Ana Gutierrez

List of Publications by Year
in descending order

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124 papers	8,603 citations	34076 52 h-index	48277 88 g-index
127 all docs	127 docs citations	127 times ranked	6963 citing authors

#	Article	IF	Citations
1	Structural Characterization of Wheat Straw Lignin as Revealed by Analytical Pyrolysis, 2D-NMR, and Reductive Cleavage Methods. Journal of Agricultural and Food Chemistry, 2012, 60, 5922-5935.	2.4	650
2	Enzymatic delignification of plant cell wall: from nature to mill. Current Opinion in Biotechnology, 2009, 20, 348-357.	3.3	271
3	Lignin Composition and Structure in Young versus AdultEucalyptus globulusPlants. Plant Physiology, 2011, 155, 667-682.	2.3	263
4	Paper pulp delignification using laccase and natural mediators. Enzyme and Microbial Technology, 2007, 40, 1264-1271.	1.6	228
5	Differences in the chemical structure of the lignins from sugarcane bagasse and straw. Biomass and Bioenergy, 2015, 81, 322-338.	2.9	227
6	Monolignol acylation and lignin structure in some nonwoody plants: A 2D NMR study. Phytochemistry, 2008, 69, 2831-2843.	1.4	197
7	Lignin Monomers from beyond the Canonical Monolignol Biosynthetic Pathway: Another Brick in the Wall. ACS Sustainable Chemistry and Engineering, 2020, 8, 4997-5012.	3.2	184
8	Occurrence of Naturally Acetylated Lignin Units. Journal of Agricultural and Food Chemistry, 2007, 55, 5461-5468.	2.4	173
9	Highly Acylated (Acetylated and/or p-Coumaroylated) Native Lignins from Diverse Herbaceous Plants. Journal of Agricultural and Food Chemistry, 2008, 56, 9525-9534.	2.4	172
10	Structural Characterization of the Lignin in the Cortex and Pith of Elephant Grass (Pennisetum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.4	172
11	Composition of non-woody plant lignins and cinnamic acids by Py-GC/MS, Py/TMAH and FT-IR. Journal of Analytical and Applied Pyrolysis, 2007, 79, 39-46.	2.6	167
12	Efficient bleaching of non-wood high-quality paper pulp using laccase-mediator system. Enzyme and Microbial Technology, 2004, 35, 113-120.	1.6	164
13	Structural Characterization of the Lignin from Jute (Corchorus capsularis) Fibers. Journal of Agricultural and Food Chemistry, 2009, 57, 10271-10281.	2.4	163
14	Pretreatment with laccase and a phenolic mediator degrades lignin and enhances saccharification of Eucalyptus feedstock. Biotechnology for Biofuels, 2014, 7, 6.	6.2	161
15	Determining the influence of eucalypt lignin composition in paper pulp yield using Py-GC/MS. Journal of Analytical and Applied Pyrolysis, 2005, 74, 110-115.	2.6	157
16	Structural characterization of milled wood lignins from different eucalypt species. Holzforschung, 2008, 62, 514-526.	0.9	147
17	Structural characterization of extracellular polysaccharides produced by fungi from the genus Pleurotus. Carbohydrate Research, 1996, 281, 143-154.	1.1	136
18	Isolation and structural characterization of the milled-wood lignin from Paulownia fortunei wood. Industrial Crops and Products, 2009, 30, 137-143.	2.5	135

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19	5â€hydroxymethylfurfural conversion by fungal arylâ€alcohol oxidase and unspecific peroxygenase. FEBS Journal, 2015, 282, 3218-3229.	2.2	132
20	HSQC-NMR analysis of lignin in woody (Eucalyptus globulus and Picea abies) and non-woody (Agave sisalana) ball-milled plant materials at the gel state 10th EWLP, Stockholm, Sweden, August 25â€“28, 2008. Holzforschung, 2009, 63, 691-698.	0.9	130
21	Demonstration of laccase-based removal of lignin from wood and non-wood plant feedstocks. Bioresource Technology, 2012, 119, 114-122.	4.8	130
22	Structural Characterization of Lignin Isolated from Coconut (Cocos nucifera) Coir Fibers. Journal of Agricultural and Food Chemistry, 2013, 61, 2434-2445.	2.4	130
23	Lignin Modification duringEucalyptus globulusKraft Pulping Followed by Totally Chlorine-Free Bleaching:Â A Two-Dimensional Nuclear Magnetic Resonance, Fourier Transform Infrared, and Pyrolysisâ€'Gas Chromatography/Mass Spectrometry Study. Journal of Agricultural and Food Chemistry, 2007, 55, 3477-3490.	2.4	118
24	Polymerization of lignosulfonates by the laccase-HBT (1-hydroxybenzotriazole) system improves dispersibility. Bioresource Technology, 2010, 101, 5054-5062.	4.8	112
25	Isolation and Structural Characterization of the Milled Wood Lignin, Dioxane Lignin, and Cellulolytic Lignin Preparations from Brewerâ€™s Spent Grain. Journal of Agricultural and Food Chemistry, 2015, 63, 603-613.	2.4	110
26	Analysis of lipophilic extractives from wood and pitch deposits by solid-phase extraction and gas chromatography. Journal of Chromatography A, 1998, 823, 449-455.	1.8	104
27	Selective lignin and polysaccharide removal in natural fungal decay of wood as evidenced by in situ structural analyses. Environmental Microbiology, 2011, 13, 96-107.	1.8	93
28	Structural Characterization of Guaiacyl-rich Lignins in Flax (Linum usitatissimum) Fibers and Shives. Journal of Agricultural and Food Chemistry, 2011, 59, 11088-11099.	2.4	92
29	Removal of Lipophilic Extractives from Paper Pulp by Laccase and Lignin-Derived Phenols as Natural Mediators. Environmental Science & Technology, 2007, 41, 4124-4129.	4.6	91
30	Microbial and enzymatic control of pitch in the pulp and paper industry. Applied Microbiology and Biotechnology, 2009, 82, 1005-1018.	1.7	91
31	Analysis of the Phlebiopsis gigantea Genome, Transcriptome and Secretome Provides Insight into Its Pioneer Colonization Strategies of Wood. PLoS Genetics, 2014, 10, e1004759.	1.5	90
32	Hydroxystilbenes Are Monomers in Palm Fruit Endocarp Lignins. Plant Physiology, 2017, 174, 2072-2082.	2.3	90
33	Lipid and lignin composition of woods from different eucalypt species. Holzforschung, 2007, 61, 165-174.	0.9	83
34	Enzymatic grafting of simple phenols on flax and sisal pulp fibres using laccases. Bioresource Technology, 2010, 101, 8211-8216.	4.8	83
35	Oxyfunctionalization of aliphatic compounds by a recombinant peroxygenase from Coprinopsis cinerea. Biotechnology and Bioengineering, 2013, 110, 2323-2332.	1.7	77
36	Regioselective oxygenation of fatty acids, fatty alcohols and other aliphatic compounds by a basidiomycete heme-thiolate peroxidase. Archives of Biochemistry and Biophysics, 2011, 514, 33-43.	1.4	76

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37	Chemical composition of lipids in brewer's spent grain: A promising source of valuable phytochemicals. Journal of Cereal Science, 2013, 58, 248-254.	1.8	73
38	Analysis of ligninâ€“carbohydrate and ligninâ€“lignin linkages after hydrolase treatment of xylanâ€“lignin, glucomannanâ€“lignin and glucanâ€“lignin complexes from spruce wood. Planta, 2014, 239, 1079-90.	1.6	73
39	Towards industrially-feasible delignification and pitch removal by treating paper pulp with Myceliophthora thermophila laccase and a phenolic mediator. Bioresource Technology, 2011, 102, 6717-6722.	4.8	71
40	Variability in Lignin Composition and Structure in Cell Walls of Different Parts of MacaÃºba (Acrocomia aculeata) Palm Fruit. Journal of Agricultural and Food Chemistry, 2018, 66, 138-153.	2.4	70
41	Production of New Unsaturated Lipids during Wood Decay by Ligninolytic Basidiomycetes. Applied and Environmental Microbiology, 2002, 68, 1344-1350.	1.4	69
42	Kinetic and chemical characterization of aldehyde oxidation by fungal aryl-alcohol oxidase. Biochemical Journal, 2010, 425, 585-593.	1.7	69
43	Chemical characterization of residual lignins from eucalypt paper pulps. Journal of Analytical and Applied Pyrolysis, 2005, 74, 116-122.	2.6	68
44	Chemical Characterization of Lignin and Lipid Fractions in Industrial Hemp Bast Fibers Used for Manufacturing High-Quality Paper Pulps. Journal of Agricultural and Food Chemistry, 2006, 54, 2138-2144.	2.4	68
45	Modification of the Lignin Structure during Alkaline Delignification of Eucalyptus Wood by Kraft, Soda-AQ, and Soda-O₂Cooking. Industrial & Engineering Chemistry Research, 2013, 52, 15702-15712.	1.8	67
46	Characterization of organic deposits produced in the kraft pulping of Eucalyptus globulus wood. Journal of Chromatography A, 1998, 823, 457-465.	1.8	65
47	Chemical composition and thermal behavior of the pulp and kernel oils from macauba palm () Tj ETQq1 1 0.784314 rgBT /Overlock 10	2.5	63
48	Structural modification of eucalypt pulp lignin in a totally chlorine-free bleaching sequence including a laccase-mediator stage. Holzforschung, 2007, 61, 634-646.	0.9	62
49	Analysis of pitch deposits produced in Kraft pulp mills using a totally chlorine free bleaching sequence. Journal of Chromatography A, 2000, 874, 235-245.	1.8	57
50	Chemical Composition of Abaca (Musa textilis) Leaf Fibers Used for Manufacturing of High Quality Paper Pulps. Journal of Agricultural and Food Chemistry, 2006, 54, 4600-4610.	2.4	57
51	Gas chromatography/mass spectrometry demonstration of steryl glycosides in eucalypt wood, Kraft pulp and process liquids. Rapid Communications in Mass Spectrometry, 2001, 15, 2515-2520.	0.7	55
52	Chemical composition of lipophilic extractives from sisal (Agave sisalana) fibers. Industrial Crops and Products, 2008, 28, 81-87.	2.5	55
53	Modulating Fatty Acid Epoxidation vs Hydroxylation in a Fungal Peroxygenase. ACS Catalysis, 2019, 9, 6234-6242.	5.5	54
54	Ferulates and lignin structural composition in cork. Holzforschung, 2016, 70, 275-289.	0.9	53

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55	Delignification and Saccharification Enhancement of Sugarcane Byproducts by a Laccase-Based Pretreatment. ACS Sustainable Chemistry and Engineering, 2017, 5, 7145-7154.	3.2	53
56	Comprehensive Study of Valuable Lipophilic Phytochemicals in Wheat Bran. Journal of Agricultural and Food Chemistry, 2014, 62, 1664-1673.	2.4	50
57	Enzymatic Removal of Free and Conjugated Sterols Forming Pitch Deposits in Environmentally Sound Bleaching of Eucalypt Paper Pulp. Environmental Science & Technology, 2006, 40, 3416-3422.	4.6	47
58	Chemical characterization of pitch deposits produced in the manufacturing of high-quality paper pulps from hemp fibers. Bioresource Technology, 2005, 96, 1445-1450.	4.8	44
59	Understanding Pulp Delignification by Laccaseâ€“Mediator Systems through Isolation and Characterization of Ligninâ€“Carbohydrate Complexes. Biomacromolecules, 2013, 14, 3073-3080.	2.6	44
60	Lipophilic phytochemicals from sugarcane bagasse and straw. Industrial Crops and Products, 2015, 77, 992-1000.	2.5	44
61	Cell wall modifications triggered by the down-regulation of Coumarate 3-hydroxylase-1 in maize. Plant Science, 2015, 236, 272-282.	1.7	44
62	Lipophilic extractives from several nonwoody lignocellulosic crops (flax, hemp, sisal, abaca) and their fate during alkaline pulping and TCF/ECF bleaching. Bioresource Technology, 2010, 101, 260-267.	4.8	43
63	From Alkanes to Carboxylic Acids: Terminal Oxygenation by a Fungal Peroxygenase. Angewandte Chemie - International Edition, 2016, 55, 12248-12251.	7.2	43
64	Hydroxystilbene Glucosides Are Incorporated into Norway Spruce Bark Lignin. Plant Physiology, 2019, 180, 1310-1321.	2.3	43
65	Two New Unspecific Peroxygenases from Heterologous Expression of Fungal Genes in Escherichia coli. Applied and Environmental Microbiology, 2020, 86, .	1.4	43
66	Isolation of high-purity residual lignins from eucalypt paper pulps by cellulase and proteinase treatments followed by solvent extraction. Enzyme and Microbial Technology, 2004, 35, 173-181.	1.6	38
67	Chemical characterization of the lipophilic fraction of giant reed (Arundo donax) fibres used for pulp and paper manufacturing. Industrial Crops and Products, 2007, 26, 229-236.	2.5	38
68	Structural Characterization of Lignin from Maize (Zea mays L.) Fibers: Evidence for Diferuloylputrescine Incorporated into the Lignin Polymer in Maize Kernels. Journal of Agricultural and Food Chemistry, 2018, 66, 4402-4413.	2.4	38
69	Lipids from Flax Fibers and Their Fate in Alkaline Pulping. Journal of Agricultural and Food Chemistry, 2003, 51, 4965-4971.	2.4	37
70	Chemical Characterization of Lignin and Lipid Fractions in Kenaf Bast Fibers Used for Manufacturing High-Quality Papers. Journal of Agricultural and Food Chemistry, 2004, 52, 4764-4773.	2.4	37
71	Chemical Characterization of Lignin and Lipophilic Fractions from Leaf Fibers of Curaua (Ananas) Tj ETQq1 1 0.784314 rgBT /Overlock	2.4	37
72	Ligninâ€“carbohydrate complexes from sisal (Agave sisalana) and abaca (Musa textilis): chemical composition and structural modifications during the isolation process. Planta, 2016, 243, 1143-1158.	1.6	37

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73	Fatty Acid Chain Shortening by a Fungal Peroxygenase. Chemistry - A European Journal, 2017, 23, 16985-16989.	1.7	37
74	Steroid Hydroxylation by Basidiomycete Peroxygenases: a Combined Experimental and Computational Study. Applied and Environmental Microbiology, 2015, 81, 4130-4142.	1.4	36
75	In-Depth 2D NMR Study of Lignin Modification During Pretreatment of Eucalyptus Wood with Laccase and Mediators. Bioenergy Research, 2015, 8, 211-230.	2.2	35
76	Lipophilic Extractives from the Cortex and Pith of Elephant Grass (Pennisetum purpureum Schumach.) Stems. Journal of Agricultural and Food Chemistry, 2012, 60, 6408-6417.	2.4	34
77	A Comprehensive Characterization of Lipids in Wheat Straw. Journal of Agricultural and Food Chemistry, 2013, 61, 1904-1913.	2.4	34
78	Lignin from Tree Barks: Chemical Structure and Valorization. ChemSusChem, 2020, 13, 4537-4547.	3.6	33
79	Morphological characteristics and composition of lipophilic extractives and lignin in Brazilian woods from different eucalypt hybrids. Industrial Crops and Products, 2012, 36, 572-583.	2.5	32
80	Oxidative degradation of model lipids representative for main paper pulp lipophilic extractives by the laccaseâ€“mediator system. Applied Microbiology and Biotechnology, 2008, 80, 211-222.	1.7	31
81	Acetylated heteroxylan from Agave sisalana and its behavior in alkaline pulping and TCF/ECF bleaching. Carbohydrate Polymers, 2010, 81, 517-523.	5.1	30
82	Demonstration of Lignin-to-Peroxidase Direct Electron Transfer. Journal of Biological Chemistry, 2015, 290, 23201-23213.	1.6	30
83	Molecular determinants for selective C₂₅-hydroxylation of vitamins D₂and D₃by fungal peroxygenases. Catalysis Science and Technology, 2016, 6, 288-295.	2.1	29
84	Fatty acid epoxidation byCollariella virescensperoxygenase and heme-channel variants. Catalysis Science and Technology, 2020, 10, 717-725.	2.1	29
85	Lipophilic extractives in process waters during manufacturing of totally chlorine free kraft pulp from eucalypt wood. Chemosphere, 2001, 44, 1237-1242.	4.2	28
86	Selective synthesis of the resveratrol analogue 4,4â€²-dihydroxy-trans-stilbene and stilbenoids modification by fungal peroxygenases. Catalysis Science and Technology, 2018, 8, 2394-2401.	2.1	28
87	Flavonoids naringenin chalcone, naringenin, dihydrotricin, and tricin are lignin monomers in papyrus. Plant Physiology, 2022, 188, 208-219.	2.3	28
88	Selective Epoxidation of Fatty Acids and Fatty Acid Methyl Esters by Fungal Peroxygenases. ChemCatChem, 2018, 10, 3964-3968.	1.8	26
89	Selective synthesis of 4-hydroxyisophorone and 4-ketoisophorone by fungal peroxygenases. Catalysis Science and Technology, 2019, 9, 1398-1405.	2.1	26
90	Induced lignoâ€suberin vascular coating and tyramineâ€derived hydroxycinnamic acid amides restrict Ralstonia solanacearum colonization in resistant tomato. New Phytologist, 2022, 234, 1411-1429.	3.5	26

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91	Analysis of impurities occurring in a totally chlorine free-bleached Kraft pulp. Journal of Chromatography A, 1999, 830, 227-232.	1.8	25
92	Fungal Pretreatment ofEucalyptusWood Can Strongly Decrease the Amount of Lipophilic Extractives during Chlorine Free Kraft Pulping. Environmental Science & Technology, 2000, 34, 3705-3709.	4.6	25
93	Fatty-Acid Oxygenation by Fungal Peroxygenases: From Computational Simulations to Preparative Regio- and Stereoselective Epoxidation. ACS Catalysis, 2020, 10, 13584-13595.	5.5	25
94	Presence of 5-hydroxyguaiacyl units as native lignin constituents in plants as seen by Py-GC/MS. Journal of Analytical and Applied Pyrolysis, 2007, 79, 33-38.	2.6	24
95	Deciphering the Unique Structure and Acylation Pattern of Posidonia oceanica Lignin. ACS Sustainable Chemistry and Engineering, 2020, 8, 12521-12533.	3.2	24
96	Regioselective Hydroxylation in the Production of 25â€Hydroxyvitaminâ€...D by Coprinopsis cinerea Peroxygenase. ChemCatChem, 2015, 7, 283-290.	1.8	23
97	Identification of intact long-chainp-hydroxycinnamate esters in leaf fibers of abaca (Musa textilis) using gas chromatography/mass spectrometry. Rapid Communications in Mass Spectrometry, 2004, 18, 2691-2696.	0.7	22
98	Structural insights on laccase biografting of ferulic acid onto lignocellulosic fibers. Biochemical Engineering Journal, 2014, 86, 16-23.	1.8	20
99	Delignification of eucalypt kraft pulp with manganese-substituted polyoxometalate assisted by fungal versatile peroxidase. Bioresource Technology, 2010, 101, 5935-5940.	4.8	19
100	Enzymatic degradation of Elephant grass (Pennisetum purpureum) stems: Influence of the pith and bark in the total hydrolysis. Bioresource Technology, 2014, 167, 469-475.	4.8	19
101	Influence of operation conditions on laccase-mediator removal of sterols from eucalypt pulp. Process Biochemistry, 2009, 44, 1032-1038.	1.8	18
102	Structural characteristics of lignin in pruning residues of olive tree (Olea europaea L.). Holzforschung, 2018, 73, 25-34.	0.9	18
103	Identification and functional analysis of the cyclopropane fatty acid synthase of Brucella abortus. Microbiology (United Kingdom), 2012, 158, 1037-1044.	0.7	17
104	Origin of the acetylated structures present in white birch (Betula pendula Roth) milled wood lignin. Wood Science and Technology, 2012, 46, 459-471.	1.4	17
105	Comparative Recalcitrance and Extractability of Cell Wall Polysaccharides from Cereal (Wheat, Rye,) Tj ETQq1 1 0.784314 rgBT /Overlo 7192-7204.	3.2	17
106	Phenylphenalenone Type Compounds from the Leaf Fibers of Abaca (Musa textilis). Journal of Agricultural and Food Chemistry, 2006, 54, 8744-8748.	2.4	16
107	Sterols and lignin in Eucalyptus globulus Labill. wood: Spatial distribution and fungal removal as revealed by microscopy and chemical analyses. Holzforschung, 2009, 63, 362-370.	0.9	16
108	Search, engineering, and applications of new oxidative biocatalysts. Biofuels, Bioproducts and Biorefining, 2014, 8, 819-835.	1.9	16

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109	Chemical composition of lipophilic extractives from jute (Corchorus capsularis) fibers used for manufacturing of high-quality paper pulps. Industrial Crops and Products, 2009, 30, 241-249.	2.5	15
110	From Alkanes to Carboxylic Acids: Terminal Oxygenation by a Fungal Peroxygenase. Angewandte Chemie, 2016, 128, 12436-12439.	1.6	14
111	Chemical composition of lignin and lipids from tagasaste (Chamaecytisus proliferus spp. palmensis). Industrial Crops and Products, 2008, 28, 29-36.	2.5	13
112	Structural Modifications of Residual Lignins from Sisal and Flax Pulps during Soda-AQ Pulping and TCF/ECF Bleaching. Industrial & Engineering Chemistry Research, 2013, 52, 4695-4703.	1.8	13
113	Isolation and Structural Characterization of Lignin from Cardoon (Cynara cardunculus L.) Stalks. Bioenergy Research, 2015, 8, 1946-1955.	2.2	13
114	A commercial laccase-mediator system to delignify and improve saccharification of the fast-growingPaulownia fortunei(Seem.) Hemsl.. Holzforschung, 2018, 73, 45-54.	0.9	13
115	Selective Oxygenation of Ionones and Damascones by Fungal Peroxygenases. Journal of Agricultural and Food Chemistry, 2020, 68, 5375-5383.	2.4	13
116	Unconventional lignin monomersâ€"Extension of the lignin paradigm. Advances in Botanical Research, 2022, , 1-39.	0.5	13
117	Hydrolysis of sterol esters by an esterase from Ophiostoma piceae: application to pitch control in pulping of Eucalyptus globulus wood. International Journal of Biotechnology, 2004, 6, 367.	1.2	12
118	Effects of Fe deficiency on the protein profiles and lignin composition of stem tissues from Medicago truncatula in absence or presence of calcium carbonate. Journal of Proteomics, 2016, 140, 1-12.	1.2	12
119	Differences in the content, composition and structure of the lignins from rind and pith of papyrus (Cyperus papyrus L.) culms. Industrial Crops and Products, 2021, 174, 114226.	2.5	12
120	Identification of a novel series of alkylitaconic acids in wood cultures ofCeriporiopsis subvermisporaby gas chromatography/mass spectrometry. Rapid Communications in Mass Spectrometry, 2002, 16, 62-68.	0.7	10
121	Exploring the potential of fungal manganese-containing lipoxygenase for pitch control and pulp delignification. Bioresource Technology, 2011, 102, 1338-1343.	4.8	7
122	Pseudochrobactrum algeriensis sp. nov., isolated from lymph nodes of Algerian cattle. International Journal of Systematic and Evolutionary Microbiology, 2022, 72, .	0.8	6
123	Papyrus production revisited: differences between ancient and modern production modes. Cellulose, 2022, 29, 4931-4950.	2.4	6
124	A comprehensive study of different types of speck impurities present in bleached eucalypt kraft pulps using PY-GC/MS. Journal of Analytical and Applied Pyrolysis, 2003, 68-69, 251-268.	2.6	5