Anik Vrnai

List of Publications by Citations

49 papers	2,528 citations	30 h-index	50 g-index
50 ext. papers	2,993 ext. citations	6.5 avg, IF	5.33 L-index

#	Paper	IF	Citations
49	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, 6287-92	11.5	289
48	Harnessing the potential of LPMO-containing cellulase cocktails poses new demands on processing conditions. *Biotechnology for Biofuels*, **2015**, 8, 187	7.8	141
47	Restriction of the enzymatic hydrolysis of steam-pretreated spruce by lignin and hemicellulose. *Enzyme and Microbial Technology*, **2010**, 46, 185-193	3.8	139
46	Structural and Functional Characterization of a Lytic Polysaccharide Monooxygenase with Broad Substrate Specificity. *Journal of Biological Chemistry*, **2015**, 290, 22955-69	5.4	131
45	Oxidoreductases and Reactive Oxygen Species in Conversion of Lignocellulosic Biomass. *Microbiology and Molecular Biology Reviews*, **2018**, 82,	13.2	128
44	Synergistic action of xylanase and mannanase improves the total hydrolysis of softwood. *Bioresource Technology*, **2011**, 102, 9096-104	11	113
43	Enhancement of cellulose hydrolysis in sugarcane bagasse by the selective removal of lignin with sodium chlorite. *Applied Energy*, **2013**, 102, 399-402	10.7	100
42	Carbohydrate-binding modules (CBMs) revisited: reduced amount of water counterbalances the need for CBMs. *Biotechnology for Biofuels*, **2013**, 6, 30	7.8	98
41	Carbohydrate-binding modules of fungal cellulases: occurrence in nature, function, and relevance in industrial biomass conversion. *Advances in Applied Microbiology*, **2014**, 88, 103-65	4.9	93
40	Lytic Polysaccharide Monooxygenases in Enzymatic Processing of Lignocellulosic Biomass. *ACS Catalysis*, **2019**, 9, 4970-4991	13.1	76
39	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	4.8	76
38	Adsorption of monocomponent enzymes in enzyme mixture analyzed quantitatively during hydrolysis of lignocellulose substrates. *Bioresource Technology*, **2011**, 102, 1220-7	11	75
37	On the functional characterization of lytic polysaccharide monooxygenases (LPMOs). *Biotechnology for Biofuels*, **2019**, 12, 58	7.8	72
36	Xylan as limiting factor in enzymatic hydrolysis of nanocellulose. *Bioresource Technology*, **2013**, 129, 135-41	11	68
35	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	4.5	66
34	Methylation of the N-terminal histidine protects a lytic polysaccharide monooxygenase from auto-oxidative inactivation. *Protein Science*, **2018**, 27, 1636-1650	6.3	60
33	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	11	52

32	Expression of endoglucanases in Pichia pastoris under control of the GAP promoter. *Microbial Cell Factories*, **2014**, 13, 57	6.4	50
31	Enzymatic processing of lignocellulosic biomass: principles, recent advances and perspectives. *Journal of Industrial Microbiology and Biotechnology*, **2020**, 47, 623-657	4.2	49
30	The Pyrroloquinoline-Quinone-Dependent Pyranose Dehydrogenase from Coprinopsis cinerea Drives Lytic Polysaccharide Monooxygenase Action. *Applied and Environmental Microbiology*, **2018**, 84,	4.8	47
29	pH-Dependent Relationship between Catalytic Activity and Hydrogen Peroxide Production Shown via Characterization of a Lytic Polysaccharide Monooxygenase from. *Applied and Environmental Microbiology*, **2019**, 85,	4.8	47
28	Cellulases without carbohydrate-binding modules in high consistency ethanol production process. *Biotechnology for Biofuels*, **2014**, 7, 27	7.8	46
27	Changes in submicrometer structure of enzymatically hydrolyzed microcrystalline cellulose. *Biomacromolecules*, **2010**, 11, 1111-7	6.9	46
26	Development of minimal enzyme cocktails for hydrolysis of sulfite-pulped lignocellulosic biomass. *Journal of Biotechnology*, **2017**, 246, 16-23	3.7	42
25	Outer membrane vesicles from Fibrobacter succinogenes S85 contain an array of carbohydrate-active enzymes with versatile polysaccharide-degrading capacity. *Environmental Microbiology*, **2017**, 19, 2701-2714	5.2	40
24	Mechanisms of laccase-mediator treatments improving the enzymatic hydrolysis of pre-treated spruce. *Biotechnology for Biofuels*, **2014**, 7, 177	7.8	40
23	FgLPMO9A from Fusarium graminearum cleaves xyloglucan independently of the backbone substitution pattern. *FEBS Letters*, **2016**, 590, 3346-3356	3.8	38
22	Specific Xylan Activity Revealed for AA9 Lytic Polysaccharide Monooxygenases of the Thermophilic Fungus by Functional Characterization. *Applied and Environmental Microbiology*, **2019**, 85,	4.8	36
21	Comparison of three seemingly similar lytic polysaccharide monooxygenases from suggests different roles in plant biomass degradation. *Journal of Biological Chemistry*, **2019**, 294, 15068-15081	5.4	33
20	Effects of enzymatic removal of plant cell wall acylation (acetylation, p-coumaroylation, and feruloylation) on accessibility of cellulose and xylan in natural (non-pretreated) sugar cane fractions. *Biotechnology for Biofuels*, **2014**, 7, 153	7.8	30
19	Functional characterization of a lytic polysaccharide monooxygenase from the thermophilic fungus Myceliophthora thermophila. *PLoS ONE*, **2018**, 13, e0202148	3.7	29
18	Quantitative comparison of the biomass-degrading enzyme repertoires of five filamentous fungi. *Scientific Reports*, **2020**, 10, 20267	4.9	22
17	Small-angle scattering study of structural changes in the microfibril network of nanocellulose during enzymatic hydrolysis. *Cellulose*, **2013**, 20, 1031-1040	5.5	20
16	Demonstration-scale enzymatic saccharification of sulfite-pulped spruce with addition of hydrogen peroxide for LPMO activation. *Biofuels, Bioproducts and Biorefining*, **2020**, 14, 734-745	5.3	17
15	Characterization of an AA9 LPMO from Thielavia australiensis, TausLPMO9B, under industrially relevant lignocellulose saccharification conditions. *Biotechnology for Biofuels*, **2020**, 13, 195	7.8	16

14	Comparison of fungal carbohydrate esterases of family CE16 on artificial and natural substrates. *Journal of Biotechnology*, **2016**, 233, 228-36	3.7	16
13	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	3.7	15
12	Fungal PQQ-dependent dehydrogenases and their potential in biocatalysis. *Current Opinion in Chemical Biology*, **2019**, 49, 113-121	9.7	15
11	Heterologous expression of lytic polysaccharide monooxygenases (LPMOs). *Biotechnology Advances*, **2020**, 43, 107583	17.8	13
10	Negative salt effect in an acid-base diode: Simulations and experiments. *Journal of Chemical Physics* , **2010**, 132, 064902	3.9	9
9	In-depth characterization of Trichoderma reesei cellobiohydrolase TrCel7A produced in Nicotiana benthamiana reveals limitations of cellulase production in plants by host-specific post-translational modifications. *Plant Biotechnology Journal*, **2020**, 18, 631-643	11.6	9
8	Challenges and opportunities in mimicking non-enzymatic brown-rot decay mechanisms for pretreatment of Norway spruce. *Wood Science and Technology*, **2019**, 53, 291-311	2.5	7
7	In situ measurements of oxidation-reduction potential and hydrogen peroxide concentration as tools for revealing LPMO inactivation during enzymatic saccharification of cellulose. *Biotechnology for Biofuels*, **2021**, 14, 46	7.8	6
6	Fungal Lytic Polysaccharide Monooxygenases (LPMOs): Biological Importance and Applications **2021**, 281-294		6
5	Quantifying Oxidation of Cellulose-Associated Glucuronoxylan by Two Lytic Polysaccharide Monooxygenases from Neurospora crassa. *Applied and Environmental Microbiology*, **2021**, 87, e0165221	4.8	4
4	Comparison of six lytic polysaccharide monooxygenases from shows that functional variation underlies the multiplicity of LPMO genes in filamentous fungi.. *Applied and Environmental Microbiology*, **2022**, aem0009622	4.8	2
3	Characterization of a lytic polysaccharide monooxygenase from Aspergillus fumigatus shows functional variation among family AA11 fungal LPMOs. *Journal of Biological Chemistry*, **2021**, 297, 101421	5.4	1
2	The Role of Lytic Polysaccharide Monooxygenases in Wood Rotting Basidiomycetes. *Trends in Glycoscience and Glycotechnology*, **2020**, 32, E135-E143	0.1	0
1	The Role of Lytic Polysaccharide Monooxygenases in Wood Rotting Basidiomycetes. *Trends in Glycoscience and Glycotechnology*, **2020**, 32, J111-J119	0.1	