Ivo FrÃ©bort

List of Publications by Year
in descending order

101 papers	3,476 citations	159525 30 h-index	155592 55 g-index
104 all docs	104 docs citations	104 times ranked	3518 citing authors

#	Article	IF	Citations
1	Evolution of cytokinin biosynthesis and degradation. Journal of Experimental Botany, 2011, 62, 2431-2452.	2.4	341
2	Root-synthesized cytokinins improve shoot growth and fruit yield in salinized tomato (Solanum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	2.4	198
3	Biochemical Characterization of Cytokinin Oxidases/Dehydrogenases from Arabidopsis thaliana Expressed in Nicotiana tabacum L.. Journal of Plant Growth Regulation, 2007, 26, 255-267.	2.8	151
4	Human virus detection with graphene-based materials. Biosensors and Bioelectronics, 2020, 166, 112436.	5.3	140
5	Characterization of New Maize Genes Putatively Involved in Cytokinin Metabolism and Their Expression during Osmotic Stress in Relation to Cytokinin Levels Â. Plant Physiology, 2009, 151, 433-447.	2.3	139
6	Acetic acid bacteria: A group of bacteria with versatile biotechnological applications. Biotechnology Advances, 2015, 33, 1260-1271.	6.0	131
7	FAD-containing polyamine oxidases: a timely challenge for researchers in biochemistry and physiology of plants. Plant Science, 2001, 160, 197-207.	1.7	119
8	Transgenic barley overexpressing a cytokinin dehydrogenase gene shows greater tolerance to drought stress. New Biotechnology, 2016, 33, 692-705.	2.4	117
9	Cytokinin oxidase or dehydrogenase?. FEBS Journal, 2001, 268, 450-461.	0.2	115
10	Genetic engineering of cytokinin metabolism: Prospective way to improve agricultural traits of crop plants. Biotechnology Advances, 2013, 31, 97-117.	6.0	109
11	Antimicrobial peptide production and plant-based expression systems for medical and agricultural biotechnology. Biotechnology Advances, 2015, 33, 1005-1023.	6.0	107
12	Cytokinin Oxidase/Cytokinin Dehydrogenase Assay: Optimized Procedures and Applications. Analytical Biochemistry, 2002, 306, 1-7.	1.1	91
13	Cytokinin oxidase/dehydrogenase genes in barley and wheat. FEBS Journal, 2004, 271, 3990-4002.	0.2	86
14	Redox Hydrogel-Based Amperometric Bienzyme Electrodes for Fish Freshness Monitoring. Analytical Chemistry, 2000, 72, 1591-1597.	3.2	82
15	Vacuolar and cytosolic cytokinin dehydrogenases of Arabidopsis thaliana: Heterologous expression, purification and properties. Phytochemistry, 2010, 71, 1970-1978.	1.4	74
16	Catalytic reaction of cytokinin dehydrogenase: preference for quinones as electron acceptors. Biochemical Journal, 2004, 380, 121-130.	1.7	70
17	Overexpression of Cytokinin Dehydrogenase Genes in Barley (Hordeum vulgare cv. Golden Promise) Fundamentally Affects Morphology and Fertility. PLoS ONE, 2013, 8, e79029.	1.1	69
18	Subcellular localization and biochemical comparison of cytosolic and secreted cytokinin dehydrogenase enzymes from maize. Journal of Experimental Botany, 2009, 60, 2701-2712.	2.4	68

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19	Parasitic fungus Claviceps as a source for biotechnological production of ergot alkaloids. Biotechnology Advances, 2013, 31, 79-89.	6.0	60
20	Phenyl- and benzylurea cytokinins as competitive inhibitors of cytokinin oxidase/dehydrogenase: A structural study. Biochimie, 2010, 92, 1052-1062.	1.3	53
21	Tissue Localization of Cytokinin Dehydrogenase in Maize: Possible Involvement of Quinone Species Generated from Plant Phenolics by Other Enzymatic Systems in the Catalytic Reaction. Plant and Cell Physiology, 2005, 46, 716-728.	1.5	48
22	Amine Oxidase Based Amperometric Biosensors forHistamine Detection. Electroanalysis, 2000, 12, 369-375.	1.5	46
23	Transgenic barley: A prospective tool for biotechnology and agriculture. Biotechnology Advances, 2014, 32, 137-157.	6.0	41
24	Degradation of cytokinins by cytokinin oxidases in plants. Plant Growth Regulation, 2000, 32, 315-327.	1.8	39
25	Amine oxidase amperometric biosensor coupled to liquid chromatography for biogenic amines determination. Mikrochimica Acta, 2008, 163, 219-225.	2.5	37
26	Extra- and intracellular distribution of cytokinins in the leaves of monocots and dicots. New Biotechnology, 2016, 33, 735-742.	2.4	37
27	Copper/quinone-containing amine oxidases, an exciting class of ubiquitous enzymes. Journal of Bioscience and Bioengineering, 1995, 80, 625-632.	0.9	36
28	Degradation of cytokinins by maize cytokinin dehydrogenase is mediated by free radicals generated by enzymatic oxidation of natural benzoxazinones. Plant Journal, 2010, 61, 467-481.	2.8	35
29	Two Distinct Quinoprotein Amine Oxidases are Induced by n-Butylamine in the Mycelia of Aspergillus niger AKU 3302. Purification, Characterization, cDNA Cloning and Sequencing. FEBS Journal, 1996, 237, 255-265.	0.2	33
30	Analysis of the active sites of copper/topa quinone-containing amine oxidases fromLathyrus odoratus andL. sativus seedlings. Phytochemical Analysis, 1998, 9, 211-222.	1.2	31
31	Amine oxidase-based flow biosensor for the assessment of fish freshness. Food Control, 2000, 11, 13-18.	2.8	26
32	Kinetic and chemical analyses of the cytokinin dehydrogenase-catalysed reaction: correlations with the crystal structure. Biochemical Journal, 2006, 398, 113-124.	1.7	25
33	Kinetic and structural investigation of the cytokinin oxidase/dehydrogenase active site. FEBS Journal, 2016, 283, 361-377.	2.2	24
34	Vanillin formation by microbial amine oxidases from vanillylamine. Journal of Bioscience and Bioengineering, 1997, 84, 603-605.	0.9	23
35	Biochemical and Structural Aspects of Cytokinin Biosynthesis and Degradation in Bacteria. Microorganisms, 2021, 9, 1314.	1.6	22
36	Functional expression and purification of cytokinin dehydrogenase from Arabidopsis thaliana (AtCKX2) in Saccharomyces cerevisiae. Biologia Plantarum, 2007, 51, 673-682.	1.9	21

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37	Molecular Farming in Barley: Development of a Novel Production Platform to Produce Human Antimicrobial Peptide LL-37. Biotechnology Journal, 2018, 13, 1700628.	1.8	21
38	Quantification of DNA during winemaking by fluorimetry and Vitis vinifera L.-specific quantitative PCR. European Food Research and Technology, 2008, 226, 491-497.	1.6	20
39	Purification of Maize Nucleotide Pyrophosphatase/Phosphodiesterase Casts Doubt on the Existence of Zeatin Cisâ€“Trans Isomerase in Plants. Frontiers in Plant Science, 2017, 8, 1473.	1.7	20
40	Molecular mode of interaction of plant amine oxidase with the mechanism-based inhibitor 2-butyne-1,4-diamine. FEBS Journal, 2000, 267, 1423-1433.	0.2	19
41	Biochemical Characterization of Putative Adenylate Dimethylallyltransferase and Cytokinin Dehydrogenase from Nostoc sp. PCC 7120. PLoS ONE, 2015, 10, e0138468.	1.1	19
42	Light influences cytokinin biosynthesis and sensing in Nostoc (cyanobacteria). Journal of Phycology, 2017, 53, 703-714.	1.0	19
43	Current state and future directions of bioeconomy in the Czech Republic. New Biotechnology, 2021, 61, 1-8.	2.4	19
44	Inhibitors of Plant Copper Amineoxidases. Journal of Enzyme Inhibition and Medicinal Chemistry, 1998, 13, 311-325.	0.5	18
45	Barley polyamine oxidase: characterisation and analysis of the cofactor and the N-terminal amino acid sequence. Phytochemical Analysis, 2001, 12, 166-173.	1.2	18
46	Hydrolytic cleavage ofN6-substituted adenine derivatives by eukaryotic adenine and adenosine deaminases. Bioscience Reports, 2008, 28, 335-347.	1.1	17
47	The three-dimensional structure of â€œLonely Guyâ€•fromClaviceps purpureaprovides insights into the phosphoribohydrolase function of Rossmann fold-containing lysine decarboxylase-like proteins. Proteins: Structure, Function and Bioinformatics, 2015, 83, 1539-1546.	1.5	17
48	Active-Site Covalent Modifications of Quinoprotein Amine Oxidases from Aspergillus niger. Evidence for Binding of the Mechanism-Based Inhibitor, 1,4-Diamino-2-Butyne, to Residue Lys356 Involved in the Catalytic Cycle. FEBS Journal, 1994, 225, 959-965.	0.2	16
49	A Study on the Reactions of Plant Copper Amine Oxidase with C3 and C4 Aliphatic Diamines. Archives of Biochemistry and Biophysics, 2000, 384, 88-99.	1.4	16
50	Recent advances in molecular farming using monocot plants. Biotechnology Advances, 2022, 58, 107913.	6.0	16
51	Purification and Characterization of Methylamine Oxidase Induced inAspergillus nigerAKU 3302. Bioscience, Biotechnology and Biochemistry, 1999, 63, 125-134.	0.6	15
52	Xanthine dehydrogenase of pea seedlings: a member of the plant molybdenum oxidoreductase family. Plant Physiology and Biochemistry, 2002, 40, 393-400.	2.8	15
53	Molybdenum Cofactor-Containing Oxidoreductase Family in Plants. Biologia Plantarum, 2003, 46, 481-490.	1.9	15
54	Involvement of multiple copper/topa quinone-containing and flavin-containing amine oxidases and NAD(P)+ aldehyde dehydrogenases in amine degradation by filamentous fungi. Journal of Bioscience and Bioengineering, 1997, 84, 200-212.	0.9	14

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55	Assessment of CE for the identification of microorganisms. Electrophoresis, 2009, 30, 444-449.	1.3	14
56	Identification of Genes Essential for the Biogenesis of Quinohemoprotein Amine Dehydrogenase. Biochemistry, 2014, 53, 895-907.	1.2	14
57	CRISPR/Cas9 genome editing in ergot fungus Claviceps purpurea. Journal of Biotechnology, 2021, 325, 341-354.	1.9	14
58	Long-Lasting Stable Expression of Human LL-37 Antimicrobial Peptide in Transgenic Barley Plants. Antibiotics, 2021, 10, 898.	1.5	14
59	Electrooxidation Mechanism of Biogenic Amines at Amine Oxidase Modified Graphite Electrode. Analytical Chemistry, 2000, 72, 5988-5993.	3.2	13
60	Metabolism of plant hormones cytokinins and their function in signaling, cell differentiation and plant development. Studies in Natural Products Chemistry, 2008, , 203-264.	0.8	13
61	Comparison of Kinetic Properties Between Plant and Fungal Amine Oxidases. Journal of Enzyme Inhibition and Medicinal Chemistry, 1996, 10, 251-262.	0.5	12
62	Two amine oxidases from Aspergillus niger AKU 3302 contain topa quinone as the cofactor: unusual cofactor link to the glutamyl residue occurs only at one of the enzymes. BBA - Proteins and Proteomics, 1996, 1295, 59-72.	2.1	12
63	Confirmation of the presence of a Cu(II)/topa quinone active site in the amine oxidase from fenugreek seedlings. Journal of Experimental Botany, 1997, 48, 1897-1907.	2.4	12
64	Cytokinins as Inhibitors of Plant Amine Oxidase. Journal of Enzyme Inhibition and Medicinal Chemistry, 1998, 13, 457-463.	0.5	12
65	Cellular localization and metabolic function of n-butylamine-induced amine oxidases in the fungus Aspergillus niger AKU 3302. Archives of Microbiology, 2000, 173, 358-365.	1.0	12
66	AMINOHYDROLASES ACTING ON ADENINE, ADENOSINE AND THEIR DERIVATIVES. Biomedical Papers of the Medical Faculty of the University Palacký, Olomouc, Czechoslovakia, 2007, 151, 3-10.	0.2	12
67	Prussian Blue acts as a mediator in a reagentless cytokinin biosensor. Analytica Chimica Acta, 2011, 701, 218-223.	2.6	11
68	Activity of (+)-Discadenine as a Plant Cytokinin. Journal of Natural Products, 2017, 80, 2136-2140.	1.5	11
69	Quinoprotein amine oxidase from sainfoin seedlings. Phytochemistry, 1997, 45, 239-242.	1.4	9
70	Inhibition of copper amine oxidases by pyridine-derived aldoximes and ketoximes. Biochimie, 2001, 83, 995-1002.	1.3	9
71	European genome editing regulations: threats to the European bioeconomy and unfit for purpose. EFB Bioeconomy Journal, 2021, 1, 100001.	1.1	8
72	Confirmation of the presence of a Cu(II)/topa quinone active site in the amine oxidase from fenugreek seedlings. Journal of Experimental Botany, 1997, 48, 1897-1907.	2.4	8

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73	Comparison of Coupling Subsites and Inhibition Effects of Piperidine Alkaloids and Aminoketones on Plant Amine Oxidases. Journal of Enzyme Inhibition and Medicinal Chemistry, 1991, 4, 327-335.	0.5	7
74	Probing the Active Site of Pea Seedlings Amine Oxidase with Optical Antipodes of Sedamine Alkaloids. Journal of Enzyme Inhibition and Medicinal Chemistry, 2001, 16, 367-372.	0.5	7
75	Overexpression of Trp-related genes in Claviceps purpurea leading to increased ergot alkaloid production. New Biotechnology, 2021, 61, 69-79.	2.4	7
76	Molecular farming: Expanding the field of edible vaccines for sustainable fish aquaculture. Reviews in Aquaculture, 2022, 14, 1978-2001.	4.6	7
77	Some Amines as Inhibitors of Pea Diamine Oxidase. Journal of Enzyme Inhibition and Medicinal Chemistry, 1991, 5, 323-329.	0.5	6
78	Amino oxidase from trigonella foenum-graecum seedlings. Phytochemistry, 1995, 38, 23-25.	1.4	6
79	Screening of the occurrence of copper amine oxidases in Fabaceae plants. Biologia Plantarum, 1998, 41, 241-254.	1.9	6
80	Recent news related to substrates and inhibitors of plant amine oxidases. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2003, 1647, 355-360.	1.1	6
81	Gene Organization and Molecular Modeling of Copper Amine Oxidase from Aspergillus niger: Re-Evaluation of the Cofactor Structure. Biological Chemistry, 2003, 384, 1451-61.	1.2	5
82	Functional expression of amine oxidase from Aspergillus niger (AO-I) in Saccharomyces cerevisiae. Molecular Biology Reports, 2009, 36, 13-20.	1.0	5
83	Enzyme Based Amperometric Biosensor for Adenine Determination. Electroanalysis, 2013, 25, 237-242.	1.5	5
84	The main DNA viruses significantly affecting pig livestock. Journal of Veterinary Research (Poland), 2020, 65, 15-25.	0.3	5
85	Time-Dependent Inhibition of Pea Cotyledon Diamine Oxidase by Some Hydrazides. Journal of Enzyme Inhibition and Medicinal Chemistry, 1992, 6, 243-250.	0.5	4
86	A kinetic method for assay of plant peroxidase and catalase activities by chemiluminescence. Phytochemical Analysis, 1992, 3, 55-60.	1.2	4
87	Inhibition of Copper/Quinoprotein Mine Oxidases fromAspergzllus Nzgerby Benzophenanthridine Alkaloids. Journal of Enzyme Inhibition and Medicinal Chemistry, 1995, 9, 295-302.	0.5	4
88	Developmental stage as a possible factor affecting cytokinin content and cytokinin dehydrogenase activity in Pinus sylvestris. Biologia Plantarum, 2007, 51, 193-197.	1.9	4
89	A Highly Selective Biosensor with Nanomolar Sensitivity Based on Cytokinin Dehydrogenase. PLoS ONE, 2014, 9, e90877.	1.1	4
90	Copper/topa quinone-containing amine oxidases â€" Recent research developments. Studies in Natural Products Chemistry, 2002, 26, 1259-1299.	0.8	3

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91	Improving field production of ergot alkaloids by application of gametocide on rye host plants. New Biotechnology, 2015, 32, 739-746.	2.4	3
92	Design and validation of an STR hexaplex assay for DNA profiling of grapevine cultivars. Electrophoresis, 2016, 37, 3059-3067.	1.3	3
93	The fungus Gibberella fujikuroi produces copper/topaquinoneâ€containing amine oxidase when induced by nâ€butylamine. IUBMB Life, 1997, 41, 11-23.	1.5	2
94	Guest Editorial. Biotechnology Advances, 2014, 32, 1.	6.0	2
95	Comparison of kinetic properties of amine oxidases from sainfoin and lentil and immunochemical characterization of copper/quinoprotein amine oxidases. IUBMB Life, 1999, 47, 47-61.	1.5	1
96	Mapping the primary structure of copper/topaquinone-containing methylamine oxidase fromAspergillus niger. Folia Microbiologica, 2005, 50, 401-408.	1.1	1
97	Nebularine Affects Plant Growth and Development but does not Interfere with Cytokinin Signaling. Journal of Plant Growth Regulation, 2009, 28, 321-330.	2.8	1
98	Preparation of transgenic barley with improved quality. Journal of Biotechnology, 2010, 150, 119-119.	1.9	0
99	Engineering barley for increased drought resistance. New Biotechnology, 2014, 31, S56.	2.4	0
100	Plant Biotechnology: Green for Good III. New Biotechnology, 2016, 33, 593.	2.4	0
101	Crown-root development in barley (Hordeum vulgare L.): Molecular and hormonal control. New Biotechnology, 2016, 33, S166.	2.4	0