AnikÃ³ VÃ¡rnai

List of Publications by Year
in descending order

50 papers	3,476 citations	126708 33 h-index	205818 48 g-index
50 all docs	50 docs citations	50 times ranked	2940 citing authors

#	Article	IF	Citations
1	Discovery of LPMO activity on hemicelluloses shows the importance of oxidative processes in plant cell wall degradation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6287-6292.	3.3	358
2	Oxidoreductases and Reactive Oxygen Species in Conversion of Lignocellulosic Biomass. Microbiology and Molecular Biology Reviews, 2018, 82, .	2.9	204
3	Harnessing the potential of LPMO-containing cellulase cocktails poses new demands on processing conditions. Biotechnology for Biofuels, 2015, 8, 187.	6.2	187
4	Restriction of the enzymatic hydrolysis of steam-pretreated spruce by lignin and hemicellulose. Enzyme and Microbial Technology, 2010, 46, 185-193.	1.6	157
5	Structural and Functional Characterization of a Lytic Polysaccharide Monooxygenase with Broad Substrate Specificity. Journal of Biological Chemistry, 2015, 290, 22955-22969.	1.6	157
6	Lytic Polysaccharide Monooxygenases in Enzymatic Processing of Lignocellulosic Biomass. ACS Catalysis, 2019, 9, 4970-4991.	5.5	145
7	Synergistic action of xylanase and mannanase improves the total hydrolysis of softwood. Bioresource Technology, 2011, 102, 9096-9104.	4.8	136
8	Enhancement of cellulose hydrolysis in sugarcane bagasse by the selective removal of lignin with sodium chlorite. Applied Energy, 2013, 102, 399-402.	5.1	128
9	Carbohydrate-Binding Modules of Fungal Cellulases. Advances in Applied Microbiology, 2014, 88, 103-165.	1.3	127
10	Carbohydrate-binding modules (CBMs) revisited: reduced amount of water counterbalances the need for CBMs. Biotechnology for Biofuels, 2013, 6, 30.	6.2	123
11	On the functional characterization of lytic polysaccharide monooxygenases (LPMOs). Biotechnology for Biofuels, 2019, 12, 58.	6.2	119
12	Enzymatic processing of lignocellulosic biomass: principles, recent advances and perspectives. Journal of Industrial Microbiology and Biotechnology, 2020, 47, 623-657.	1.4	109
13	A Lytic Polysaccharide Monooxygenase with Broad Xyloglucan Specificity from the Brown-Rot Fungus Gloeophyllum trabeum and Its Action on Cellulose-Xyloglucan Complexes. Applied and Environmental Microbiology, 2016, 82, 6557-6572.	1.4	97
14	Methylation of the Nâ€terminal histidine protects a lytic polysaccharide monooxygenase from autoâ€oxidative inactivation. Protein Science, 2018, 27, 1636-1650.	3.1	91
15	Simultaneous analysis of C1 and C4 oxidized oligosaccharides, the products of lytic polysaccharide monooxygenases acting on cellulose. Journal of Chromatography A, 2016, 1445, 46-54.	1.8	90
16	Xylan as limiting factor in enzymatic hydrolysis of nanocellulose. Bioresource Technology, 2013, 129, 135-141.	4.8	82
17	Adsorption of monocomponent enzymes in enzyme mixture analyzed quantitatively during hydrolysis of lignocellulose substrates. Bioresource Technology, 2011, 102, 1220-1227.	4.8	80
18	Expression of endoglucanases in Pichia pastoris under control of the GAP promoter. Microbial Cell Factories, 2014, 13, 57.	1.9	63

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19	The Pyrroloquinoline-Quinone-Dependent Pyranose Dehydrogenase from Coprinopsis cinerea Drives Lytic Polysaccharide Monooxygenase Action. Applied and Environmental Microbiology, 2018, 84, .	1.4	62
20	pH-Dependent Relationship between Catalytic Activity and Hydrogen Peroxide Production Shown via Characterization of a Lytic Polysaccharide Monooxygenase from <i>Gloeophyllum trabeum</i>. Applied and Environmental Microbiology, 2019, 85, .	1.4	62
21	The role of carbohydrate binding module (CBM) at high substrate consistency: Comparison of Trichoderma reesei and Thermoascus aurantiacus Cel7A (CBHI) and Cel5A (EGII). Bioresource Technology, 2013, 143, 196-203.	4.8	59
22	Development of minimal enzyme cocktails for hydrolysis of sulfite-pulped lignocellulosic biomass. Journal of Biotechnology, 2017, 246, 16-23.	1.9	59
23	Comparison of three seemingly similar lytic polysaccharide monooxygenases from Neurospora crassa suggests different roles in plant biomass degradation. Journal of Biological Chemistry, 2019, 294, 15068-15081.	1.6	59
24	Outer membrane vesicles from <i>Fibrobacter succinogenes</i> S85 contain an array of carbohydrateâ€active enzymes with versatile polysaccharideâ€degrading capacity. Environmental Microbiology, 2017, 19, 2701-2714.	1.8	55
25	Specific Xylan Activity Revealed for AA9 Lytic Polysaccharide Monooxygenases of the Thermophilic Fungus <i>Malbranchea cinnamomea</i> by Functional Characterization. Applied and Environmental Microbiology, 2019, 85, .	1.4	54
26	Changes in Submicrometer Structure of Enzymatically Hydrolyzed Microcrystalline Cellulose. Biomacromolecules, 2010, 11, 1111-1117.	2.6	51
27	Cellulases without carbohydrate-binding modules in high consistency ethanol production process. Biotechnology for Biofuels, 2014, 7, 27.	6.2	51
28	Quantitative comparison of the biomass-degrading enzyme repertoires of five filamentous fungi. Scientific Reports, 2020, 10, 20267.	1.6	51
29	Mechanisms of laccase-mediator treatments improving the enzymatic hydrolysis of pre-treated spruce. Biotechnology for Biofuels, 2014, 7, 177.	6.2	46
30	<i>Fg</i><scp>LPMO</scp>9A from <i>Fusarium graminearum</i> cleaves xyloglucan independently of the backbone substitution pattern. FEBS Letters, 2016, 590, 3346-3356.	1.3	44
31	Effects of enzymatic removal of plant cell wall acylation (acetylation, p-coumaroylation, and) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf fractions. Biotechnology for Biofuels, 2014, 7, 153.	6.2	38
32	Functional characterization of a lytic polysaccharide monooxygenase from the thermophilic fungus Myceliophthora thermophila. PLoS ONE, 2018, 13, e0202148.	1.1	36
33	Demonstrationâ€scale enzymatic saccharification of sulfiteâ€pulped spruce with addition of hydrogen peroxide for <scp>LPMO</scp> activation. Biofuels, Bioproducts and Biorefining, 2020, 14, 734-745.	1.9	34
34	Heterologous expression of lytic polysaccharide monooxygenases (LPMOs). Biotechnology Advances, 2020, 43, 107583.	6.0	29
35	Characterization of an AA9 LPMO from Thielavia australiensis, TausLPMO9B, under industrially relevant lignocellulose saccharification conditions. Biotechnology for Biofuels, 2020, 13, 195.	6.2	28
36	Characterization of two family AA9 LPMOs from Aspergillus tamarii with distinct activities on xyloglucan reveals structural differences linked to cleavage specificity. PLoS ONE, 2020, 15, e0235642.	1.1	26

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37	Small-angle scattering study of structural changes in the microfibril network of nanocellulose during enzymatic hydrolysis. Cellulose, 2013, 20, 1031-1040.	2.4	24
38	Fungal PQQ-dependent dehydrogenases and their potential in biocatalysis. Current Opinion in Chemical Biology, 2019, 49, 113-121.	2.8	22
39	Comparison of Six Lytic Polysaccharide Monooxygenases from <i>Thermothielavioides terrestris</i> Shows That Functional Variation Underlies the Multiplicity of LPMO Genes in Filamentous Fungi. Applied and Environmental Microbiology, 2022, 88, aem0009622.	1.4	22
40	Comparison of fungal carbohydrate esterases of family CE16 on artificial and natural substrates. Journal of Biotechnology, 2016, 233, 228-236.	1.9	21
41	In situ measurements of oxidationâ€“reduction potential and hydrogen peroxide concentration as tools for revealing LPMO inactivation during enzymatic saccharification of cellulose. Biotechnology for Biofuels, 2021, 14, 46.	6.2	20
42	Quantifying Oxidation of Cellulose-Associated Glucuronoxylan by Two Lytic Polysaccharide Monooxygenases from Neurospora crassa. Applied and Environmental Microbiology, 2021, 87, e0165221.	1.4	15
43	Inâ€depth characterization of <i>Trichoderma reesei</i> cellobiohydrolase <i>Tr</i>Cel7A produced in <i>Nicotiana benthamiana</i> reveals limitations of cellulase production in plants by hostâ€specific postâ€translational modifications. Plant Biotechnology Journal, 2020, 18, 631-643.	4.1	13
44	Challenges and opportunities in mimicking non-enzymatic brown-rot decay mechanisms for pretreatment of Norway spruce. Wood Science and Technology, 2019, 53, 291-311.	1.4	11
45	Negative salt effect in an acid-base diode: Simulations and experiments. Journal of Chemical Physics, 2010, 132, 064902.	1.2	9
46	Fungal Lytic Polysaccharide Monooxygenases (LPMOs): Biological Importance and Applications. , 2021, , 281-294.		7
47	2-Naphthol Impregnation Prior to Steam Explosion Promotes LPMO-Assisted Enzymatic Saccharification of Spruce and Yields High-Purity Lignin. ACS Sustainable Chemistry and Engineering, 2022, 10, 5233-5242.	3.2	7
48	Characterization of a lytic polysaccharide monooxygenase from Aspergillus fumigatus shows functional variation among family AA11 fungal LPMOs. Journal of Biological Chemistry, 2021, 297, 101421.	1.6	5
49	The Role of Lytic Polysaccharide Monooxygenases in Wood Rotting Basidiomycetes. Trends in Glycoscience and Glycotechnology, 2020, 32, E135-E143.	0.0	3
50	The Role of Lytic Polysaccharide Monooxygenases in Wood Rotting Basidiomycetes. Trends in Glycoscience and Glycotechnology, 2020, 32, J111-J119.	0.0	0