Marco Moracci

List of Publications by Year
in descending order

106 papers	3,801 citations	117625 34 h-index	144013 57 g-index
113 all docs	113 docs citations	113 times ranked	3803 citing authors

#	Article	IF	Citations
1	Effect of cavity-creating mutations in the hydrophobic core of chymotrypsin inhibitor 2. Biochemistry, 1993, 32, 11259-11269.	2.5	294
2	Crystal structure of the Î²-glycosidase from the hyperthermophilic archeon Sulfolobus solfataricus: resilience as a key factor in thermostability. Journal of Molecular Biology, 1997, 271, 789-802.	4.2	235
3	Oligosaccharide synthesis by glycosynthases. Trends in Biotechnology, 2004, 22, 31-37.	9.3	197
4	Structure of human lysosomal acid Î±-glucosidaseâ€"a guide for the treatment of Pompe disease. Nature Communications, 2017, 8, 1111.	12.8	169
5	Glycosyl hydrolases from hyperthermophiles. Extremophiles, 1997, 1, 2-13.	2.3	142
6	Comparative Metagenomics of Eight Geographically Remote Terrestrial Hot Springs. Microbial Ecology, 2015, 70, 411-424.	2.8	118
7	Restoration of the Activity of Active-Site Mutants of the Hyperthermophilic Î²-Glycosidase fromSulfolobus solfataricus:Â Dependence of the Mechanism on the Action of External Nucleophilesâ€. Biochemistry, 1998, 37, 17262-17270.	2.5	110
8	Pharmacological Enhancement of Î±-Glucosidase by the Allosteric Chaperone N-acetylcysteine. Molecular Therapy, 2012, 20, 2201-2211.	8.2	90
9	Structural basis of laminin binding to the LARGE glycans on dystroglycan. Nature Chemical Biology, 2016, 12, 810-814.	8.0	88
10	A novel thermophilic Glycosynthase that effects branching glycosylation. Bioorganic and Medicinal Chemistry Letters, 2000, 10, 365-368.	2.2	77
11	Expression and extensive characterization of a Î²-glycosidase from the extreme thermoacidophilic archaeon Sulfolobus solfataricus in Escherichia coli: Authenticity of the recombinant enzyme. Enzyme and Microbial Technology, 1995, 17, 992-997.	3.2	75
12	Identification and Molecular Characterization of the First Î±-Xylosidase from an Archaeon. Journal of Biological Chemistry, 2000, 275, 22082-22089.	3.4	68
13	Î²-Glycosyl Azides as Substrates for Î±-Glycosynthases: Preparation of Efficient Î±-L-Fucosynthases. Chemistry and Biology, 2009, 16, 1097-1108.	6.0	65
14	Expression of the thermostable beta-galactosidase gene from the archaebacterium Sulfolobus solfataricus in Saccharomyces cerevisiae and characterization of a new inducible promoter for heterologous expression. Journal of Bacteriology, 1992, 174, 873-882.	2.2	63
15	Glycosynthases in Biocatalysis. Advanced Synthesis and Catalysis, 2011, 353, 2284-2300.	4.3	63
16	Structural Studies of the Î²-Glycosidase fromSulfolobus solfataricusin Complex with Covalently and Noncovalently Bound Inhibitorsâ€. Biochemistry, 2004, 43, 6101-6109.	2.5	62
17	Recent Advances in the Oligosaccharide Synthesis Promoted by Catalytically Engineered Glycosidases. Advanced Synthesis and Catalysis, 2005, 347, 941-950.	4.3	53
18	Pharmacological chaperone therapy for lysosomal storage diseases. Future Medicinal Chemistry, 2014, 6, 1031-1045.	2.3	53

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19	Identification of two glutamic acid residues essential for catalysis in the Î²-glycosidase from the thermoacidophilic archaeon Sulfolobus solfataricus. Protein Engineering, Design and Selection, 1996, 9, 1191-1195.	2.1	50
20	Glycosynthases as tools for the production of glycan analogs of natural products. Natural Product Reports, 2012, 29, 697.	10.3	48
21	Diversity of bacteria and archaea from two shallow marine hydrothermal vents from Vulcano Island. Extremophiles, 2017, 21, 733-742.	2.3	48
22	Identification of the Catalytic Nucleophile of the Family 29 Î±-l-Fucosidase fromSulfolobus solfataricusvia Chemical Rescue of an Inactive Mutantâ€. Biochemistry, 2003, 42, 9525-9531.	2.5	47
23	Structural, Kinetic, and Thermodynamic Analysis of Glucoimidazole-Derived Glycosidase Inhibitorsâ€,â€¡. Biochemistry, 2006, 45, 11879-11884.	2.5	47
24	A novel fatty acid binding protein produced by teratocytes of the aphid parasitoid Aphidius ervi. Insect Molecular Biology, 2005, 14, 195-205.	2.0	46
25	A New Archaeal Î²-Glycosidase from Sulfolobus solfataricus. Journal of Biological Chemistry, 2010, 285, 20691-20703.	3.4	45
26	Adsorption of Î²-galactosidase of Alicyclobacillus acidocaldarius on wild type and mutants spores of Bacillus subtilis. Microbial Cell Factories, 2012, 11, 100.	4.0	45
27	Identification of an Archaeal Î±-l-Fucosidase Encoded by an Interrupted Gene. Journal of Biological Chemistry, 2003, 278, 14622-14631.	3.4	44
28	Isolation and characterization of a new family 42 Î²-galactosidase from the thermoacidophilic bacterium Alicyclobacillus acidocaldarius: Identification of the active site residues. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2008, 1784, 292-301.	2.3	44
29	High-level expression of thermostable cellulolytic enzymes in tobacco transplastomic plants and their use in hydrolysis of an industrially pretreated Arundo donax L. biomass. Biotechnology for Biofuels, 2016, 9, 154.	6.2	43
30	Activity of Hyperthermophilic Glycosynthases Is Significantly Enhanced at Acidic pHâ€. Biochemistry, 2003, 42, 8484-8493.	2.5	40
31	Recoding in Archaea. Molecular Microbiology, 2004, 55, 339-348.	2.5	39
32	Evidence that the xylanase activity from Sulfolobus solfataricus OÎ± is encoded by the endoglucanase precursor gene (sso1354) and characterization of the associated cellulase activity. Extremophiles, 2008, 12, 689-700.	2.3	37
33	Structure-function studies on Î²-glycosidase from Sulfolobus solfataricus. Molecular bases of thermostability. Biochimie, 1998, 80, 949-957.	2.6	36
34	Thermostable Î²-Glycosidase fromSulfolobus Solfataricus. Biocatalysis, 1994, 11, 89-103.	0.9	34
35	Probing the Catalytically Essential Residues of the Î±-l-Fucosidase from the Hyperthermophilic Archaeon Sulfolobus solfataricus. Biochemistry, 2005, 44, 6331-6342.	2.5	34
36	A novel Î±-d-galactosynthase from Thermotoga maritima converts Î²-d-galactopyranosyl azide to Î±-galacto-oligosaccharides. Glycobiology, 2011, 21, 448-456.	2.5	34

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37	Characterization of a Î²-glycosidase from the thermoacidophilic bacterium Alicyclobacillus acidocaldarius. Extremophiles, 2006, 10, 301-310.	2.3	33
38	The identification and molecular characterization of the first archaeal bifunctional exo-Î²-glucosidase/N-acetyl-Î²-glucosaminidase demonstrate that family GH116 is made of three functionally distinct subfamilies. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 367-377.	2.4	33
39	Molecular biology of extremophiles. World Journal of Microbiology and Biotechnology, 1995, 11, 71-84.	3.6	32
40	Activity and stability of hyperthermophilic enzymes: a comparative study on two archaeal Î²-glycosidases. Extremophiles, 2000, 4, 157-164.	2.3	32
41	Discovery of hyperstable carbohydrateâ€active enzymes through metagenomics of extreme environments. FEBS Journal, 2020, 287, 1116-1137.	4.7	32
42	<i>N</i>-Butyl-<scp>l</scp>-deoxynojirimycin (<scp>l</scp>-NBDNJ): Synthesis of an Allosteric Enhancer of Î±-Glucosidase Activity for the Treatment of Pompe Disease. Journal of Medicinal Chemistry, 2017, 60, 9462-9469.	6.4	31
43	Glycosynthases: new enzymes for oligosaccharide synthesis. Journal of Molecular Catalysis B: Enzymatic, 2001, 11, 155-163.	1.8	30
44	Translational recoding in archaea. Extremophiles, 2012, 16, 793-803.	2.3	29
45	Metagenomics of microbial and viral life in terrestrial geothermal environments. Reviews in Environmental Science and Biotechnology, 2017, 16, 425-454.	8.1	29
46	Astrochemistry and Astrobiology: Materials Sciencein Wonderland?. International Journal of Molecular Sciences, 2019, 20, 4079.	4.1	29
47	The molecular characterization of a novel GH38 Î±-mannosidase from the crenarchaeon Sulfolobus solfataricus revealed its ability in de-mannosylating glycoproteins. Biochimie, 2010, 92, 1895-1907.	2.6	25
48	Novel thermophilic hemicellulases for the conversion of lignocellulose for second generation biorefineries. Enzyme and Microbial Technology, 2015, 78, 63-73.	3.2	25
49	A gene encoding a putative membrane protein homologous to the major facilitator superfamily of transporters maps upstream of the beta-glycosidase gene in the archaeon Sulfolobus solfataricus. Journal of Bacteriology, 1995, 177, 1614-1619.	2.2	24
50	Two-dimensional IR correlation spectroscopy of mutants of the Î²-glycosidase from the hyperthermophilic archaeon Sulfolobus solfataricus identifies the mechanism of quaternary structure stabilization and unravels the sequence of thermal unfolding events. Biochemical Journal, 2004, 384, 69-78.	3.7	24
51	Human<i>Î±-L-fucosidase-1</i>attenuates the invasive properties of thyroid cancer. Oncotarget, 2017, 8, 27075-27092.	1.8	24
52	The Chromosomal Protein Sso7d of the CrenarchaeonSulfolobus solfataricus Rescues Aggregated Proteins in an ATP Hydrolysis-dependent Manner. Journal of Biological Chemistry, 2000, 275, 31813-31818.	3.4	23
53	Formamide-based prebiotic chemistry in the Phlegrean Fields. Advances in Space Research, 2018, 62, 2372-2379.	2.6	23
54	The gene of an archaeal Î±-l-fucosidase is expressed by translational frameshifting. Nucleic Acids Research, 2006, 34, 4258-4268.	14.5	22

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55	Î²-Glycosidase from Sulfolobus solfataricus. Methods in Enzymology, 2001, 330, 201-215.	1.0	21
56	Structural characterization of the nonameric assembly of an Archaeal Î±-l-fucosidase by synchrotron small angle X-ray scattering. Biochemical and Biophysical Research Communications, 2004, 320, 176-182.	2.1	21
57	Enzymatic synthesis of oligosaccharides by two glycosyl hydrolases of Sulfolobus solfataricus. Extremophiles, 2001, 5, 145-152.	2.3	20
58	Glycosynthase-Catalysed syntheses at pH below neutrality. Bioorganic and Medicinal Chemistry Letters, 2003, 13, 4039-4042.	2.2	20
59	Ionic network at the C-terminus of the ?-glycosidase from the hyperthermophilic archaeonSulfolobus solfataricus: Functional role in the quaternary structure thermal stabilization. Proteins: Structure, Function and Bioinformatics, 2002, 48, 98-106.	2.6	19
60	Highly Productive Autocondensation and Transglycosylation Reactions with Sulfolobus solfataricus Glycosynthase. ChemBioChem, 2005, 6, 1431-1437.	2.6	19
61	A comparative infrared spectroscopic study of glycoside hydrolases from extremophilic archaea revealed different molecular mechanisms of adaptation to high temperatures. Proteins: Structure, Function and Bioinformatics, 2007, 67, 991-1001.	2.6	19
62	Functional Characterization and High-Throughput Proteomic Analysis of Interrupted Genes in the ArchaeonSulfolobus solfataricus. Journal of Proteome Research, 2010, 9, 2496-2507.	3.7	18
63	Prebiotic properties of Bacillus coagulans MA-13: production of galactoside hydrolyzing enzymes and characterization of the transglycosylation properties of a GH42 Î²-galactosidase. Microbial Cell Factories, 2021, 20, 71.	4.0	18
64	Structural basis ofÂtheÂdestabilization produced byÂanÂamino-terminal tag inÂtheÂÎ²-glycosidase from theÂhyperthermophilic archeon SulfolobusÂsolfataricus. Biochimie, 2006, 88, 807-817.	2.6	16
65	The Î±-l-fucosidase from Sulfolobus solfataricus. Extremophiles, 2008, 12, 61-68.	2.3	15
66	The Î±â€Thioglycoligase Derived from a GH89 Î±â€‹<i>N</i>â€Acetylglucosaminidase Synthesises Î±â€‹<i>N</i>â€Acetylglucosamineâ€Based Glycosides of Biomedical Interest. Advanced Synthesis and Catalysis, 2017, 359, 663-676.	4.3	15
67	Introducing transgalactosylation activity into a family 42 Î²-galactosidase. Glycobiology, 2017, 27, 425-437.	2.5	14
68	Identification of a novel esterase from the thermophilic bacterium Geobacillus thermodenitrificans NG80-2. Extremophiles, 2019, 23, 407-419.	2.3	14
69	Enzymatic synthesis and hydrolysis of xylogluco-oligosaccharides using the first archaeal Î±-xylosidase from Sulfolobus solfataricus. Extremophiles, 2001, 5, 277-282.	2.3	13
70	Properties of the recombinant Î±-glucosidase from Sulfolobus solfataricus in relation to starch processing. Journal of Molecular Catalysis B: Enzymatic, 2001, 11, 787-794.	1.8	13
71	Engineering the stability and the activity of a glycoside hydrolase. Protein Engineering, Design and Selection, 2011, 24, 21-26.	2.1	13
72	Structural and functional insights into RHA-P, a bacterial GH106 Î±-L-rhamnosidase from Novosphingobium sp. PP1Y. Archives of Biochemistry and Biophysics, 2018, 648, 1-11.	3.0	13

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73	Correction of oxidative stress enhances enzyme replacement therapy in Pompe disease. EMBO Molecular Medicine, 2021, 13, e14434.	6.9	13
74	Enzymatic synthesis of 2-deoxy-Î²-glucosides and stereochemistry of Î²-glycosidase from Sulfolobus solfataricus on glucal. Tetrahedron: Asymmetry, 2001, 12, 2783-2787.	1.8	12
75	Molecular biology of hyperthermophilic Archaea. Advances in Biochemical Engineering/Biotechnology, 1998, 61, 87-115.	1.1	11
76	Thermophilic Glycosynthases for Oligosaccharides Synthesis. Methods in Enzymology, 2012, 510, 273-300.	1.0	11
77	Spatial Metagenomics of Three Geothermal Sites in Pisciarelli Hot Spring Focusing on the Biochemical Resources of the Microbial Consortia. Molecules, 2020, 25, 4023.	3.8	11
78	Exoâ€glucosidase activity and substrate specificity of the betaâ€glycosidase isolated from the extreme thermophile Sulfolobus solfataricus. Biotechnology and Applied Biochemistry, 1993, 17, 239-250.	3.1	11
79	Draft Genome Sequence of Bacillus coagulans MA-13, a Thermophilic Lactic Acid Producer from Lignocellulose. Microbiology Resource Announcements, 2019, 8, .	0.6	10
80	The Italian National Project of Astrobiologyâ€"Life in Spaceâ€"Origin, Presence, Persistence of Life in Space, from Molecules to Extremophiles. Astrobiology, 2020, 20, 580-582.	3.0	10
81	RNA editing and modifications of RNAs might have favoured the evolution of the triplet genetic code from an ennuplet code. Journal of Theoretical Biology, 2014, 359, 1-5.	1.7	9
82	Oxalacetate decarâ˜ylase and pyruvate carâ˜ylase activities, and effect of sulfhydryl reagents in malic enzyme from Sulfolubus solfataricus. BBA - Proteins and Proteomics, 1988, 957, 301-311.	2.1	8
83	Preparation of a glycosynthase from the Î²-glycosidase of the ArchaeonPyrococcus horikoshii. Biocatalysis and Biotransformation, 2006, 24, 23-29.	2.0	8
84	Conversion of xylan by recyclable spores of Bacillus subtilis displaying thermophilic enzymes. Microbial Cell Factories, 2017, 16, 218.	4.0	8
85	Xyloglucan Oligosaccharides Hydrolysis by Exo-Acting Glycoside Hydrolases from Hyperthermophilic Microorganism Saccharolobus solfataricus. International Journal of Molecular Sciences, 2021, 22, 3325.	4.1	8
86	Metagenomics of Hyperthermophilic Environments: Biodiversity and Biotechnology. , 2017, , 103-135.		7
87	GlcNAc De- <i>N</i> -Acetylase from the Hyperthermophilic Archaeon <i>Sulfolobus solfataricus</i>. Applied and Environmental Microbiology, 2019, 85, .	3.1	7
88	Design of new reaction conditions for characterization of a mutant thermophilic<i>Î±</i>-<scp>l</scp>-fucosidase. Biocatalysis and Biotransformation, 2008, 26, 18-24.	2.0	6
89	Enzymatic Synthesis of 2-Deoxyglycosides Using the ÃŸ-Glycosidase of the ArchaeonSulfolobus solfataricus. Biocatalysis and Biotransformation, 2003, 21, 17-24.	2.0	5
90	A novel, efficient and sustainable strategy for the synthesis of Î±-glycoconjugates by combination of a Î±-galactosynthase and a green solvent. RSC Advances, 2015, 5, 55313-55320.	3.6	5

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91	Applications in Biocatalysis of Glycosyl Hydrolases from the Hyperthermophilic ArchaeonSulfolobus solfataricus. Biocatalysis and Biotransformation, 2003, 21, 215-221.	2.0	4
92	Effects of Random Mutagenesis and In Vivo Selection on the Specificity and Stability of a Thermozyme. Catalysts, 2019, 9, 440.	3.5	4
93	Interrupted Genes in Extremophilic Archaea: Mechanisms of Gene Expression in Early Organisms. Origins of Life and Evolution of Biospheres, 2007, 36, 487-492.	1.9	3
94	Exploitation of Î²-glycosyl azides for the preparation of Î±-glycosynthases. Biocatalysis and Biotransformation, 2012, 30, 288-295.	2.0	3
95	Carnitine is a pharmacological allosteric chaperone of the human lysosomal Î±-glucosidase. Journal of Enzyme Inhibition and Medicinal Chemistry, 2021, 36, 2068-2079.	5.2	3
96	Transcript Regulation of the Recoded Archaeal Î±-l-Fucosidase In Vivo. Molecules, 2021, 26, 1861.	3.8	3
97	Extremophilic (Hemi)cellulolytic Microorganisms and Enzymes. , 2013, , 111-130.		2
98	Probing the role of an invariant active site His in family GH1 Î²-glycosidases. Journal of Enzyme Inhibition and Medicinal Chemistry, 2019, 34, 973-980.	5.2	2
99	A novel Streptomyces strain isolated by functional bioprospecting for laccases. Process Biochemistry, 2021, 111, 315-324.	3.7	2
100	Carbohydrate-Active Enzymes from Hyperthermophiles: Biochemistry and Applications. , 2011, , 427-441.		1
101	Programmed Deviations of Ribosomes From Standard Decoding in Archaea. Frontiers in Microbiology, 2021, 12, 688061.	3.5	1
102	Recent Developments in the Synthesis of Oligosaccharides by Hyperthermophilic Glycosidases. , 2005, , 587-612.		1
103	Properties and production of the Î²-glycosidase from the thermophilic Archaeon Sulfolobus solfataricus expressed in mesophilic hosts. Progress in Biotechnology, 1995, 10, 77-84.	0.2	0
104	Ischia (Naples) hosted the Eighth Carbohydrate Bioengineering Meeting on May 10â€"13, 2009. Biocatalysis and Biotransformation, 2010, 28, 1-2.	2.0	0
105	Industrial-Scale Production of Thermostable Enzymes: The Model-System of the Î²-Glycosidase from Sulfolobus Solfataricus. , 1996, , 89-99.		0
106	Structure and Reaction Mechanism of the Î²-Glycosidase from the Archaeon Sulfolobus Solfataricus. , 1998, , 209-212.		0