Michael J O'donohue

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Endogeic earthworms shape bacterial functional communities and affect organic matter mineralization in a tropical soil. ISME Journal, 2012, 6, 213-222.	9.8	169
2	Glycosynthesis in a waterworld: new insight into the molecular basis of transglycosylation in retaining glycoside hydrolases. Biochemical Journal, 2015, 467, 17-35.	3.7	133
3	Impact and efficiency of GH10 and GH11 thermostable endoxylanases on wheat bran and alkali-extractable arabinoxylans. Carbohydrate Research, 2004, 339, 2529-2540.	2.3	125
4	Thermobacillus xylanilyticus gen. nov., sp. nov., a new aerobic thermophilic xylan-degrading bacterium isolated from farm soil.. International Journal of Systematic and Evolutionary Microbiology, 2000, 50, 315-320.	1.7	89
5	A Brief and Informationally Rich Naming System for Oligosaccharide Motifs of Heteroxylans Found in Plant Cell Walls. Australian Journal of Chemistry, 2009, 62, 533.	0.9	84
6	White biotechnology: State of the art strategies for the development of biocatalysts for biorefining. Biotechnology Advances, 2015, 33, 1653-1670.	11.7	83
7	Genetic and Biochemical Characterization of a Highly Thermostable Î±- l -Arabinofuranosidase from Thermobacillus xylanilyticus. Applied and Environmental Microbiology, 2000, 66, 1734-1736.	3.1	82
8	Bioinformatics of the glycoside hydrolase family 57 and identification of catalytic residues in amylopullulanase from Thermococcusâ€ƒhydrothermalis. FEBS Journal, 2004, 271, 2863-2872.	0.2	80
9	Engineering increased thermostability in the thermostable GH-11 xylanase from Thermobacillus xylanilyticus. Journal of Biotechnology, 2006, 125, 338-350.	3.8	76
10	The Role of Histidine 231 in Thermolysin-like Enzymes.. Journal of Biological Chemistry, 1995, 270, 16803-16808.	3.4	74
11	The Type II Pullulanase of <i>Thermococcus hydrothermalis</i> : Molecular Characterization of the Gene and Expression of the Catalytic Domain. Journal of Bacteriology, 1999, 181, 3284-3287.	2.2	73
12	The 2.1 Ã… structure of an elicitinâ€ergosterol complex: A recent addition to the Sterol Carrier Protein family. Protein Science, 1999, 8, 1191-1199.	7.6	71
13	Progress and future prospects for pentose-specific biocatalysts in biorefining. Process Biochemistry, 2012, 47, 346-357.	3.7	70
14	Mining for hemicellulases in the fungus-growing termite Pseudacanthotermes militaris using functional metagenomics. Biotechnology for Biofuels, 2013, 6, 78.	6.2	65
15	Uncovering the Potential of Termite Gut Microbiome for Lignocellulose Bioconversion in Anaerobic Batch Bioreactors. Frontiers in Microbiology, 2017, 8, 2623.	3.5	64
16	Development of cellobiose-degrading ability in Yarrowia lipolytica strain by overexpression of endogenous genes. Biotechnology for Biofuels, 2015, 8, 109.	6.2	57
17	The Roles of the Prosequence of Thermolysin in Enzyme Inhibition and Folding in Vitro. Journal of Biological Chemistry, 1996, 271, 26477-26481.	3.4	56
18	Analysis of large 16S <scp>rRNA</scp> Illumina data sets: Impact of singleton read filtering on microbial community description. Molecular Ecology Resources, 2017, 17, e122-e132.	4.8	55

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19	Engineering better biomass-degrading ability into a GH11 xylanase using a directed evolution strategy. Biotechnology for Biofuels, 2012, 5, 3.	6.2	54
20	The Structure of the Complex between a Branched Pentasaccharide and <i>Thermobacillus xylanilyticus</i> GH-51 Arabinofuranosidase Reveals Xylan-Binding Determinants and Induced Fit. Biochemistry, 2008, 47, 7441-7451.	2.5	53
21	Probing a family GH11 endo-Î²-1,4-xylanase inhibition mechanism by phenolic compounds: Role of functional phenolic groups. Journal of Molecular Catalysis B: Enzymatic, 2011, 72, 130-138.	1.8	53
22	Chemical synthesis, expression and mutagenesis of a gene encoding ?-cryptogein, an elicitin produced by Phytophthora cryptogea. Plant Molecular Biology, 1995, 27, 577-586.	3.9	51
23	Expression in Escherichia coli and characterization of Î²-xylosidases GH39 and GH-43 from Bacillus halodurans C-125. Applied Microbiology and Biotechnology, 2006, 73, 582-590.	3.6	51
24	Comparison of the Heterologous Expression of Trichoderma reesei Endoglucanase II and Cellobiohydrolase II in the Yeasts Pichia pastoris and Yarrowia lipolytica. Molecular Biotechnology, 2013, 54, 158-169.	2.4	48
25	New insights into the role of the thumb-like loop in GH-11 xylanases. Protein Engineering, Design and Selection, 2007, 20, 15-23.	2.1	47
26	First Structural Insights into Î±-l-Arabinofuranosidases from the Two GH62 Glycoside Hydrolase Subfamilies. Journal of Biological Chemistry, 2014, 289, 5261-5273.	3.4	45
27	Efficient anaerobic transformation of raw wheat straw by a robust cow rumen-derived microbial consortium. Bioresource Technology, 2015, 196, 241-249.	9.6	45
28	A versatile assay for the accurate, time-resolved determination of cellular viability. Analytical Biochemistry, 2003, 314, 1-7.	2.4	43
29	Overexpression inPichia pastorisand Crystallization of an Elicitor Protein Secreted by the Phytopathogenic Fungus,Phytophthora cryptogea. Protein Expression and Purification, 1996, 8, 254-261.	1.3	41
30	Evidence by Site-Directed Mutagenesis That Arginine 203 of Thermolysin and Arginine 717 of Neprilysin (Neutral Endopeptidase) Play Equivalent Critical Roles in Substrate Hydrolysis and Inhibitor Binding. Biochemistry, 1997, 36, 13938-13945.	2.5	41
31	In Vitro Model Assemblies To Study the Impact of Ligninâ^'Carbohydrate Interactions on the Enzymatic Conversion of Xylan. Biomacromolecules, 2009, 10, 2489-2498.	5.4	40
32	CAZyChip: dynamic assessment of exploration of glycoside hydrolases in microbial ecosystems. BMC Genomics, 2016, 17, 671.	2.8	39
33	Conferring cellulose-degrading ability to Yarrowia lipolytica to facilitate a consolidated bioprocessing approach. Biotechnology for Biofuels, 2017, 10, 132.	6.2	38
34	Probing the cell wall heterogeneity of micro-dissected wheat caryopsis using both active and inactive forms of a GH11 xylanase. Planta, 2005, 222, 246-257.	3.2	36
35	Waste-to-nutrition: a review of current and emerging conversion pathways. Biotechnology Advances, 2021, 53, 107857.	11.7	36
36	Probing the catalytically essential residues of the Î±-l-arabinofuranosidase from Thermobacillus xylanilyticus. Protein Engineering, Design and Selection, 2002, 15, 21-28.	2.1	34

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37	Molecular Design of Non-Leloir Furanose-Transferring Enzymes from an Î±-<scp>l</scp>-Arabinofuranosidase: A Rationale for the Engineering of Evolved Transglycosylases. ACS Catalysis, 2015, 5, 4598-4611.	11.2	34
38	The GH51 Î±-l-arabinofuranosidase from Paenibacillus sp. THS1 is multifunctional, hydrolyzing main-chain and side-chain glycosidic bonds in heteroxylans. Biotechnology for Biofuels, 2016, 9, 140.	6.2	34
39	Phytophthora Resistance Through Production of a Fungal Protein Elicitor (Î²-Cryptogein) in Tobacco. Molecular Plant-Microbe Interactions, 1998, 11, 64-67.	2.6	33
40	Synthesis of pentose-containing disaccharides using a thermostable Î±-l-arabinofuranosidase. Carbohydrate Research, 2004, 339, 2019-2025.	2.3	33
41	An original chemoenzymatic route for the synthesis of Î²-d-galactofuranosides using an Î±-l-arabinofuranosidase. Carbohydrate Research, 2005, 340, 637-644.	2.3	33
42	Anaerobic lignocellulolytic microbial consortium derived from termite gut: enrichment, lignocellulose degradation and community dynamics. Biotechnology for Biofuels, 2018, 11, 284.	6.2	32
43	Developing cellulolytic Yarrowia lipolytica as a platform for the production of valuable products in consolidated bioprocessing of cellulose. Biotechnology for Biofuels, 2018, 11, 141.	6.2	32
44	Enzymatic synthesis of alkyl arabinofuranosides using a thermostable Î±-l-arabinofuranosidase. Tetrahedron Letters, 2002, 43, 9653-9655.	1.4	31
45	Engineering transglycosidase activity into a GH51 Î±-l-arabinofuranosidase. New Biotechnology, 2013, 30, 536-544.	4.4	29
46	Rational Enzyme Design without Structural Knowledge: A Sequenceâ€Based Approach for Efficient Generation of Transglycosylases. Chemistry - A European Journal, 2021, 27, 10323-10334.	3.3	29
47	Evaluation of the transglycosylation activities of a GH 39 Î²-d-xylosidase for the synthesis of xylose-based glycosides. Journal of Molecular Catalysis B: Enzymatic, 2009, 58, 1-5.	1.8	27
48	Characterization and mutagenesis of two novel ironâ€"sulphur cluster pentonate dehydratases. Applied Microbiology and Biotechnology, 2016, 100, 7549-7563.	3.6	27
49	Expressing accessory proteins in cellulolytic Yarrowia lipolytica to improve the conversion yield of recalcitrant cellulose. Biotechnology for Biofuels, 2017, 10, 298.	6.2	27
50	Action of a GH 51 Î±-l-arabinofuranosidase on wheat-derived arabinoxylans and arabino-xylooligosaccharides. Carbohydrate Polymers, 2008, 72, 424-430.	10.2	25
51	THUMB-LOOPS UP FOR CATALYSIS: A STRUCTURE/FUNCTION INVESTIGATION OF A FUNCTIONAL LOOP MOVEMENT IN A GH11 XYLANASE. Computational and Structural Biotechnology Journal, 2012, 1, e201207001.	4.1	25
52	Chemoenzymatic Syntheses of Linear and Branched Hemithiomaltodextrins as Potential Inhibitors for Starch-Debranching Enzymes. Chemistry - A European Journal, 2002, 8, 5447-5455.	3.3	23
53	A high-throughput screening system for the evaluation of biomass-hydrolyzing glycoside hydrolases. Bioresource Technology, 2010, 101, 8237-8243.	9.6	23
54	Title is missing!. Biotechnology Letters, 2001, 23, 1273-1277.	2.2	22

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55	Identification and Characterization of Various Cholecystokinin B Receptor mRNA Forms in Rat Brain Tissue and Partial Determination of the Cholecystokinin B Receptor Gene Structure. Journal of Neurochemistry, 2002, 63, 1199-1206.	3.9	22
56	A Chemoenzymatic Approach for the Synthesis of Unnatural Disaccharides ContainingD-Galacto-orD-Fucofuranosides. European Journal of Organic Chemistry, 2005, 2005, 4860-4869.	2.4	20
57	Investigation of the specificity of an Î±-l-arabinofuranosidase using C-2 and C-5 modified Î±-l-arabinofuranosides. Carbohydrate Research, 2007, 342, 2202-2211.	2.3	20
58	Mutation of a pH-modulating residue in a GH51 Î±-l-arabinofuranosidase leads to a severe reduction of the secondary hydrolysis of transfuranosylation products. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 626-636.	2.4	20
59	Enhancing the chemoenzymatic synthesis of arabinosylated xylo-oligosaccharides by GH51 Î±-l-arabinofuranosidase. Carbohydrate Research, 2015, 401, 64-72.	2.3	19
60	Biocatalytic conversion of wheat bran hydrolysate using an immobilized GH43 Î²-xylosidase. Bioresource Technology, 2009, 100, 338-344.	9.6	17
61	Impact of an N-terminal extension on the stability and activity of the GH11 xylanase from Thermobacillus xylanilyticus. Journal of Biotechnology, 2014, 174, 64-72.	3.8	17
62	Investigating the Function of an Arabinan Utilization Locus Isolated from a Termite Gut Community. Applied and Environmental Microbiology, 2015, 81, 31-39.	3.1	17
63	A Single Point Mutation Alters the Transglycosylation/Hydrolysis Partition, Significantly Enhancing the Synthetic Capability of an <i>endo</i>-Glycoceramidase. ACS Catalysis, 2016, 6, 8264-8275.	11.2	17
64	A 1H NMR study of the specificity of Î±-l-arabinofuranosidases on natural and unnatural substrates. Biochimica Et Biophysica Acta - General Subjects, 2014, 1840, 3106-3114.	2.4	16
65	New chromogenic substrates for feruloyl esterases. Organic and Biomolecular Chemistry, 2008, 6, 1208.	2.8	15
66	Functional roles of H98 and W99 and Î²2Î±2 loop dynamics in the Î±â€‹<scp>l</scp>â€arabinofuranosidase from <i>Thermobacillusâ€ƒxylanilyticus</i>. FEBS Journal, 2012, 279, 3598-3611.	4.7	15
67	Multimodularity of a GH10 Xylanase Found in the Termite Gut Metagenome. Applied and Environmental Microbiology, 2021, 87, .	3.1	14
68	A novel elicitin necrotic site revealed by a-cinnamomin sequence and site-directed mutagenesis. Phytochemistry, 1999, 50, 961-966.	2.9	13
69	Probing the determinants of the transglycosylation/hydrolysis partition in a retaining Î±-l-arabinofuranosidase. New Biotechnology, 2021, 62, 68-78.	4.4	12
70	Characterization of Deinococcus sahariens sp. nov., a radiation-resistant bacterium isolated from a Saharan hot spring. Archives of Microbiology, 2012, 194, 315-322.	2.2	11
71	Redefining <i>Xyn</i>A from <i>Penicillium funiculosum</i> IMI 378536 as a GH7 cellobiohydrolase. Journal of Industrial Microbiology and Biotechnology, 2012, 39, 1569-1576.	3.0	10
72	Meeting new challenges in food science technology: The development of complex systems approach for food and biobased research. Innovative Food Science and Emerging Technologies, 2018, 46, 1-6.	5.6	10

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73	Caldimonas hydrothermale sp. nov., a novel thermophilic bacterium isolated from roman hot bath in south Tunisia. Archives of Microbiology, 2010, 192, 485-491.	2.2	9
74	A substrate for the detection of broad specificity Î±-l-arabinofuranosidases with indirect release of a chromogenic group. Tetrahedron Letters, 2013, 54, 3063-3066.	1.4	9
75	Paenibacillus marinumsp. nov., a thermophilic xylanolytic bacterium isolated from a marine hot spring in Tunisia. Journal of Basic Microbiology, 2013, 53, 877-883.	3.3	9
76	Ecofriendly lignocellulose pretreatment to enhance the carboxylate production of a rumen-derived microbial consortium. Bioresource Technology, 2017, 236, 225-233.	9.6	9
77	Probing the Functions of Carbohydrate Binding Modules in the CBEL Protein from the Oomycete Phytophthora parasitica. PLoS ONE, 2015, 10, e0137481.	2.5	9
78	Design of chromogenic probes for efficient screening and evaluation of feruloyl esterase-like activities. Journal of Molecular Catalysis B: Enzymatic, 2016, 126, 24-31.	1.8	7
79	A Versatile and Colorful Screening Tool for the Identification of Arabinofuranoseâ€Acting Enzymes. ChemBioChem, 2012, 13, 1885-1888.	2.6	6
80	Construction and characterization of recA mutant strains of Corynebacterium glutamicum and Brevibacterium lactofermentum. Applied Microbiology and Biotechnology, 1994, 42, 575-580.	3.6	5
81	Thioimidoyl furanosides as first inhibitors of the Î±-l-arabinofuranosidase AbfD3. Bioorganic and Medicinal Chemistry Letters, 2007, 17, 434-438.	2.2	5
82	The Jo-In protein welding system is a relevant tool to create CBM-containing plant cell wall degrading enzymes. New Biotechnology, 2021, 65, 31-41.	4.4	5
83	Investigation of the functional relevance of the catalytically important Glu28in family 51 arabinosidases. FEBS Letters, 2003, 553, 381-386.	2.8	4
84	A method for introducing site-specific mutations using oligonucleotide primers and its application to site-saturation mutagenesis. Molecular Biotechnology, 1996, 6, 179-189.	2.4	3
85	Site-Directed and Site-Saturation Mutagenesis Using Oligonucleotide Primers. , 1994, 30, 211-226.		2
86	Effect of lignin content on a GH11 endoxylanase acting on glucuronoarabinoxylan-lignin nanocomposites. Carbohydrate Polymers, 2012, 89, 423-431.	10.2	2
87	INRA's research in industrial biotechnology: For food, chemicals, materials and fuels. Innovative Food Science and Emerging Technologies, 2018, 46, 140-152.	5.6	2
88	Synthesis of Î±-l-Araf and Î²-d-Galf series furanobiosides using mutants of a GH51 Î±-l-arabinofuranosidase. Bioorganic Chemistry, 2021, 116, 105245.	4.1	2
89	Tyr26 and Phe73 are essential for full biological activity of the Fd Gene 5 protein. FEMS Microbiology Letters, 1993, 109, 219-223.	1.8	2
90	Biorefineries for food, fuels and materials. Biofuels, Bioproducts and Biorefining, 2014, 8, 453-455.	3.7	1

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91	La production de carburants Ã partir de biomasse lignocellulosique par voie biologique : Ã©tat de lâ€™art et perspectives. Oleagineux Corps Gras Lipides, 2008, 15, 172-177.	0.2	0
92	Regioselective chemoenzymatic syntheses of ferulate conjugates as chromogenic substrates for feruloyl esterases. Beilstein Journal of Organic Chemistry, 2021, 17, 325-333.	2.2	0