Gabriel PaÃ«s

List of Publications by Year
in descending order

43 papers	2,022 citations	361413 20 h-index	276875 41 g-index
44 all docs	44 docs citations	44 times ranked	2525 citing authors

#	Article	IF	Citations
1	Lignocellulosic Biomass: Understanding Recalcitrance and Predicting Hydrolysis. Frontiers in Chemistry, 2019, 7, 874.	3.6	424
2	GH11 xylanases: Structure/function/properties relationships and applications. Biotechnology Advances, 2012, 30, 564-592.	11.7	351
3	Understanding the structural and chemical changes of plant biomass following steam explosion pretreatment. Biotechnology for Biofuels, 2017, 10, 36.	6.2	214
4	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
5	Lignocellulosic fibers: a critical review of the extrusion process for enhancement of the properties of natural fiber composites. RSC Advances, 2017, 7, 34638-34654.	3.6	86
6	Engineering increased thermostability in the thermostable GH-11 xylanase from Thermobacillus xylanilyticus. Journal of Biotechnology, 2006, 125, 338-350.	3.8	76
7	Multimodal analysis of pretreated biomass species highlights generic markers of lignocellulose recalcitrance. Biotechnology for Biofuels, 2018, 11, 52.	6.2	59
8	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
9	Exploring mechanical properties of fully compostable flax reinforced composite filaments for 3D printing applications. Industrial Crops and Products, 2019, 135, 246-250.	5.2	52
10	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
11	Fluorescent Probes for Exploring Plant Cell Wall Deconstruction: A Review. Molecules, 2014, 19, 9380-9402.	3.8	43
12	Seeing biomass recalcitrance through fluorescence. Scientific Reports, 2017, 7, 8838.	3.3	42
13	Fluorescence techniques can reveal cell wall organization and predict saccharification in pretreated wood biomass. Industrial Crops and Products, 2018, 123, 84-92.	5.2	38
14	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
15	Tyrosine 105 and Threonine 212 at Outermost Substrate Binding Subsites â€“6 and +4 Control Substrate Specificity, Oligosaccharide Cleavage Patterns, and Multiple Binding Modes of Barley Î±-Amylase 1. Journal of Biological Chemistry, 2004, 279, 10093-10102.	3.4	33
16	Characterization of Arabinoxylan/Cellulose Nanocrystals Gels to Investigate Fluorescent Probes Mobility in Bioinspired Models of Plant Secondary Cell Wall. Biomacromolecules, 2012, 13, 206-214.	5.4	30
17	Exploring accessibility of pretreated poplar cell walls by measuring dynamics of fluorescent probes. Biotechnology for Biofuels, 2017, 10, 15.	6.2	26
18	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

#	Article	IF	Citations
19	Tracking of enzymatic biomass deconstruction by fungal secretomes highlights markers of lignocellulose recalcitrance. Biotechnology for Biofuels, 2019, 12, 76.	6.2	25
20	Investigation of the binding properties of a multi-modular GH45 cellulase using bioinspired model assemblies. Biotechnology for Biofuels, 2016, 9, 12.	6.2	22
21	Exploring the microstructure of natural fibre composites by confocal Raman imaging and image analysis. Composites Part A: Applied Science and Manufacturing, 2017, 94, 32-40.	7.6	21
22	Action of lytic polysaccharide monooxygenase on plant tissue is governed by cellular type. Scientific Reports, 2017, 7, 17792.	3.3	21
23	Heterologous production of the<i>Piromyces equi</i>cinnamoyl esterase in<i>Trichoderma reesei</i>for biotechnological applications. Letters in Applied Microbiology, 2009, 49, 673-678.	2.2	17
24	Fluorescent Nano-Probes to Image Plant Cell Walls by Super-Resolution STED Microscopy. Plants, 2018, 7, 11.	3.5	16
25	Ferulic acid derivatives used as biobased powders for a convenient plasticization of polylactic acid in continuous hot-melt process. European Polymer Journal, 2019, 110, 293-300.	5.4	15
26	Evaluating polymer interplay after hot water pretreatment to investigate maize stem internode recalcitrance. Biotechnology for Biofuels, 2021, 14, 164.	6.2	15
27	Modeling Progression of Fluorescent Probes in Bioinspired Lignocellulosic Assemblies. Biomacromolecules, 2013, 14, 2196-2205.	5.4	14
28	Enzymes to unravel bioproducts architecture. Biotechnology Advances, 2020, 41, 107546.	11.7	12
29	Dynamical assessment of fluorescent probes mobility in poplar cell walls reveals nanopores govern saccharification. Biotechnology for Biofuels, 2018, 11, 271.	6.2	11
30	FRET-SLiM on native autofluorescence: a fast and reliable method to study interactions between fluorescent probes and lignin in plant cell wall. Plant Methods, 2018, 14, 74.	4.3	11
31	Real Time and Quantitative Imaging of Lignocellulosic Films Hydrolysis by Atomic Force Microscopy Reveals Lignin Recalcitrance at Nanoscale. Biomacromolecules, 2019, 20, 515-527.	5.4	11
32	Multimodal characterization of acid-pretreated poplar reveals spectral and structural parameters strongly correlate with saccharification. Bioresource Technology, 2019, 293, 122015.	9.6	10
33	Bioinspired assemblies of plant cell wall polymers unravel the affinity properties of carbohydrate-binding modules. Soft Matter, 2015, 11, 6586-6594.	2.7	9
34	Fluorescence Lifetime Imaging as an <i>In Situ</i> and Label-Free Readout for the Chemical Composition of Lignin. ACS Sustainable Chemistry and Engineering, 2021, 9, 17381-17392.	6.7	9
35	Editorial: From Biomass to Advanced Bio-Based Chemicals & Materials: A Multidisciplinary Perspective. Frontiers in Chemistry, 2020, 8, 131.	3.6	6
36	Flax shives-PBAT processing into 3D printed fluorescent materials with potential sensor functionalities. Industrial Crops and Products, 2021, 167, 113482.	5.2	6

#	Article	IF	Citations
37	Testing scientific models using Qualitative Reasoning: Application to cellulose hydrolysis. Scientific Reports, 2017, 7, 14122.	3.3	2
38	Microstructural and Chemical Approach To Highlight How a Simple Methyl Group Affects the Mechanical Properties of a Natural Fibers Composite. ACS Sustainable Chemistry and Engineering, 2017, 5, 10352-10360.	6.7	2
39	Fluorescence Lifetime Imaging of Plant Cell Walls. Methods in Molecular Biology, 2019, 1992, 77-82.	0.9	2
40	Real-time imaging of enzymatic degradation of pretreated maize internodes reveals different cell types have different profiles. Bioresource Technology, 2022, 353, 127140.	9.6	2
41	Bioinspired Assemblies of Plant Cell Walls for Measuring Protein-Carbohydrate Interactions by FRAP. Methods in Molecular Biology, 2017, 1588, 169-179.	0.9	1
42	Three-Dimensional Imaging of Plant Cell Wall Deconstruction Using Fluorescence Confocal Microscopy. Sustainable Chemistry, 2020, 1, 75-85.	4.7	1
43	Measuring Interactions between Fluorescent Probes and Lignin in Plant Sections by sFLIM Based on Native Autofluorescence. Journal of Visualized Experiments, 2020, , .	0.3	1