Robert M Kelly

List of Publications by Year
in descending order

241 papers	10,737 citations	23544 58 h-index	49868 87 g-index
252 all docs	252 docs citations	252 times ranked	7734 citing authors

#	Article	IF	Citations
1	A genomic catalog of Earthâ€™s microbiomes. Nature Biotechnology, 2021, 39, 499-509.	9.4	457
2	Extremely thermophilic microorganisms for biomass conversion: status and prospects. Current Opinion in Biotechnology, 2008, 19, 210-217.	3.3	236
3	Hydrogenase of the hyperthermophile Pyrococcus furiosus is an elemental sulfur reductase or sulfhydrogenase: evidence for a sulfur-reducing hydrogenase ancestor.. Proceedings of the National Academy of Sciences of the United States of America, 1993, 90, 5341-5344.	3.3	187
4	Global analysis of carbohydrate utilization by Lactobacillus acidophilus using cDNA microarrays. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 3816-3821.	3.3	185
5	Finding and using hyperthermophilic enzymes. Trends in Biotechnology, 1998, 16, 329-332.	4.9	180
6	Purification and characterization of an alpha-glucosidase from a hyperthermophilic archaebacterium, Pyrococcus furiosus, exhibiting a temperature optimum of 105 to 115 degrees C. Journal of Bacteriology, 1990, 172, 3654-3660.	1.0	172
7	Characterization of Amylolytic Enzymes, Having Both Î±-1,4 and Î±-1,6 Hydrolytic Activity, from the Thermophilic Archaea <i>Pyrococcus furiosus</i> and <i>Thermococcus litoralis</i>. Applied and Environmental Microbiology, 1993, 59, 2614-2621.	1.4	162
8	The Genome Sequence of the Metal-Mobilizing, Extremely Thermoacidophilic Archaeon <i>Metallosphaera sedula</i> Provides Insights into Bioleaching-Associated Metabolism. Applied and Environmental Microbiology, 2008, 74, 682-692.	1.4	160
9	Extremozymes: Expanding the Limits of Biocatalysis. Nature Biotechnology, 1995, 13, 662-668.	9.4	154
10	Extremely thermophilic microorganisms as metabolic engineering platforms for production of fuels and industrial chemicals. Frontiers in Microbiology, 2015, 6, 1209.	1.5	147
11	Thermophilic lignocellulose deconstruction. FEMS Microbiology Reviews, 2014, 38, 393-448.	3.9	145
12	Hydrogenomics of the Extremely Thermophilic Bacterium <i>Caldicellulosiruptor saccharolyticus</i>. Applied and Environmental Microbiology, 2008, 74, 6720-6729.	1.4	142
13	Growth Physiology of the Hyperthermophilic Archaeon Thermococcus litoralis: Development of a Sulfur-Free Defined Medium, Characterization of an Exopolysaccharide, and Evidence of Biofilm Formation. Applied and Environmental Microbiology, 1996, 62, 4478-4485.	1.4	131
14	Role of Polysulfides in Reduction of Elemental Sulfur by the Hyperthermophilic Archaebacterium <i>Pyrococcus furiosus</i>. Applied and Environmental Microbiology, 1990, 56, 1255-1262.	1.4	129
15	Characterization of Amylolytic Enzyme Activities Associated with the Hyperthermophilic Archaebacterium <i>Pyrococcus furiosus</i>. Applied and Environmental Microbiology, 1990, 56, 1985-1991.	1.4	127
16	An Endoglucanase, EglA, from the Hyperthermophilic Archaeon <i>Pyrococcus furiosus</i> Hydrolyzes Î²-1,4 Bonds in Mixed-Linkage (1â†’3),(1â†’4)-Î²- <scp>d</scp> -Glucans and Cellulose. Journal of Bacteriology, 1999, 181, 284-290.	1.0	127
17	Bioenergetics of sulfur reduction in the hyperthermophilic archaeon Pyrococcus furiosus. Journal of Bacteriology, 1993, 175, 1823-1830.	1.0	123
18	Exploiting microbial hyperthermophilicity to produce an industrial chemical, using hydrogen and carbon dioxide. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5840-5845.	3.3	121

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19	Carbohydrate-induced Differential Gene Expression Patterns in the Hyperthermophilic Bacterium Thermotoga maritima. Journal of Biological Chemistry, 2003, 278, 7540-7552.	1.6	117
20	Characterization of sodium dodecyl sulfate-resistant proteolytic activity in the hyperthermophilic archaebacterium Pyrococcus furiosus. Applied and Environmental Microbiology, 1990, 56, 1992-1998.	1.4	117
21	Comparison of a Î²-Glucosidase and a Î²-Mannosidase from the Hyperthermophilic Archaeon Pyrococcus furiosus. Journal of Biological Chemistry, 1996, 271, 23749-23755.	1.6	116
22	Identification of Components of Electron Transport Chains in the Extremely Thermoacidophilic Crenarchaeon <i>Metallosphaera sedula</i> through Iron and Sulfur Compound Oxidation Transcriptomes. Applied and Environmental Microbiology, 2008, 74, 7723-7732.	1.4	109
23	Microbial biochemistry, physiology, and biotechnology of hyperthermophilicThermotogaspecies. FEMS Microbiology Reviews, 2006, 30, 872-905.	3.9	108
24	ENZYMES FROM MICROORGANISMS IN EXTREME ENVIRONMENTS. Chemical & Engineering News, 1995, 73, 32-42.	0.2	107
25	Phylogenetic, Microbiological, and Glycoside Hydrolase Diversities within the Extremely Thermophilic, Plant Biomass-Degrading Genus <i>Caldicellulosiruptor</i>. Applied and Environmental Microbiology, 2010, 76, 8084-8092.	1.4	105
26	xylA cloning and sequencing and biochemical characterization of xylose isomerase from Thermotoga neapolitana. Applied and Environmental Microbiology, 1995, 61, 1867-1875.	1.4	104
27	Microwave Activation of Enzymatic Catalysis. Journal of the American Chemical Society, 2008, 130, 10048-10049.	6.6	103
28	Insights into plant biomass conversion from the genome of the anaerobic thermophilic bacterium Caldicellulosiruptor bescii DSM 6725. Nucleic Acids Research, 2011, 39, 3240-3254.	6.5	103
29	Regulation of Endo-Acting Glycosyl Hydrolases in the Hyperthermophilic Bacterium Thermotoga maritima Grown on Glucan- and Mannan-Based Polysaccharides. Applied and Environmental Microbiology, 2002, 68, 545-554.	1.4	102
30	Purification and characterization of a highly thermostable glucose isomerase produced by the extremely thermophilic eubacterium,Thermotoga maritima. Biotechnology and Bioengineering, 1993, 41, 878-886.	1.7	100
31	Heat Shock Response by the Hyperthermophilic Archaeon Pyrococcus furiosus. Applied and Environmental Microbiology, 2003, 69, 2365-2371.	1.4	100
32	Carbohydrate Utilization Patterns for the Extremely Thermophilic Bacterium <i>Caldicellulosiruptor saccharolyticus</i> Reveal Broad Growth Substrate Preferences. Applied and Environmental Microbiology, 2009, 75, 7718-7724.	1.4	98
33	Sequence, expression in Escherichia coli, and analysis of the gene encoding a novel intracellular protease (PfpI) from the hyperthermophilic archaeon Pyrococcus furiosus. Journal of Bacteriology, 1996, 178, 2605-2612.	1.0	96
34	Caldicellulosiruptor Core and Pangenomes Reveal Determinants for Noncellulosomal Thermophilic Deconstruction of Plant Biomass. Journal of Bacteriology, 2012, 194, 4015-4028.	1.0	96
35	Effect of carbon and nitrogen sources on growth dynamics and exopolysaccharide production for the hyperthermophilic archaeonThermococcus litoralis and bacteriumThermotoga maritima. Biotechnology and Bioengineering, 2000, 69, 537-547.	1.7	94
36	Population density-dependent regulation of exopolysaccharide formation in the hyperthermophilic bacterium Thermotoga maritima. Molecular Microbiology, 2004, 55, 664-674.	1.2	89

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37	Biochemical Analysis ofThermotoga maritimaGH36 Î±-Galactosidase (TmGalA) Confirms the Mechanistic Commonality of Clan GH-D Glycoside Hydrolasesâ€. Biochemistry, 2007, 46, 3319-3330.	1.2	87
38	Biological conversion of carbon dioxide and hydrogen into liquid fuels and industrial chemicals. Current Opinion in Biotechnology, 2013, 24, 376-384.	3.3	87
39	Single gene insertion drives bioalcohol production by a thermophilic archaeon. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17618-17623.	3.3	86
40	Growth of Hyperthermophilic Archaeon Pyrococcus furiosus on Chitin Involves Two Family 18 Chitinases. Applied and Environmental Microbiology, 2003, 69, 3119-3128.	1.4	85
41	Hydrogenesis in hyperthermophilic microorganisms: Implications for biofuels. Metabolic Engineering, 2008, 10, 394-404.	3.6	80
42	Transcriptional Analysis of Biofilm Formation Processes in the Anaerobic, Hyperthermophilic Bacterium Thermotoga maritima. Applied and Environmental Microbiology, 2004, 70, 6098-6112.	1.4	79
43	Aflatoxin conducive and non-conducive growth conditions reveal new gene associations with aflatoxin production. Fungal Genetics and Biology, 2005, 42, 506-518.	0.9	79
44	Rheology and Molecular Weight Changes during Enzymatic Degradation of a Water-Soluble Polymer. Macromolecules, 1999, 32, 294-300.	2.2	78
45	Uranium extremophily is an adaptive, rather than intrinsic, feature for extremely thermoacidophilic <i>Metallosphaera</i> species. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 16702-16707.	3.3	76
46	An Expression-Driven Approach to the Prediction of Carbohydrate Transport and Utilization Regulons in theHyperthermophilic Bacterium Thermotoga maritima. Journal of Bacteriology, 2005, 187, 7267-7282.	1.0	75
47	Denaturation and Aggregation of Three Î±-Lactalbumin Preparations at Neutral pH. Journal of Agricultural and Food Chemistry, 2005, 53, 3182-3190.	2.4	75
48	Carbohydrate and lignin are simultaneously solubilized from unpretreated switchgrass by microbial action at high temperature. Energy and Environmental Science, 2013, 6, 2186.	15.6	75
49	Metabolism in hyperthermophilic microorganisms. Antonie Van Leeuwenhoek, 1994, 66, 247-270.	0.7	73
50	The Confluence of Heavy Metal Biooxidation and Heavy Metal Resistance: Implications for Bioleaching by Extreme Thermoacidophiles. Minerals (Basel, Switzerland), 2015, 5, 397-451.	0.8	73
51	Physiological Versatility of the Extremely Thermoacidophilic Archaeon <i>Metallosphaera sedula</i> Supported by Transcriptomic Analysis of Heterotrophic, Autotrophic, and Mixotrophic Growth. Applied and Environmental Microbiology, 2010, 76, 931-935.	1.4	70
52	Bioenergetic Response of the Extreme Thermoacidophile Metallosphaera sedula to Thermal and Nutritional Stresses. Applied and Environmental Microbiology, 1995, 61, 2314-2321.	1.4	70
53	Dynamic Metabolic Adjustments and Genome Plasticity Are Implicated in the Heat Shock Response of the Extremely Thermoacidophilic Archaeon Sulfolobus solfataricus. Journal of Bacteriology, 2006, 188, 4553-4559.	1.0	68
54	Extreme thermophiles: moving beyond single-enzyme biocatalysis. Current Opinion in Chemical Engineering, 2012, 1, 363-372.	3.8	67

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55	Biotechnology of extremely thermophilic archaea. FEMS Microbiology Reviews, 2018, 42, 543-578.	3.9	67
56	Extremely Thermophilic Archaebacteria: Biological and Engineering Considerations. Biotechnology Progress, 1988, 4, 47-62.	1.3	66
57	Transcriptional and Biochemical Analysis of Starch Metabolism in the Hyperthermophilic Archaeon Pyrococcus furiosus. Journal of Bacteriology, 2006, 188, 2115-2125.	1.0	64
58	Characterization of extremely thermostable enzymatic breakers (Î±-1,6-galactosidase and Î²-1,4-mannanase) from the hyperthermophilic bacterium Thermotoga neapolitana 5068 for hydrolysis of guar gum. , 2000, 52, 332-339.		63
59	Glycoside hydrolase inventory drives plant polysaccharide deconstruction by the extremely thermophilic bacterium <i>Caldicellulosiruptor saccharolyticus</i>. Biotechnology and Bioengineering, 2011, 108, 1559-1569.	1.7	61
60	The Family 1 Î²-Glucosidases fromPyrococcus furiosusandAgrobacterium faecalisShare a Common Catalytic Mechanismâ€. Biochemistry, 1998, 37, 17170-17178.	1.2	59
61	The Thermotoga maritima Phenotype Is Impacted by Syntrophic Interaction with Methanococcus jannaschii in Hyperthermophilic Coculture. Applied and Environmental Microbiology, 2006, 72, 811-818.	1.4	59
62	<i>Polysaccharide Degradation and Synthesis by Extremely Thermophilic Anaerobes</i>. Annals of the New York Academy of Sciences, 2008, 1125, 322-337.	1.8	58
63	Role of vapBC toxinâ€"antitoxin loci in the thermal stress response of Sulfolobus solfataricus. Biochemical Society Transactions, 2009, 37, 123-126.	1.6	58
64	Transcriptomes of the Extremely Thermoacidophilic Archaeon Metallosphaera sedula Exposed to Metal â€œShockâ€• Reveal Generic and Specific Metal Responses. Applied and Environmental Microbiology, 2016, 82, 4613-4627.	1.4	58
65	Regulation of Proteolytic Activity in the Hyperthermophile <i>Pyrococcus furiosus</i>. Applied and Environmental Microbiology, 1992, 58, 1134-1141.	1.4	57
66	Impact of Molecular Hydrogen on Chalcopyrite Bioleaching by the Extremely Thermoacidophilic Archaeon <i>Metallosphaera sedula</i>. Applied and Environmental Microbiology, 2010, 76, 2668-2672.	1.4	55
67	The genus<i>Thermotoga</i>: recent developments. Environmental Technology (United Kingdom), 2010, 31, 1169-1181.	1.2	55
68	Cross-linked Polymer Nanofibers for Hyperthermophilic Enzyme Immobilization: Approaches to Improve Enzyme Performance. ACS Applied Materials & Interfaces, 2014, 6, 11899-11906.	4.0	55
69	Bivalent cations and amino-acid composition contribute to the thermostability ofBacillus licheniformisxylose isomerase. FEBS Journal, 2001, 268, 6291-6301.	0.2	54
70	Biochemical characterization ofThermotoga maritimaendoglucanase Cel74 with and without a carbohydrate binding module (CBM). FEBS Letters, 2002, 531, 375-380.	1.3	54
71	Complete Genome Sequences for the Anaerobic, Extremely Thermophilic Plant Biomass-Degrading Bacteria Caldicellulosiruptor hydrothermalis , Caldicellulosiruptor kristjanssonii , Caldicellulosiruptor kronotskyensis , Caldicellulosiruptor owensensis , and Caldicellulosiruptor lactoaceticus. Journal of Bacteriology, 2011, 193, 1483-1484.	1.0	54
72	Cultivation Techniques for Hyperthermophilic Archaebacteria: Continuous Culture of <i>Pyrococcus furiosus</i> at Temperatures near 100ï¿½C. Applied and Environmental Microbiology, 1989, 55, 2086-2088.	1.4	54

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73	Galactomannanases Man2 and Man5 fromThermotogaspecies: Growth physiology on galactomannans, gene sequence analysis, and biochemical properties of recombinant enzymes. Biotechnology and Bioengineering, 2001, 75, 322-333.	1.7	53
74	Glucose-to-fructose conversion at high temperatures with xylose (glucose) isomerases fromStreptomyces murinus and two hyperthermophilicThermotoga species. Biotechnology and Bioengineering, 2002, 80, 185-194.	1.7	52
75	Life in hot acid: pathway analyses in extremely thermoacidophilic archaea. Current Opinion in Biotechnology, 2008, 19, 445-453.	3.3	52
76	A hybrid synthetic pathway for butanol production by a hyperthermophilic microbe. Metabolic Engineering, 2015, 27, 101-106.	3.6	51
77	S-Layer Homology Domain Proteins Csac_0678 and Csac_2722 Are Implicated in Plant Polysaccharide Deconstruction by the Extremely Thermophilic Bacterium Caldicellulosiruptor saccharolyticus. Applied and Environmental Microbiology, 2012, 78, 768-777.	1.4	50
78	Proteolysis in hyperthermophilic microorganisms. Archaea, 2002, 1, 63-74.	2.3	49
79	Role of an Archaeal PitA Transporter in the Copper and Arsenic Resistance of Metallosphaera sedula, an Extreme Thermoacidophile. Journal of Bacteriology, 2014, 196, 3562-3570.	1.0	49
80	Glycosyl hydrolases from hyperthermophilic microorganisms. Current Opinion in Biotechnology, 1998, 9, 141-145.	3.3	48
81	Diversity of bacteria and archaea from two shallow marine hydrothermal vents from Vulcano Island. Extremophiles, 2017, 21, 733-742.	0.9	48
82	Multidomain, Surface Layer-associated Glycoside Hydrolases Contribute to Plant Polysaccharide Degradation by Caldicellulosiruptor Species. Journal of Biological Chemistry, 2016, 291, 6732-6747.	1.6	44
83	Microbiological Metal Transformations: Biotechnological Applications and Potential. Biotechnology Progress, 1986, 2, 1-15.	1.3	41
84	Growth and gas production for hyperthermophilic archaebacterium,Pyrococcus furiosus. Biotechnology and Bioengineering, 1989, 34, 1050-1057.	1.7	41
85	Extremely Thermophilic Routes to Microbial Electrofuels. ACS Catalysis, 2011, 1, 1043-1050.	5.5	41
86	A Highly Thermostable Kanamycin Resistance Marker Expands the Tool Kit for Genetic Manipulation of Caldicellulosiruptor bescii. Applied and Environmental Microbiology, 2016, 82, 4421-4428.	1.4	41
87	Isolation and Characterization of Thermococcus barossii, sp. nov., a Hyperthermophilic Archaeon Isolated from a Hydrothermal Vent Flange Formation. Systematic and Applied Microbiology, 1998, 21, 40-49.	1.2	40
88	Engineering Hydrogen Gas Production from Formate in a Hyperthermophile by Heterologous Production of an 18-Subunit Membrane-bound Complex. Journal of Biological Chemistry, 2014, 289, 2873-2879.	1.6	40
89	Engineering redox-balanced ethanol production in the cellulolytic and extremely thermophilic bacterium, Caldicellulosiruptor bescii. Metabolic Engineering Communications, 2018, 7, e00073.	1.9	40
90	Uncoupling Fermentative Synthesis of Molecular Hydrogen from Biomass Formation in Thermotoga maritima. Applied and Environmental Microbiology, 2018, 84, .	1.4	40

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91	Hydrogen transfer between methanogens and fermentative heterotrophs in hyperthermophilic cocultures. , 1997, 56, 268-278.		38
92	Functional-Genomics-Based Identification and Characterization of Open Reading Frames Encoding Î±-Glucoside-Processing Enzymes in the Hyperthermophilic Archaeon Pyrococcus furiosus. Applied and Environmental Microbiology, 2008, 74, 1281-1283.	1.4	38
93	Heterologous Production of an Energy-Conserving Carbon Monoxide Dehydrogenase Complex in the Hyperthermophile Pyrococcus furiosus. Frontiers in Microbiology, 2016, 7, 29.	1.5	38
94	Characterization of hydrogen-uptake activity in the hyperthermophile Pyrodictium brockii.. Proceedings of the National Academy of Sciences of the United States of America, 1989, 86, 138-141.	3.3	37
95	Transcriptional analysis of dynamic heat-shock response by the hyperthermophilic bacterium Thermotoga maritima. Extremophiles, 2004, 8, 209-217.	0.9	37
96	Impact of Substrate Glycoside Linkage and Elemental Sulfur on Bioenergetics of and Hydrogen Production by the Hyperthermophilic Archaeon <i>Pyrococcus furiosus</i>. Applied and Environmental Microbiology, 2007, 73, 6842-6853.	1.4	37
97	Hyperthermophilic Thermotoga Species Differ with Respect to Specific Carbohydrate Transporters and Glycoside Hydrolases. Applied and Environmental Microbiology, 2012, 78, 1978-1986.	1.4	37
98	Functional Analysis of the Glucan Degradation Locus in Caldicellulosiruptor bescii Reveals Essential Roles of Component Glycoside Hydrolases in Plant Biomass Deconstruction. Applied and Environmental Microbiology, 2017, 83, .	1.4	37
99	Purification and Characterization of a Proteasome from the Hyperthermophilic Archaeon Pyrococcus furiosus. Applied and Environmental Microbiology, 1997, 63, 1160-1164.	1.4	37
100	VapC6, a ribonucleolytic toxin regulates thermophilicity in the crenarchaeote Sulfolobus solfataricus. Rna, 2011, 17, 1381-1392.	1.6	36
101	Role of 4-Hydroxybutyrate-CoA Synthetase in the CO2 Fixation Cycle in Thermoacidophilic Archaea. Journal of Biological Chemistry, 2013, 288, 4012-4022.	1.6	36
102	Comparative Analysis of Extremely Thermophilic Caldicellulosiruptor Species Reveals Common and Unique Cellular Strategies for Plant Biomass Utilization. Applied and Environmental Microbiology, 2015, 81, 7159-7170.	1.4	36
103	Relationship between Glycosyl Hydrolase Inventory and Growth Physiology of the Hyperthermophile Pyrococcus furiosus on Carbohydrate-Based Media. Applied and Environmental Microbiology, 1999, 65, 893-897.	1.4	35
104	Temperature, not LuxS, mediates AI-2 formation in hydrothermal habitats. FEMS Microbiology Ecology, 2009, 68, 173-181.	1.3	34
105	A novel Î±-d-galactosynthase from Thermotoga maritima converts Î²-d-galactopyranosyl azide to Î±-galacto-oligosaccharides. Glycobiology, 2011, 21, 448-456.	1.3	34
106	Extreme thermophiles as emerging metabolic engineering platforms. Current Opinion in Biotechnology, 2019, 59, 55-64.	3.3	34
107	Strategic biocatalysis with hyperthermophilic enzymes. Green Chemistry, 2004, 6, 459.	4.6	33
108	Influence of divalent cations on the structural thermostability and thermal inactivation kinetics of class II xylose isomerases. FEBS Journal, 2005, 272, 1454-1464.	2.2	33

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109	Genus-Wide Assessment of Lignocellulose Utilization in the Extremely Thermophilic Genus Caldicellulosiruptor by Genomic, Pangenomic, and Metagenomic Analyses. Applied and Environmental Microbiology, 2018, 84, .	1.4	33
110	Physiological, metabolic and biotechnological features of extremely thermophilic microorganisms. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2017, 9, e1377.	6.6	32
111	Use of epifluorescence microscopy for characterizing the activity ofThiobacillus Ferrooxidans on iron pyrite. Biotechnology and Bioengineering, 1987, 30, 138-146.	1.7	31
112	Influence of tungsten on metabolic patterns in Pyrococcus furiosus, a hyperthermophilic archaeon. Archives of Microbiology, 1993, 159, 380-385.	1.0	31
113	Nanofibrous membranes for single-step immobilization of hyperthermophilic enzymes. Journal of Membrane Science, 2014, 472, 251-260.	4.1	31
114	Development of a defined medium and two-step culturing method for improved exotoxin A yields from Pseudomonas aeruginosa. Applied and Environmental Microbiology, 1987, 53, 2013-2020.	1.4	31
115	Experimental methods for measuring static liquid holdup in packed columns. AIChE Journal, 1986, 32, 1920-1923.	1.8	30
116	Homomultimeric protease in the hyperthermophilic bacteriumThermotoga maritimahas structural and amino acid sequence homology to bacteriocins in mesophilic bacteria. FEBS Letters, 1998, 440, 393-398.	1.3	30
117	Proteases and Glycosyl Hydrolases from Hyperthermophilic Microorganisms. Advances in Protein Chemistry, 1996, 48, 271-310.	4.4	28
118	Synergistic interactions among ?-laminarinase, ?-1,4-glucanase, and ?-glucosidase from the hyperthermophilic archaeonPyrococcus furiosus during hydrolysis of ?-1,4-, ?-1,3-, and mixed-linked polysaccharides. Biotechnology and Bioengineering, 1999, 66, 51-60.	1.7	28
119	Conversion of 4-Hydroxybutyrate to Acetyl Coenzyme A and Its Anapleurosis in the Metallosphaera sedula 3-Hydroxypropionate/4-Hydroxybutyrate Carbon Fixation Pathway. Applied and Environmental Microbiology, 2014, 80, 2536-2545.	1.4	28
120	Discrete and Structurally Unique Proteins (TÄpirins) Mediate Attachment of Extremely Thermophilic Caldicellulosiruptor Species to Cellulose. Journal of Biological Chemistry, 2015, 290, 10645-10656.	1.6	28
121	Deletion of acetyl-CoA synthetases I and II increases production of 3-hydroxypropionate by the metabolically-engineered hyperthermophile Pyrococcus furiosus. Metabolic Engineering, 2014, 22, 83-88.	3.6	27
122	Ethanol production by the hyperthermophilic archaeon <i>Pyrococcus furiosus</i> by expression of bacterial bifunctional alcohol dehydrogenases. Microbial Biotechnology, 2017, 10, 1535-1545.	2.0	27
123	Thermostability and thermoactivity of enzymes from hyperthermophilic archaea. Bioorganic and Medicinal Chemistry, 1994, 2, 659-667.	1.4	26
124	Reaction kinetic analysis of the 3-hydroxypropionate/4-hydroxybutyrate CO2 fixation cycle in extremely thermoacidophilic archaea. Metabolic Engineering, 2016, 38, 446-463.	3.6	26
125	A New Class of Tungsten-Containing Oxidoreductase in Caldicellulosiruptor, a Genus of Plant Biomass-Degrading Thermophilic Bacteria. Applied and Environmental Microbiology, 2015, 81, 7339-7347.	1.4	25
126	Thermotoga neapolitana Homotetrameric Xylose Isomerase Is Expressed as a Catalytically Active and Thermostable Dimer in Escherichia coli. Applied and Environmental Microbiology, 1998, 64, 2357-2360.	1.4	25

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127	Epimerase (Msed_0639) and Mutase (Msed_0638 and Msed_2055) Convert (<i>S</i>) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 7 3-Hydroxypropionate/4-Hydroxybutyrate Cycle. Applied and Environmental Microbiology, 2012, 78, 6194-6202.	1.4	24
128	Alcohol Selectivity in a Synthetic Thermophilic <i>n</i> -Butanol Pathway Is Driven by Biocatalytic and Thermostability Characteristics of Constituent Enzymes. Applied and Environmental Microbiology, 2015, 81, 7187-7200.	1.4	24
129	The biology of thermoacidophilic archaea from the order <i>Sulfolobales</i>. FEMS Microbiology Reviews, 2021, 45, .	3.9	24
130	Electrochemical regeneration of NAD+on carbon electrodes. Biotechnology and Bioengineering, 1977, 19, 1215-1218.	1.7	23
131	Rheological Properties of Guar Galactomannan Solutions during Hydrolysis with Galactomannanase and Î±-Galactosidase Enzyme Mixtures. Biomacromolecules, 2007, 8, 949-956.	2.6	23
132	Temperature-dependent acetoin production by Pyrococcus furiosus is catalyzed by a biosynthetic acetolactate synthase and its deletion improves ethanol production. Metabolic Engineering, 2016, 34, 71-79.	3.6	23
133	Extremely thermophilic energy metabolisms: biotechnological prospects. Current Opinion in Biotechnology, 2017, 45, 104-112.	3.3	23
134	The Hyperthermophilic Archaebacterium, Pyrococcus furiosus.. Annals of the New York Academy of Sciences, 1990, 589, 301-314.	1.8	22
135	Biooxidation capacity of the extremely thermoacidophilic archaeonMetallosphaera sedula under bioenergetic challenge. , 1998, 58, 617-624.		22
136	Quantitative fermentation of unpretreated transgenic poplar by Caldicellulosiruptor bescii. Nature Communications, 2019, 10, 3548.	5.8	22
137	Î±a-D-Galactosidases from Thermotoga species. Methods in Enzymology, 2001, 330, 246-260.	0.4	21
138	Bioprocessing analysis of <i>Pyrococcus furiosus</i> strains engineered for CO₂â€based 3â€hydroxypropionate production. Biotechnology and Bioengineering, 2015, 112, 1533-1543.	1.7	21
139	Ancillary contributions of heterologous biotin protein ligase and carbonic anhydrase for CO₂ incorporation into 3â€hydroxypropionate by metabolically engineered <i>Pyrococcus furiosus</i>. Biotechnology and Bioengineering, 2016, 113, 2652-2660.	1.7	21
140	Sequential processing with fermentative <i>Caldicellulosiruptor kronotskyensis</i> and chemolithoautotrophic <i>Cupriavidus necator</i> for converting rice straw and CO₂ to polyhydroxybutyrate. Biotechnology and Bioengineering, 2018, 115, 1624-1629.	1.7	21
141	Native xylose-inducible promoter expands the genetic tools for the biomass-degrading, extremely thermophilic bacterium Caldicellulosiruptor bescii. Extremophiles, 2018, 22, 629-638.	0.9	21
142	The biology and biotechnology of the genus Caldicellulosiruptor: recent developments in â€˜Caldi Worldâ€™. Extremophiles, 2020, 24, 1-15.	0.9	21
143	Enantiomeric Resolution of 2-Aryl Propionic Esters with Hyperthermophilic and Mesophilic Esterases:Â Contrasting Thermodynamic Mechanisms. Journal of the American Chemical Society, 2002, 124, 8190-8191.	6.6	20
144	Strategic Selection of Hyperthermophilic Esterases for Resolution of 2-Arylpropionic Esters. Biotechnology Progress, 2003, 19, 1410-1416.	1.3	20

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