Kenneth E Hammel

List of Publications by Year
in descending order

72 papers	7,072 citations	44069 48 h-index	82547 72 g-index
73 all docs	73 docs citations	73 times ranked	5041 citing authors

#	Article	IF	Citations
1	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.	7.1	530
2	Reactive oxygen species as agents of wood decay by fungi. Enzyme and Microbial Technology, 2002, 30, 445-453.	3.2	345
3	Role of fungal peroxidases in biological ligninolysis. Current Opinion in Plant Biology, 2008, 11, 349-355.	7.1	337
4	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.	7.1	259
5	Biodegradative mechanism of the brown rot basidiomyceteGloeophyllum trabeum: evidence for an extracellular hydroquinone-driven fenton reaction. FEBS Letters, 1999, 446, 49-54.	2.8	246
6	Evidence for cleavage of lignin by a brown rot basidiomycete. Environmental Microbiology, 2008, 10, 1844-1849.	3.8	232
7	The oxidative 4-dechlorination of polychlorinated phenols is catalyzed by extracellular fungal lignin peroxidases. Biochemistry, 1988, 27, 6563-6568.	2.5	201
8	Pathways for Extracellular Fenton Chemistry in the Brown Rot Basidiomycete Gloeophyllum trabeum. Applied and Environmental Microbiology, 2001, 67, 2705-2711.	3.1	201
9	Oxidative degradation of non-phenolic lignin during lipid peroxidation by fungal manganese peroxidase. FEBS Letters, 1994, 354, 297-300.	2.8	190
10	Depolymerization of a synthetic lignin in vitro by lignin peroxidase. Enzyme and Microbial Technology, 1991, 13, 15-18.	3.2	177
11	Lipid Peroxidation by the Manganese Peroxidase of <i>Phanerochaete chrysosporium</i> Is the Basis for Phenanthrene Oxidation by the Intact Fungus. Applied and Environmental Microbiology, 1994, 60, 1956-1961.	3.1	174
12	Localizing gene regulation reveals a staggered wood decay mechanism for the brown rot fungus <i>Postia placenta</i>. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 10968-10973.	7.1	160
13	Oxidative degradation of phenanthrene by the ligninolytic fungus Phanerochaete chrysosporium. Applied and Environmental Microbiology, 1992, 58, 1832-1838.	3.1	152
14	Degradation of nonphenolic lignin by the laccase/1-hydroxybenzotriazole system. Journal of Biotechnology, 2000, 81, 179-188.	3.8	143
15	Ring fission of anthracene by a eukaryote.. Proceedings of the National Academy of Sciences of the United States of America, 1991, 88, 10605-10608.	7.1	140
16	Organopollutant degradation by ligninolytic fungi. Enzyme and Microbial Technology, 1989, 11, 776-777.	3.2	136
17	Peroxyl radicals are potential agents of lignin biodegradation. FEBS Letters, 1999, 461, 115-119.	2.8	131
18	Multidimensional NMR analysis reveals truncated lignin structures in wood decayed by the brown rot basidiomycete <i>Postia placenta</i>. Environmental Microbiology, 2011, 13, 1091-1100.	3.8	131

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19	Fungal hydroquinones contribute to brown rot of wood. Environmental Microbiology, 2006, 8, 2214-2223.	3.8	127
20	Processive Endoglucanase Active in Crystalline Cellulose Hydrolysis by the Brown Rot Basidiomycete Gloeophyllum trabeum. Applied and Environmental Microbiology, 2005, 71, 2412-2417.	3.1	126
21	Laccase and Its Role in Production of Extracellular Reactive Oxygen Species during Wood Decay by the Brown Rot Basidiomycete <i>Postia placenta</i>. Applied and Environmental Microbiology, 2010, 76, 2091-2097.	3.1	110
22	A new environmentally benign technology for transforming wood pulp into paper. Engineering polyoxometalates as catalysts for multiple processes. Journal of Molecular Catalysis A, 1997, 116, 59-84.	4.8	107
23	Fungal Biodegradation of Lignocelluloses. , 2011, , 319-340.		107
24	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
25	An NADH:Quinone Oxidoreductase Active during Biodegradation by the Brown-Rot Basidiomycete Gloeophyllum trabeum. Applied and Environmental Microbiology, 2002, 68, 2699-2703.	3.1	102
26	Biosynthetic Pathway for Veratryl Alcohol in the Ligninolytic Fungus <i>Phanerochaete chrysosporium</i>. Applied and Environmental Microbiology, 1994, 60, 709-714.	3.1	101
27	Substrate free radicals are intermediates in ligninase catalysis.. Proceedings of the National Academy of Sciences of the United States of America, 1986, 83, 3708-3712.	7.1	92
28	Carbon monoxide fixation into the carboxyl group of acetyl coenzyme A during autotrophic growth ofMethanobacterium. FEBS Letters, 1983, 152, 21-23.	2.8	86
29	Oxidative Cleavage of Diverse Ethers by an Extracellular Fungal Peroxygenase. Journal of Biological Chemistry, 2009, 284, 29343-29349.	3.4	86
30	H2O2 Recycling during Oxidation of the Arylglycerol .beta.-Aryl Ether Lignin Structure by Lignin Peroxidase and Glyoxal Oxidase. Biochemistry, 1994, 33, 13349-13354.	2.5	82
31	Lignin-degrading Peroxidases from Genome of Selective Ligninolytic Fungus Ceriporiopsis subvermispora. Journal of Biological Chemistry, 2012, 287, 16903-16916.	3.4	81
32	Rapid polyether cleavage via extracellular one-electron oxidation by a brown-rot basidiomycete. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 10373-10377.	7.1	79
33	Exploring new strategies for cellulosic biofuels production. Energy and Environmental Science, 2011, 4, 3820.	30.8	79
34	Significant levels of extracellular reactive oxygen species produced by brown rot basidiomycetes on cellulose. FEBS Letters, 2002, 531, 483-488.	2.8	76
35	Basidiomycete DyPs: Genomic diversity, structuralâ€"functional aspects, reaction mechanism and environmental significance. Archives of Biochemistry and Biophysics, 2015, 574, 66-74.	3.0	71
36	Chlorination and Cleavage of Lignin Structures by Fungal Chloroperoxidases. Applied and Environmental Microbiology, 2003, 69, 5015-5018.	3.1	69

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37	Chlorination of lignin by ubiquitous fungi has a likely role in global organochlorine production. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3895-3900.	7.1	68
38	Fungal degradation of recalcitrant nonphenolic lignin structures without lignin peroxidase.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 12794-12797.	7.1	67
39	Preparation of human drug metabolites using fungal peroxygenases. Biochemical Pharmacology, 2011, 82, 789-796.	4.4	66
40	Iron addition to soil specifically stabilized lignin. Soil Biology and Biochemistry, 2016, 98, 95-98.	8.8	66
41	New Insights into the Ligninolytic Capability of a Wood Decay Ascomycete. Applied and Environmental Microbiology, 2007, 73, 6691-6694.	3.1	65
42	Enrichment of Lignin-Derived Carbon in Mineral-Associated Soil Organic Matter. Environmental Science & Technology, 2019, 53, 7522-7531.	10.0	63
43	Regioselective preparation of 5-hydroxypropranolol and 4â€²-hydroxydiclofenac with a fungal peroxygenase. Bioorganic and Medicinal Chemistry Letters, 2009, 19, 3085-3087.	2.2	59
44	Lignin decomposition is sustained under fluctuating redox conditions in humid tropical forest soils. Global Change Biology, 2015, 21, 2818-2828.	9.5	59
45	Regulation of Gene Expression during the Onset of Ligninolytic Oxidation by Phanerochaete chrysosporium on Spruce Wood. Applied and Environmental Microbiology, 2015, 81, 7802-7812.	3.1	58
46	Differential Stress-Induced Regulation of Two Quinone Reductases in the Brown Rot Basidiomycete Gloeophyllum trabeum. Applied and Environmental Microbiology, 2004, 70, 324-331.	3.1	56
47	Regioselective preparation of (R)-2-(4-hydroxyphenoxy)propionic acid with a fungal peroxygenase. Tetrahedron Letters, 2008, 49, 5950-5953.	1.4	55
48	Stepwise oxygenations of toluene and 4-nitrotoluene by a fungal peroxygenase. Biochemical and Biophysical Research Communications, 2010, 397, 18-21.	2.1	51
49	Evidence from Serpula lacrymans that 2,5-Dimethoxyhydroquinone Is a Lignocellulolytic Agent of Divergent Brown Rot Basidiomycetes. Applied and Environmental Microbiology, 2013, 79, 2377-2383.	3.1	50
50	Selective Transition-Metal Catalysis of Oxygen Delignification. Using Water-Soluble Salts of Polyoxometalate (POM) Anions. Part II. Reactions of Î±-[SiVW_{11}O_{40}]^{5-}with Phenolic Lignin-Model Compounds. Holzforschung, 1998, 52, 311-318.	1.9	46
51	Differential Expression in <i>Phanerochaete chrysosporium</i> of Membrane-Associated Proteins Relevant to Lignin Degradation. Applied and Environmental Microbiology, 2008, 74, 7252-7257.	3.1	46
52	Proteomic and Functional Analysis of the Cellulase System Expressed by Postia placenta during Brown Rot of Solid Wood. Applied and Environmental Microbiology, 2011, 77, 7933-7941.	3.1	46
53	Biomimetic oxidation of nonphenolic lignin models by Mn(III): New observations on the oxidizability of guaiacyl and syringyl substructures. Archives of Biochemistry and Biophysics, 1989, 270, 404-409.	3.0	45
54	Lignin lags, leads, or limits the decomposition of litter and soil organic carbon. Ecology, 2020, 101, e03113.	3.2	44

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55	Evidence for a nickel-containing carbon monoxide dehydrogenase in Methanobrevibacter arboriphilicus. Journal of Bacteriology, 1984, 157, 975-978.	2.2	44
56	Ferredoxin/flavoprotein-linked pathway for the reduction of thioredoxin.. Proceedings of the National Academy of Sciences of the United States of America, 1983, 80, 3681-3685.	7.1	40
57	[27] Lignin peroxidase from fungi: Phanerochaete chrysosporium. Methods in Enzymology, 1990, , 159-171.	1.0	39
58	Stimulation of dark CO2 fixation by ammonia in isolated mesophyll cells of Papaver somniferum L.. Plant and Cell Physiology, 1979, 20, 1523-1529.	3.1	36
59	Oxidative cleavage of non-phenolic Î²-O-4 lignin model dimers by an extracellular aromatic peroxygenase. Holzforschung, 2011, 65, .	1.9	35
60	Oxidizability of unsaturated fatty acids and of a non-phenolic lignin structure in the manganese peroxidase-dependent lipid peroxidation system. Enzyme and Microbial Technology, 2010, 46, 136-140.	3.2	33
61	Lignin degradation and lignin peroxidase production in cultures of Phanerochaete chrysosporium immobilized on porous ceramic supports. Enzyme and Microbial Technology, 1990, 12, 916-920.	3.2	32
62	Fungal lignin peroxidase does not produce the veratryl alcohol cation radical as a diffusible ligninolytic oxidant. Journal of Biological Chemistry, 2018, 293, 4702-4712.	3.4	30
63	Construction of a genetic linkage map and analysis of quantitative trait loci associated with the agronomically important traits of Pleurotus eryngii. Fungal Genetics and Biology, 2016, 92, 50-64.	2.1	26
64	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.	3.7	25
65	An optical method for carbon dioxide isotopes and mole fractions in small gas samples: Tracing microbial respiration from soil, litter, and lignin. Rapid Communications in Mass Spectrometry, 2017, 31, 1938-1946.	1.5	24
66	Acridine Orange Indicates Early Oxidation of Wood Cell Walls by Fungi. PLoS ONE, 2016, 11, e0159715.	2.5	20
67	Spatial mapping of extracellular oxidant production by a white rot basidiomycete on wood reveals details of ligninolytic mechanism. Environmental Microbiology, 2013, 15, 956-966.	3.8	17
68	A Highly Diastereoselective Oxidant Contributes to Ligninolysis by the White Rot Basidiomycete Ceriporiopsis subvermispora. Applied and Environmental Microbiology, 2014, 80, 7536-7544.	3.1	14
69	Thioredoxin and ferredoxin-thioredoxin reductase activity occur in a fermentative bacterium. FEBS Letters, 1981, 130, 88-92.	2.8	11
70	Mechanisms for Polycyclic Aromatic Hydrocarbon Degradation by Ligninolytic Fungi. Environmental Health Perspectives, 1995, 103, 41.	6.0	9
71	Comparative evaluation of manganese peroxidase- and Mn(III)-initiated peroxidation of C18 unsaturated fatty acids by different methods. Enzyme and Microbial Technology, 2011, 49, 25-29.	3.2	9
72	Lignin-degrading peroxidases from genome of selective ligninolytic fungus Ceriporiopsis subvermispora.. Journal of Biological Chemistry, 2012, 287, 41744.	3.4	2