> . <i>Gene</i> , 1988, 63, 23-30.	2.2	90
14	<i>Herbinix hemicellulosilytica</i> gen. nov., sp. nov., a thermophilic cellulose-degrading bacterium isolated from a thermophilic biogas reactor. <i>International Journal of Systematic and Evolutionary Microbiology</i> , 2015, 65, 2365-2371.	1.7	90
15	Sequence analysis of the <i>Clostridium stercorarium</i> celZ gene encoding a thermoactive cellulase (Avicelase I): Identification of catalytic and cellulose-binding domains. <i>Molecular Genetics and Genomics</i> , 1990, 223, 258-267.	2.4	81
16	Enzyme system of <i>Clostridium stercorarium</i> for hydrolysis of arabinoxylan: reconstitution of the in vivo system from recombinant enzymes. <i>Microbiology (United Kingdom)</i> , 2004, 150, 2257-2266.	1.8	79
17	Structure of the <i>Clostridium thermocellum</i> gene licB and the encoded beta-1,3-1,4-glucanase. A catalytic region homologous to <i>Bacillus lichenases</i> joined to the reiterated domain of clostridial cellulases. <i>FEBS Journal</i> , 1992, 204, 13-19.	0.2	78
18	A major new component in the cellulosome of <i>Clostridium thermocellum</i> is a processive endo- β -1,4-glucanase producing cellotetraose. <i>FEMS Microbiology Letters</i> , 2005, 249, 353-358.	1.8	73

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19	Highly thermostable endo-1,3- β -glucanase (laminarinase) Lam A from <i>Thermotoga neapolitana</i> : nucleotide sequence of the gene and characterization of the recombinant gene product. <i>Microbiology (United Kingdom)</i> , 1997, 143, 1701-1708.	1.8	71
20	Multidomain Structure and Cellulosomal Localization of the <i>Clostridium thermocellum</i> Cellobiohydrolase CbhA. <i>Journal of Bacteriology</i> , 1998, 180, 3091-3099.	2.2	70
21	Molecular cloning of <i>Clostridium thermocellum</i> genes involved in β -glucan degradation in bacteriophage lambda. <i>Biotechnology Letters</i> , 1985, 7, 859-864.	2.2	69
22	Properties of a thermoactive β -1,3-1,4-glucanase (lichenase) from <i>Clostridium thermocellum</i> expressed in <i>Escherichia coli</i> . <i>Biochemical and Biophysical Research Communications</i> , 1991, 177, 447-452.	2.1	68
23	Lic16A of <i>Clostridium thermocellum</i> , a non-cellulosomal, highly complex endo- β -1,3-glucanase bound to the outer cell surface. <i>Microbiology (United Kingdom)</i> , 2003, 149, 1021-1031.	1.8	63
24	<i>Bacterial Cellulose Hydrolysis in Anaerobic Environmental Subsystems</i> <i>Clostridium thermocellum</i> and <i>Clostridium stercorarium</i> , Thermophilic Plant Fiber Degraders. <i>Annals of the New York Academy of Sciences</i> , 2008, 1125, 298-307.	3.8	62
25	The hemicellulose-degrading enzyme system of the thermophilic bacterium <i>Clostridium stercorarium</i> : comparative characterisation and addition of new hemicellulolytic glycoside hydrolases. <i>Biotechnology for Biofuels</i> , 2018, 11, 229.	6.2	62
26	Mutations in the Scaffoldin Gene, <i>cipA</i> , of <i>Clostridium thermocellum</i> with Impaired Cellulosome Formation and Cellulose Hydrolysis: Insertions of a New Transposable Element, IS1447, and Implications for Cellulase Synergism on Crystalline Cellulose. <i>Journal of Bacteriology</i> , 2008, 190, 4321-4327.	2.2	60
27	Two new cellulosome components encoded downstream of cell in the genome of <i>Clostridium thermocellum</i> : the non-processive endoglucanase CelN and the possibly structural protein CseP. <i>Microbiology (United Kingdom)</i> , 2003, 149, 515-524.	1.8	58
28	Two new major subunits in the cellulosome of <i>Clostridium thermocellum</i> : xyloglucanase Xgh74A and endoxylanase Xyn10D. <i>Microbiology (United Kingdom)</i> , 2005, 151, 3395-3401.	1.8	56
29	<i>In Vitro</i> Reconstitution of the Complete <i>Clostridium thermocellum</i> Cellulosome and Synergistic Activity on Crystalline Cellulose. <i>Applied and Environmental Microbiology</i> , 2012, 78, 4301-4307.	3.1	55
30	Hydrolytic bacteria in mesophilic and thermophilic degradation of plant biomass. <i>Engineering in Life Sciences</i> , 2010, 10, 528-536.	3.6	53
31	A newly described cellulosomal cellobiohydrolase, CelO, from <i>Clostridium thermocellum</i> : investigation of the exo-mode of hydrolysis, and binding capacity to crystalline cellulose The GenBank accession number for the sequence determined in this work is AJ275975.. <i>Microbiology (United Kingdom)</i> Tj ETQq1 1 0.784314 rgBT / Overlock	1.8	52
32	Chi18A, the Endochitinase in the Cellulosome of the Thermophilic, Cellulolytic Bacterium <i>Clostridium thermocellum</i> . <i>Applied and Environmental Microbiology</i> , 2002, 68, 3176-3179.	3.1	50
33	Genomics and prevalence of bacterial and archaeal isolates from biogas-producing microbiomes. <i>Biotechnology for Biofuels</i> , 2017, 10, 264.	6.2	50
34	<i>Thermotoga neapolitana</i> bgIB gene, upstream of lamA, encodes a highly thermostable β -glucosidase that is a laminariase. <i>Microbiology (United Kingdom)</i> , 1997, 143, 3537-3542.	1.8	48
35	Debranching of arabinoxylan: properties of the thermoactive recombinant β -L-arabinofuranosidase from <i>Clostridium stercorarium</i> (ArfB). <i>Applied Microbiology and Biotechnology</i> , 1995, 43, 856-860.	3.6	47
36	The binding pattern of two carbohydrate-binding modules of laminarinase Lam16A from <i>Thermotoga neapolitana</i> : differences in β -glucan binding within family CBM4. <i>Microbiology (United Kingdom)</i> , 2001, 147, 621-629.	1.8	47

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37	Extracellular Glycosyl Hydrolases from Clostridia. <i>Advances in Applied Microbiology</i> , 2004, 56, 215-261.	2.4	45
38	Comparative characterization of all cellulosomal cellulases from <i>Clostridium thermocellum</i> reveals high diversity in endoglucanase product formation essential for complex activity. <i>Biotechnology for Biofuels</i> , 2017, 10, 240.	6.2	45
39	Isolation of mesophilic solvent-producing clostridia from Colombian sources: physiological characterization, solvent production and polysaccharide hydrolysis. <i>Journal of Biotechnology</i> , 2000, 79, 117-126.	3.8	44
40	Isolation of a new butanol-producing <i>Clostridium</i> strain: High level of hemicellulosic activity and structure of solventogenesis genes of a new <i>Clostridium saccharobutylicum</i> isolate. <i>Systematic and Applied Microbiology</i> , 2009, 32, 449-459.	2.8	43
41	A new method to evaluate temperature vs. pH activity profiles for biotechnological relevant enzymes. <i>Biotechnology for Biofuels</i> , 2017, 10, 234.	6.2	39
42	Hydrolysis of citrus peel naringin by recombinant β -D-glucosaminidase from <i>Clostridium stercorarium</i> . <i>Journal of Chemical Technology and Biotechnology</i> , 2010, 85, 1419-1422.	3.2	38
43	Molecular characterization and enzymatic hydrolysis of naringin extracted from kinnow peel waste. <i>International Journal of Biological Macromolecules</i> , 2011, 48, 58-62.	7.5	35
44	Characterization of the arabinoxylan-degrading machinery of the thermophilic bacterium <i>Herbinix hemicellulosilytica</i> Six new xylanases, three arabinofuranosidases and one xylosidase. <i>Journal of Biotechnology</i> , 2017, 257, 122-130.	3.8	35
45	<i>Herbivorax saccincola</i> gen. nov., sp. nov., a cellulolytic, anaerobic, thermophilic bacterium isolated via in sacco enrichments from a lab-scale biogas reactor. <i>International Journal of Systematic and Evolutionary Microbiology</i> , 2016, 66, 4458-4463.	1.7	35
46	Nucleotide sequence of β -D-glucosaminidase of <i>Clostridium stercorarium</i> , and prediction of catalytic residues of β -D-glucosaminidases based on local similarity with several families of glycosyl hydrolases. <i>FEMS Microbiology Letters</i> , 1998, 164, 337-343.	1.8	32
47	Carbohydrate-binding properties of a separately folding protein module from β -1,3-glucanase Lic16A of <i>Clostridium thermocellum</i> . <i>Microbiology (United Kingdom)</i> , 2009, 155, 2442-2449.	1.8	32
48	Structure of the <i>Clostridium stercorarium</i> gene <i>cely</i> encoding the exo-1,4- β -D-glucanase Avicelase II. <i>Microbiology (United Kingdom)</i> , 1997, 143, 891-898.	1.8	32
49	High-level expression of <i>Clostridium thermocellum</i> cellulase genes in <i>Escherichia coli</i> . <i>Applied Microbiology and Biotechnology</i> , 1987, 27, 50.	3.6	31
50	Xylan degradation by the thermophile <i>Clostridium stercorarium</i> : Cloning and expression of xylanase, β -D-xylosidase, and β -L-arabinofuranosidase genes in <i>Escherichia coli</i> . <i>Biochemical and Biophysical Research Communications</i> , 1990, 170, 368-374.	2.1	31
51	New solvent-producing <i>Clostridium</i> sp. strains, hydrolyzing a wide range of polysaccharides, are closely related to <i>Clostridium butyricum</i> . <i>Journal of Industrial Microbiology and Biotechnology</i> , 2001, 27, 329-335.	3.0	30
52	Complete genome sequence of the cellulolytic thermophile <i>Ruminoclostridium cellulosi</i> wild-type strain DG5 isolated from a thermophilic biogas plant. <i>Journal of Biotechnology</i> , 2014, 188, 136-137.	3.8	30
53	Isolation of a <i>Clostridium thermocellum</i> gene encoding a thermostable β -1, 3-glucanase (laminarinase). <i>Biotechnology Letters</i> , 1988, 10, 225-230.	2.2	28
54	Duplicated <i>Clostridium thermocellum</i> cellobiohydrolase gene encoding cellulosomal subunits S3 and S5. <i>Applied Microbiology and Biotechnology</i> , 1999, 51, 852-859.	3.6	28

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55	Degradation of barley β -glucan by endoglucanase C of <i>Clostridium thermocellum</i> . <i>Applied Microbiology and Biotechnology</i> , 1988, 29, 25-31.	3.6	27
56	Identification of endoxylanase XynE from <i>Clostridium thermocellum</i> as the first xylanase of glycoside hydrolase family GH141. <i>Scientific Reports</i> , 2017, 7, 11178.	3.3	27
57	HPAEC-PAD for oligosaccharide analysis—novel insights into analyte sensitivity and response stability. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 7169-7181.	3.7	26
58	Comparative genotyping of <i>Clostridium thermocellum</i> strains isolated from biogas plants: Genetic markers and characterization of cellulolytic potential. <i>Systematic and Applied Microbiology</i> , 2014, 37, 311-319.	2.8	24
59	One-step purification and immobilization of His-tagged rhamnosidase for naringin hydrolysis. <i>Process Biochemistry</i> , 2010, 45, 451-456.	3.7	23
60	Synergism of Glycoside Hydrolase Secretomes from Two Thermophilic Bacteria Cocultivated on Lignocellulose. <i>Applied and Environmental Microbiology</i> , 2014, 80, 2592-2601.	3.1	23
61	DNA and RNA Extraction and Quantitative Real-Time PCR-Based Assays for Biogas Biocenoses in an Interlaboratory Comparison. <i>Bioengineering</i> , 2016, 3, 7.	3.5	23
62	Purification and cellulosomal localization of <i>Clostridium thermocellum</i> mixed linkage β -glucanase LicB (1,3 β ,4 β -D-glucanase). <i>Biotechnology Letters</i> , 1994, 16, 29-34.	2.2	22
63	Nucleotide sequence of the <i>Clostridium thermocellum</i> laminarinase gene. <i>Biochemical and Biophysical Research Communications</i> , 1991, 181, 507-512.	2.1	21
64	Protease inhibitors in bacteria: an emerging concept for the regulation of bacterial protein complexes?. <i>Molecular Microbiology</i> , 2006, 60, 1323-1326.	2.5	21
65	Draft genome sequence of the cellulolytic <i>Clostridium thermocellum</i> wild-type strain BC1 playing a role in cellulosic biomass degradation. <i>Journal of Biotechnology</i> , 2013, 168, 62-63.	3.8	21
66	Draft genome sequence of <i>Herbinix hemicellulosilytica</i> T3/55T, a new thermophilic cellulose degrading bacterium isolated from a thermophilic biogas reactor. <i>Journal of Biotechnology</i> , 2015, 214, 59-60.	3.8	21
67	Thermostable multifunctional GH74 xyloglucanase from <i>Myceliophthora thermophila</i> : high-level expression in <i>Pichia pastoris</i> and characterization of the recombinant protein. <i>Applied Microbiology and Biotechnology</i> , 2017, 101, 5653-5666.	3.6	21
68	Cloning and expression of <i>Clostridium stercorarium</i> cellulase genes in <i>Escherichia coli</i> . <i>Biotechnology Letters</i> , 1989, 11, 461-466.	2.2	20
69	Enzymes for digestion of cellulose and other polysaccharides in the gut of longhorn beetle larvae, <i>Rhagium inquisitor</i> L. (Col., Cerambycidae). <i>International Biodeterioration and Biodegradation</i> , 2003, 51, 175-179.	3.9	19
70	Optimizing the composition of a synthetic cellulosome complex for the hydrolysis of softwood pulp: identification of the enzymatic core functions and biochemical complex characterization. <i>Biotechnology for Biofuels</i> , 2018, 11, 220.	6.2	19
71	Molecular Characterization of Four Strains of the Cellulolytic Thermophile <i>Clostridium stercorarium</i> . <i>Bioscience, Biotechnology and Biochemistry</i> , 1995, 59, 1661-1665.	1.3	18
72	Complete Genome Sequence of <i>Clostridium stercorarium</i> subsp. <i>stercorarium</i> Strain DSM 8532, a Thermophilic Degrader of Plant Cell Wall Fibers. <i>Genome Announcements</i> , 2013, 1, e0007313.	0.8	18

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73	Cloning the <i>Clostridium thermocellum</i> thermostable laminarinase gene in <i>Escherichia coli</i> : The properties of the enzyme thus produced. <i>Biotechnology Letters</i> , 1990, 12, 811-816.	2.2	17
74	An untapped bacterial cellulolytic community enriched from coastal marine sediment under anaerobic and thermophilic conditions. <i>FEMS Microbiology Letters</i> , 2012, 335, 39-46.	1.8	17
75	Differences in biomass degradation between newly isolated environmental strains of <i>Clostridium thermocellum</i> and heterogeneity in the size of the cellulosomal scaffoldin. <i>Systematic and Applied Microbiology</i> , 2015, 38, 424-432.	2.8	16
76	Extracellular glycosyl hydrolase activity of the <i>Clostridium</i> strains producing acetone, butanol, and ethanol. <i>Applied Biochemistry and Microbiology</i> , 2008, 44, 42-47.	0.9	15
77	First draft genome sequence of the amylolytic <i>Bacillus thermoamylovorans</i> wild-type strain 1A1 isolated from a thermophilic biogas plant. <i>Journal of Biotechnology</i> , 2014, 192, 154-155.	3.8	15
78	Transmating: conjugative transfer of a new broad host range expression vector to various <i>Bacillus</i> species using a single protocol. <i>BMC Microbiology</i> , 2018, 18, 56.	3.3	15
79	Biochemical characterisation of four rhamnosidases from thermophilic bacteria of the genera <i>Thermotoga</i> , <i>Caldicellulosiruptor</i> and <i>Thermoclostridium</i> . <i>Scientific Reports</i> , 2019, 9, 15924.	3.3	13
80	Isolation of a solventogenic <i>Clostridium</i> sp. strain: Fermentation of glycerol to n-butanol, analysis of the bcs operon region and its potential regulatory elements. <i>Systematic and Applied Microbiology</i> , 2014, 37, 1-9.	2.8	12
81	Novel endo-(1,4)- β -glucanase Bgh12A and xyloglucanase Xgh12B from <i>Aspergillus cervinus</i> belong to GH12 subgroup I and II, respectively. <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 7553-7566.	3.6	11
82	Complete Genome Sequence of the Novel Cellulolytic, Anaerobic, Thermophilic Bacterium <i>Herbivorax saccincola</i> Type Strain GGR1, Isolated from a Lab Scale Biogas Reactor as Established by Illumina and Nanopore MinION Sequencing. <i>Genome Announcements</i> , 2018, 6, .	0.8	10
83	Isolation and properties of acetate kinase- and phosphotransacetylase-negative mutants of <i>Thermoanaerobacter thermohydrosulfuricus</i> . <i>Microbiology (United Kingdom)</i> , 1995, 141, 2891-2896.	1.8	9
84	Cloning and characterisation of a large metagenomic DNA fragment containing glycosyl-hydrolase genes. <i>Molecular Genetics, Microbiology and Virology</i> , 2009, 24, 12-16.	0.3	8
85	Complete Genome Sequence of <i>Herbinix luporum</i> SD1D, a New Cellulose-Degrading Bacterium Isolated from a Thermophilic Biogas Reactor. <i>Genome Announcements</i> , 2016, 4, .	0.8	8
86	Milling byproducts are an economically viable substrate for butanol production using clostridial ABE fermentation. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 8679-8689.	3.6	8
87	Evaluation of promoter sequences for the secretory production of a <i>Clostridium thermocellum</i> cellulase in <i>Paenibacillus polymyxa</i> . <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 10147-10159.	3.6	7
88	The Role of Cellulose-Hydrolyzing Bacteria in the Production of Biogas from Plant Biomass. <i>Microbiology Monographs</i> , 2015, , 335-361.	0.6	6
89	Addition of β -galactosidase boosts the xyloglucan degradation capability of endoglucanase Cel9D from <i>Clostridium thermocellum</i> . <i>Biotechnology for Biofuels</i> , 2018, 11, 238.	6.2	6
90	Organization of the Chromosomal Region Containing the Genes <i>lexA</i> and <i>topA</i> in <i>Thermotoga neapolitana</i> . Primary Structure of <i>LexA</i> Reveals Phylogenetic Relevance. <i>Systematic and Applied Microbiology</i> , 1999, 22, 174-178.	2.8	5

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91	Disaccharide binding module CBM28 of endoglucanase Cel5D from <i>Caldicellulosiruptor bescii</i> recognizes crystalline cellulose. <i>International Journal of Biological Macromolecules</i> , 2018, 107, 305-311.	7.5	4
92	Unusual substrate specificity in GH family 12: structure–function analysis of glucanases Bgh12A and Xgh12B from <i>Aspergillus cervinus</i> , and Egh12 from <i>Thielavia terrestris</i> . <i>Applied Microbiology and Biotechnology</i> , 2022, 106, 1493-1509.	3.6	4
93	A Novel Primer Mixture for GH48 Genes: Quantification and Identification of Truly Cellulolytic Bacteria in Biogas Fermenters. <i>Microorganisms</i> , 2020, 8, 1297.	3.6	3
94	Stimulation of bacterial DNA transformation by cattle saliva: implications for using genetically modified plants in animal feed. <i>World Journal of Microbiology and Biotechnology</i> , 2009, 25, 457-463.	3.6	2
95	Handling gene and protein names in the age of bioinformatics: the special challenge of secreted multimodular bacterial enzymes such as the <i>cbhA/cbh9A</i> gene of <i>Clostridium thermocellum</i> . <i>World Journal of Microbiology and Biotechnology</i> , 2018, 34, 42.	3.6	2
96	Strategic aromatic residues in the catalytic cleft of the xyloglucanase MtXgh74 modifying thermostability, mode of enzyme action, and viscosity reduction ability. <i>Applied Microbiology and Biotechnology</i> , 2021, 105, 1461-1476.	3.6	2
97	Biochemical and Structural Characterization of Thermostable GH159 Glycoside Hydrolases Exhibiting \pm -L-Arabinofuranosidase Activity. <i>Frontiers in Molecular Biosciences</i> , 0, 9, .	3.5	2
98	Draft Genome Sequence of <i>Propionispora</i> sp. Strain 2/2-37, a New Xylan-Degrading Bacterium Isolated from a Mesophilic Biogas Reactor. <i>Genome Announcements</i> , 2016, 4, .	0.8	1
99	Draft Genome Sequence of <i>Paenibacillus polymyxa</i> DSM 292, a Gram-Positive, Spore-Forming Soil Bacterium with High Biotechnological Potential. <i>Microbiology Resource Announcements</i> , 2020, 9, .	0.6	1
100	Eine bionische Nanomaschine für die Hydrolyse kristalliner Cellulose. <i>Chemie-Ingenieur-Technik</i> , 2008, 80, 1373-1373.	0.8	0