Francisco Javier Ruiz-DueÃ±as

List of Publications by Year
in descending order

85 papers	8,496 citations	61857 43 h-index	51492 86 g-index
92 all docs	92 docs citations	92 times ranked	6643 citing authors

#	Article	IF	Citations
1	Genomic Analysis Enlightens Agaricales Lifestyle Evolution and Increasing Peroxidase Diversity. Molecular Biology and Evolution, 2021, 38, 1428-1446.	3.5	72
2	Comparing Ligninolytic Capabilities of Bacterial and Fungal Dye-Decolorizing Peroxidases and Class-II Peroxidase-Catalases. International Journal of Molecular Sciences, 2021, 22, 2629.	1.8	20
3	Exploring the Diversity of Fungal DyPs in Mangrove Soils to Produce and Characterize Novel Biocatalysts. Journal of Fungi (Basel, Switzerland), 2021, 7, 321.	1.5	5
4	Characterization of a Dye-Decolorizing Peroxidase from Irpex lacteus Expressed in Escherichia coli: An Enzyme with Wide Substrate Specificity Able to Transform Lignosulfonates. Journal of Fungi (Basel,) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.5	16
5	Heterologous Expression, Engineering and Characterization of a Novel Laccase of Agrocybe pediades with Promising Properties as Biocatalyst. Journal of Fungi (Basel, Switzerland), 2021, 7, 359.	1.5	7
6	A Multiomic Approach to Understand How Pleurotus eryngii Transforms Non-Woody Lignocellulosic Material. Journal of Fungi (Basel, Switzerland), 2021, 7, 426.	1.5	9
7	Agaricales Mushroom Lignin Peroxidase: From Structureâ€"Function to Degradative Capabilities. Antioxidants, 2021, 10, 1446.	2.2	12
8	New Insights on Structures Forming the Lignin-Like Fractions of Ancestral Plants. Frontiers in Plant Science, 2021, 12, 740923.	1.7	17
9	Conserved white-rot enzymatic mechanism for wood decay in the Basidiomycota genus <i>Pycnoporus</i>. DNA Research, 2020, 27, .	1.5	32
10	Genome sequencing of Rigidoporus microporus provides insights on genes important for wood decay, latex tolerance and interspecific fungal interactions. Scientific Reports, 2020, 10, 5250.	1.6	16
11	Peroxidase evolution in white-rot fungi follows wood lignin evolution in plants. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17900-17905.	3.3	47
12	Different fungal peroxidases oxidize nitrophenols at a surface catalytic tryptophan. Archives of Biochemistry and Biophysics, 2019, 668, 23-28.	1.4	6
13	Increase of Redox Potential during the Evolution of Enzymes Degrading Recalcitrant Lignin. Chemistry - A European Journal, 2019, 25, 2708-2712.	1.7	16
14	Integrative visual omics of the white-rot fungus Polyporus brumalis exposes the biotechnological potential of its oxidative enzymes for delignifying raw plant biomass. Biotechnology for Biofuels, 2018, 11, 201.	6.2	45
15	Evolutionary convergence in lignin-degrading enzymes. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6428-6433.	3.3	61
16	Mapping the Long-Range Electron Transfer Route in Ligninolytic Peroxidases. Journal of Physical Chemistry B, 2017, 121, 3946-3954.	1.2	28
17	Oxidoreductases on their way to industrial biotransformations. Biotechnology Advances, 2017, 35, 815-831.	6.0	205
18	Experimental recreation of the evolution of lignin-degrading enzymes from the Jurassic to date. Biotechnology for Biofuels, 2017, 10, 67.	6.2	41

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19	Unveiling the basis of alkaline stability of an evolved versatile peroxidase. Biochemical Journal, 2016, 473, 1917-1928.	1.7	13
20	Asymmetric sulfoxidation by engineering the heme pocket of a dye-decolorizing peroxidase. Catalysis Science and Technology, 2016, 6, 6277-6285.	2.1	17
21	A secretomic view of woody and nonwoody lignocellulose degradation by Pleurotus ostreatus. Biotechnology for Biofuels, 2016, 9, 49.	6.2	85
22	Role of surface tryptophan for peroxidase oxidation of nonphenolic lignin. Biotechnology for Biofuels, 2016, 9, 198.	6.2	37
23	Alkaline versatile peroxidase by directed evolution. Catalysis Science and Technology, 2016, 6, 6625-6636.	2.1	21
24	Rational Enzyme Engineering Through Biophysical and Biochemical Modeling. ACS Catalysis, 2016, 6, 1624-1629.	5.5	48
25	Enhanced degradation of softwood versus hardwood by the white-rot fungus Pycnoporus coccineus. Biotechnology for Biofuels, 2015, 8, 216.	6.2	67
26	Improving the Oxidative Stability of a High Redox Potential Fungal Peroxidase by Rational Design. PLoS ONE, 2015, 10, e0124750.	1.1	34
27	Redox-Active Sites in <i>Auricularia auricula-judae</i> Dye-Decolorizing Peroxidase and Several Directed Variants: A Multifrequency EPR Study. Journal of Physical Chemistry B, 2015, 119, 13583-13592.	1.2	16
28	Description of the first fungal dye-decolorizing peroxidase oxidizing manganese(II). Applied Microbiology and Biotechnology, 2015, 99, 8927-8942.	1.7	66
29	Catalytic surface radical in dye-decolorizing peroxidase: a computational, spectroscopic and site-directed mutagenesis study. Biochemical Journal, 2015, 466, 253-262.	1.7	84
30	Basidiomycete DyPs: Genomic diversity, structuralâ€“functional aspects, reaction mechanism and environmental significance. Archives of Biochemistry and Biophysics, 2015, 574, 66-74.	1.4	71
31	Demonstration of Lignin-to-Peroxidase Direct Electron Transfer. Journal of Biological Chemistry, 2015, 290, 23201-23213.	1.6	30
32	Improving the pH-stability of Versatile Peroxidase by Comparative Structural Analysis with a Naturally-Stable Manganese Peroxidase. PLoS ONE, 2015, 10, e0140984.	1.1	39
33	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
34	Engineering a fungal peroxidase that degrades lignin at very acidic pH. Biotechnology for Biofuels, 2014, 7, 114.	6.2	46
35	Ligninolytic peroxidase genes in the oyster mushroom genome: heterologous expression, molecular structure, catalytic and stability properties, and lignin-degrading ability. Biotechnology for Biofuels, 2014, 7, 2.	6.2	107
36	Structural implications of the C-terminal tail in the catalytic and stability properties of manganese peroxidases from ligninolytic fungi. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 3253-3265.	2.5	33

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37	Structural Determinants of Oxidative Stabilization in an Evolved Versatile Peroxidase. ACS Catalysis, 2014, 4, 3891-3901.	5.5	31
38	Heterologous expression and physicochemical characterization of a fungal dye-decolorizing peroxidase from Auricularia auricula-judae. Protein Expression and Purification, 2014, 103, 28-37.	0.6	33
39	Search, engineering, and applications of new oxidative biocatalysts. Biofuels, Bioproducts and Biorefining, 2014, 8, 819-835.	1.9	16
40	The genome of the white-rot fungus Pycnoporus cinnabarinus: a basidiomycete model with a versatile arsenal for lignocellulosic biomass breakdown. BMC Genomics, 2014, 15, 486.	1.2	91
41	Wood and humus decay strategies by white-rot basidiomycetes correlate with two different dye decolorization and enzyme secretion patterns on agar plates. Fungal Genetics and Biology, 2014, 72, 106-114.	0.9	18
42	Ligninolytic peroxidase gene expression by Pleurotus ostreatus : Differential regulation in lignocellulose medium and effect of temperature and pH. Fungal Genetics and Biology, 2014, 72, 150-161.	0.9	68
43	Lignin-degrading peroxidases in Polyporales: an evolutionary survey based on 10 sequenced genomes. Mycologia, 2013, 105, 1428-1444.	0.8	134
44	Formation of a tyrosine adduct involved in lignin degradation by Trametopsis cervina lignin peroxidase: a novel peroxidase activation mechanism. Biochemical Journal, 2013, 452, 575-584.	1.7	25
45	Directed evolution of a temperature-, peroxide- and alkaline pH-tolerant versatile peroxidase. Biochemical Journal, 2012, 441, 487-498.	1.7	98
46	Two Oxidation Sites for Low Redox Potential Substrates. Journal of Biological Chemistry, 2012, 287, 41053-41067.	1.6	65
47	Lignin-degrading peroxidases from genome of selective ligninolytic fungus Ceriporiopsis subvermispora.. Journal of Biological Chemistry, 2012, 287, 41744.	1.6	2
48	Lignin-degrading Peroxidases from Genome of Selective Ligninolytic Fungus Ceriporiopsis subvermispora. Journal of Biological Chemistry, 2012, 287, 16903-16916.	1.6	81
49	Comparative genomics of <i>Ceriporiopsis subvermispora</i> and <i>Phanerochaete chrysosporium</i> provide insight into selective ligninolysis. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5458-5463.	3.3	259
50	The Paleozoic Origin of Enzymatic Lignin Decomposition Reconstructed from 31 Fungal Genomes. Science, 2012, 336, 1715-1719.	6.0	1,424
51	EPR parameters of amino acid radicals in P. eryngii versatile peroxidase and its W164Y variant computed at the QM/MM level. Physical Chemistry Chemical Physics, 2011, 13, 5078.	1.3	30
52	Crystallographic, Kinetic, and Spectroscopic Study of the First Ligninolytic Peroxidase Presenting a Catalytic Tyrosine. Journal of Biological Chemistry, 2011, 286, 15525-15534.	1.6	52
53	Pleurotus ostreatus heme peroxidases: An in silico analysis from the genome sequence to the enzyme molecular structure. Comptes Rendus - Biologies, 2011, 334, 795-805.	0.1	56
54	Delignification of eucalypt kraft pulp with manganese-substituted polyoxometalate assisted by fungal versatile peroxidase. Bioresource Technology, 2010, 101, 5935-5940.	4.8	19

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55	Protein Radicals in Fungal Versatile Peroxidase. Journal of Biological Chemistry, 2009, 284, 7986-7994.	1.6	55
56	Substrate oxidation sites in versatile peroxidase and other basidiomycete peroxidases. Journal of Experimental Botany, 2009, 60, 441-452.	2.4	237
57	Microbial degradation of lignin: how a bulky recalcitrant polymer is efficiently recycled in nature and how we can take advantage of this. Microbial Biotechnology, 2009, 2, 164-177.	2.0	434
58	Effect of culture temperature on the heterologous expression of Pleurotus eryngii versatile peroxidase in Aspergillus hosts. Bioprocess and Biosystems Engineering, 2009, 32, 129-134.	1.7	26
59	Novel structural features in the GMC family of oxidoreductases revealed by the crystal structure of fungal aryl-alcohol oxidase. Acta Crystallographica Section D: Biological Crystallography, 2009, 65, 1196-1205.	2.5	70
60	Enzymatic delignification of plant cell wall: from nature to mill. Current Opinion in Biotechnology, 2009, 20, 348-357.	3.3	271
61	Genome, transcriptome, and secretome analysis of wood decay fungus <i>Postia placenta</i> supports unique mechanisms of lignocellulose conversion. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1954-1959.	3.3	530
62	Escherichia coli expression and in vitro activation of a unique ligninolytic peroxidase that has a catalytic tyrosine residue. Protein Expression and Purification, 2009, 68, 208-214.	0.6	30
63	<i>In silico</i> and <i>in vitro</i> analysis of promoter regions of two exopolygalacturonase coding genes of <i>Fusarium oxysporum</i> f.sp. <i>radicis lycopersici</i> and regulation in <i>Saccharomyces cerevisiae</i>. , 2009, , .		0
64	Bioelectrochemical investigations of aryl-alcohol oxidase from Pleurotus eryngii. Journal of Electroanalytical Chemistry, 2008, 618, 83-86.	1.9	8
65	Isolation of two laccase genes from the white-rot fungus Pleurotus eryngii and heterologous expression of the pel3 encoded protein. Journal of Biotechnology, 2008, 134, 9-19.	1.9	53
66	Site-Directed Mutagenesis of the Catalytic Tryptophan Environment in <i>Pleurotus eryngii</i> Versatile Peroxidase[,]. Biochemistry, 2008, 47, 1685-1695.	1.2	65
67	Gene cloning, heterologous expression,<i>in vitro</i>reconstitution and catalytic properties of a versatile peroxidase. Biocatalysis and Biotransformation, 2007, 25, 276-285.	1.1	9
68	Manganese Oxidation Site inPleurotus eryngiiVersatile Peroxidase:Â A Site-Directed Mutagenesis, Kinetic, and Crystallographic Studyâ€,â€¡. Biochemistry, 2007, 46, 66-77.	1.2	95
69	In vitro activation, purification, and characterization of Escherichia coli expressed aryl-alcohol oxidase, a unique H2O2-producing enzyme. Protein Expression and Purification, 2006, 45, 191-199.	0.6	57
70	Site-directed mutagenesis of selected residues at the active site of aryl-alcohol oxidase, an H2O2-producing ligninolytic enzyme. FEBS Journal, 2006, 273, 4878-4888.	2.2	25
71	A Tryptophan Neutral Radical in the Oxidized State of Versatile Peroxidase from Pleurotus eryngii. Journal of Biological Chemistry, 2006, 281, 9517-9526.	1.6	93
72	Kinetics of direct and substrate-mediated electron transfer of versatile peroxidase-modified graphite electrodes. Journal of Electroanalytical Chemistry, 2005, 580, 35-40.	1.9	3

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73	Versatile Peroxidase Oxidation of High Redox Potential Aromatic Compounds: Site-directed Mutagenesis, Spectroscopic and Crystallographic Investigation of Three Long-range Electron Transfer Pathways. Journal of Molecular Biology, 2005, 354, 385-402.	2.0	248
74	Biodegradation of lignocellulosics: microbial, chemical, and enzymatic aspects of the fungal attack of lignin. International Microbiology, 2005, 8, 195-204.	1.1	673
75	Effect of pH on the stability of Pleurotus eryngii versatile peroxidase during heterologous production in Emericella nidulans. Bioprocess and Biosystems Engineering, 2004, 26, 287-293.	1.7	27
76	NMR study of manganese(II) binding by a new versatile peroxidase from the white-rot fungus Pleurotus eryngii. Journal of Biological Inorganic Chemistry, 2003, 8, 751-760.	1.1	24
77	Solution structure of the N-terminal domain of a potential copper-translocating P-type ATPase from Bacillus subtilis in the apo and Cu(I) loaded states. Journal of Molecular Biology, 2002, 317, 415-429.	2.0	67
78	Expression of Pleurotus eryngii versatile peroxidase in Escherichia coli and optimisation of in vitro folding. Enzyme and Microbial Technology, 2002, 30, 518-524.	1.6	86
79	Copper Trafficking:â€‰ the Solution Structure of Bacillus subtilis CopZ. Biochemistry, 2001, 40, 15660-15668.	1.2	106
80	The cloning of a new peroxidase found in lignocellulose cultures ofPleurotus eryngiiand sequence comparison with other fungal peroxidases. FEMS Microbiology Letters, 2000, 191, 37-43.	0.7	55
81	Description of a Versatile Peroxidase Involved in the Natural Degradation of Lignin That Has Both Manganese Peroxidase and Lignin Peroxidase Substrate Interaction Sites. Journal of Biological Chemistry, 1999, 274, 10324-10330.	1.6	326
82	Molecular characterization of a novel peroxidase isolated from the ligninolytic fungus Pleurotus eryngii. Molecular Microbiology, 1999, 31, 223-235.	1.2	203
83	A study on reducing substrates of manganese-oxidizing peroxidases fromPleurotus eryngiiandBjerkandera adusta. FEBS Letters, 1998, 428, 141-146.	1.3	188
84	Enzymatic Activities of Trametes versicolor and Pleurotus eryngii Implicated in Biocontrol of Fusarium oxysporum f. sp. lycopersici. Current Microbiology, 1996, 32, 151-155.	1.0	20
85	Purification and Catalytic Properties of Two Manganese Peroxidase Isoenzymes from Pleurotus eryngii. FEBS Journal, 1996, 237, 424-432.	0.2	323