Gerhard Schenk

List of Publications by Year
in descending order

192	7,387	41344 49	79698 73
papers	citations	h-index	g-index

208	208	208	5692
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Catalytic Mechanisms of Binuclear Metallohydrolases. Chemical Reviews, 2006, 106, 3338-3363.	47.7	395
2	Properties and functions of the thiamin diphosphate dependent enzyme transketolase. International Journal of Biochemistry and Cell Biology, 1998, 30, 1297-1318.	2.8	218
3	Structure, function, and regulation of tartrate-resistant acid phosphatase. Bone, 2000, 27, 575-584.	2.9	193
4	Purple acid phosphatase: A journey into the function and mechanism of a colorful enzyme. Coordination Chemistry Reviews, 2013, 257, 473-482.	18.8	166
5	Binuclear Metal Centers in Plant Purple Acid Phosphatases: Feâ€“Mn in Sweet Potato and Feâ€“Zn in Soybean. Archives of Biochemistry and Biophysics, 1999, 370, 183-189.	3.0	161
6	Phosphate forms an unusual tripodal complex with the Fe-Mn center of sweet potato purple acid phosphatase. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 273-278.	7.1	152
7	Identification of mammalian-like purple acid phosphatases in a wide range of plants. Gene, 2000, 250, 117-125.	2.2	141
8	Binuclear Metallohydrolases: Complex Mechanistic Strategies for a Simple Chemical Reaction. Accounts of Chemical Research, 2012, 45, 1593-1603.	15.6	129
9	An Unprecedented FeIII(Î¼-OH)ZnII Complex that Mimics the Structural and Functional Properties of Purple Acid Phosphatases. Journal of the American Chemical Society, 2007, 129, 7486-7487.	13.7	124
10	Conformational sampling, catalysis, and evolution of the bacterial phosphotriesterase. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21631-21636.	7.1	110
11	Engineering highly functional thermostable proteins using ancestral sequence reconstruction. Nature Catalysis, 2018, 1, 878-888.	34.4	106
12	A Purple Acid Phosphatase from Sweet Potato Contains an Antiferromagnetically Coupled Binuclear Fe-Mn Center. Journal of Biological Chemistry, 2001, 276, 19084-19088.	3.4	103
13	Phosphate Ester Hydrolysis: Metal Complexes As Purple Acid Phosphatase and Phosphotriesterase Analogues. European Journal of Inorganic Chemistry, 2009, 2009, 2745-2758.	2.0	103
14	Comparison between the Geometric and Electronic Structures and Reactivities of {FeNO}7and {FeO2}8Complexes: A Density Functional Theory Study. Journal of the American Chemical Society, 2004, 126, 505-515.	13.7	93
15	Electronic Structure and Spectro-Structural Correlations of Fe^{III}Zn^{II} Biomimetics for Purple Acid Phosphatases: Relevance to DNA Cleavage and Cytotoxic Activity. Inorganic Chemistry, 2010, 49, 11421-11438.	4.0	84
16	Crystal structures of a purple acid phosphatase, representing different steps of this enzyme's catalytic cycle. BMC Structural Biology, 2008, 8, 6.	2.3	83
17	Organophosphate-degrading metallohydrolases: Structure and function of potent catalysts for applications in bioremediation. Coordination Chemistry Reviews, 2016, 317, 122-131.	18.8	83
18	Improving a Natural Enzyme Activity through Incorporation of Unnatural Amino Acids. Journal of the American Chemical Society, 2011, 133, 326-333.	13.7	77

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19	A new heterobinuclear FeIIICuII complex with a single terminal FeIIIâ€“O(phenolate) bond. Relevance to purple acid phosphatases and nucleases. Journal of Biological Inorganic Chemistry, 2005, 10, 319-332.	2.6	74
20	The organophosphate-degrading enzyme from <i>Agrobacterium radiobacter</i> displays mechanistic flexibility for catalysis. Biochemical Journal, 2010, 432, 565-573.	3.7	74
21	Dinuclear Zinc(II) Complexes with Hydrogen Bond Donors as Structural and Functional Phosphatase Models. Inorganic Chemistry, 2014, 53, 9036-9051.	4.0	74
22	Iron, copper, and manganese complexes with in vitro superoxide dismutase and/or catalase activities that keep Saccharomyces cerevisiae cells alive under severe oxidative stress. Free Radical Biology and Medicine, 2015, 80, 67-76.	2.9	73
23	Substrate-Promoted Formation of a Catalytically Competent Binuclear Center and Regulation of Reactivity in a Glycerophosphodiesterase from <i>Enterobacter aerogenes</i>. Journal of the American Chemical Society, 2008, 130, 14129-14138.	13.7	72
24	Metal-Ion Mutagenesis: Conversion of a Purple Acid Phosphatase from Sweet Potato to a Neutral Phosphatase with the Formation of an Unprecedented Catalytically Competent Mn^{II}Mn^{II} Active Site. Journal of the American Chemical Society, 2009, 131, 8173-8179.	13.7	70
25	The identification of new metallo-Î²-lactamase inhibitor leads from fragment-based screening. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 3282-3285.	2.2	70
26	3-Mercapto-1,2,4-triazoles and N-acylated thiosemicarbazides as metallo-Î²-lactamase inhibitors. Bioorganic and Medicinal Chemistry Letters, 2012, 22, 380-386.	2.2	68
27	Spectroscopic and mechanistic studies of dinuclear metallohydrolases and their biomimetic complexes. Dalton Transactions, 2014, 43, 910-928.	3.3	67
28	Diesterase Activity and Substrate Binding in Purple Acid Phosphatases. Journal of the American Chemical Society, 2007, 129, 9550-9551.	13.7	66
29	Purple acid phosphatases from bacteria: similarities to mammalian and plant enzymes. Gene, 2000, 255, 419-424.	2.2	65
30	Human tartrate-resistant acid phosphatase becomes an effective ATPase upon proteolytic activation. Archives of Biochemistry and Biophysics, 2005, 439, 154-164.	3.0	65
31	Captopril analogues as metallo-Î²-lactamase inhibitors. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 1589-1593.	2.2	64
32	Structural Flexibility Enhances the Reactivity of the Bioremediator Glycerophosphodiesterase by Fine-Tuning Its Mechanism of Hydrolysis. Journal of the American Chemical Society, 2009, 131, 11900-11908.	13.7	62
33	The Divalent Metal Ion in the Active Site of Uteroferrin Modulates Substrate Binding and Catalysis. Journal of the American Chemical Society, 2010, 132, 7049-7054.	13.7	62
34	Synthesis, Magnetic Properties, and Phosphoesterase Activity of Dinuclear Cobalt(II) Complexes. Inorganic Chemistry, 2013, 52, 2029-2043.	4.0	62
35	Progress toward inhibitors of metallo-Î²-lactamases. Future Medicinal Chemistry, 2017, 9, 673-691.	2.3	62
36	Catalytic Mechanisms of Metallohydrolases Containing Two Metal Ions. Advances in Protein Chemistry and Structural Biology, 2014, 97, 49-81.	2.3	60

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37	Probing the role of the divalent metal ion in uteroferrin using metal ion replacement and a comparison to isostructural biomimetics. Journal of Biological Inorganic Chemistry, 2007, 13, 139-155.	2.6	59
38	The reaction mechanism of the Ga(III)Zn(II) derivative of uteroferrin and corresponding biomimetics. Journal of Biological Inorganic Chemistry, 2007, 12, 1207-1220.	2.6	57
39	Unsymmetrical Fe^{III}Co^{II} and Ga^{III}Co^{II} Complexes as Chemical Hydrolases: Biomimetic Models for Purple Acid Phosphatases (PAPs). Inorganic Chemistry, 2009, 48, 7905-7921.	4.0	57
40	Anomalous scattering analysis of Agrobacterium radiobacter phosphotriesterase: the prominent role of iron in the heterobinuclear active site. Biochemical Journal, 2006, 397, 501-508.	3.7	55
41	Phosphotyrosyl peptides and analogues as substrates and inhibitors of purple acid phosphatases. Archives of Biochemistry and Biophysics, 2004, 424, 154-162.	3.0	54
42	Unique spectral signatures of the nucleic acid dye acridine orange can distinguish cell death by apoptosis and necroptosis. Journal of Cell Biology, 2017, 216, 1163-1181.	5.2	54
43	Reactivity of MIIMetal-Substituted Derivatives of Pig Purple Acid Phosphatase (Uteroferrin) with Phosphate. Inorganic Chemistry, 2002, 41, 5787-5794.	4.0	53
44	Electronic Structure Analysis of the Dinuclear Metal Center in the Bioremediator Glycerophosphodiesterase (GpdQ) from <i>Enterobacter aerogenes</i>. Inorganic Chemistry, 2010, 49, 2727-2734.	4.0	53
45	Synthesis and kinetic testing of new inhibitors for a metallo-Î²-lactamase from Klebsiella pneumonia and Pseudomonas aeruginosa. European Journal of Medicinal Chemistry, 2011, 46, 6075-6082.	5.5	53
46	Direct Electrochemistry of Porcine Purple Acid Phosphatase (Uteroferrin)â€. Biochemistry, 2004, 43, 10387-10392.	2.5	52
47	Identification and molecular modeling of a novel, plant-like, human purple acid phosphatase. Gene, 2006, 377, 12-20.	2.2	52
48	Structural and spectroscopic studies of a model for catechol oxidase. Journal of Biological Inorganic Chemistry, 2008, 13, 499-510.	2.6	52
49	The role of Znâ€“OR and Znâ€“OH nucleophiles and the influence of para-substituents in the reactions of binuclear phosphatase mimetics. Dalton Transactions, 2012, 41, 1695-1708.	3.3	52
50	Heavy Water as a Probe of the Free Radical Nature and Electrical Conductivity of Melanin. Journal of Physical Chemistry B, 2015, 119, 14994-15000.	2.6	52
51	Electronic and geometric structures of the organophosphate-degrading enzyme from Agrobacterium radiobacter (OpdA). Journal of Biological Inorganic Chemistry, 2011, 16, 777-787.	2.6	51
52	Immobilization of the enzyme GpdQ on magnetite nanoparticles for organophosphate pesticide bioremediation. Journal of Inorganic Biochemistry, 2014, 131, 1-7.	3.5	51
53	Comparative investigation of the reaction mechanisms of the organophosphate-degrading phosphotriesterases from Agrobacterium radiobacter (OpdA) and Pseudomonas diminuta (OPH). Journal of Biological Inorganic Chemistry, 2014, 19, 1263-1275.	2.6	51
54	Monoesterase Activity of a Purple Acid Phosphatase Mimic with a Cyclam Platform. Chemistry - A European Journal, 2012, 18, 1700-1710.	3.3	50

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55	Spectroscopic Characterization of Soybean Lipoxygenase-1 Mutants:â€‰ the Role of Second Coordination Sphere Residues in the Regulation of Enzyme Activity. Biochemistry, 2003, 42, 7294-7302.	2.5	49
56	Polynuclear zinc(II) complexes of thiosemicarbazone: Synthesis, X-ray structure and biological evaluation. Journal of Inorganic Biochemistry, 2020, 203, 110908.	3.5	49
57	Molecular Evolutionary Analysis of the Thiamine-Diphosphate-Dependent Enzyme, Transketolase. Journal of Molecular Evolution, 1997, 44, 552-572.	1.8	48
58	Rapid-Freeze-Quench Magnetic Circular Dichroism of IntermediateXin Ribonucleotide Reductase:Â New Structural Insight. Journal of the American Chemical Society, 2003, 125, 11200-11201.	13.7	47
59	Synthesis and Kinetic Testing of Tetrahydropyrimidineâ€2â€thione and Pyrrole Derivatives as Inhibitors of the Metalloâ€Î²â€lactamase from <i>Klebsiella pneumonia</i> and <i>Pseudomonas aeruginosa</i>. Chemical Biology and Drug Design, 2012, 80, 500-515.	3.2	47
60	The Role of His113 and His114 in Pyruvate Decarboxylase from Zymomonas Mobilis. FEBS Journal, 1997, 248, 63-71.	0.2	46
61	Spectroscopic Characterization of the Active Fe^{III}Fe^{III} and Fe^{III}Fe^{II} Forms of a Purple Acid Phosphatase Model System. Inorganic Chemistry, 2012, 51, 12195-12209.	4.0	45
62	The applications of binuclear metallohydrolases in medicine: Recent advances in the design and development of novel drug leads for purple acid phosphatases, metallo-Î²-lactamases and arginases. European Journal of Medicinal Chemistry, 2014, 76, 132-144.	5.5	44
63	Structure-activity relationship study and optimisation of 2-aminopyrrole-1-benzyl-4,5-diphenyl-1 H -pyrrole-3-carbonitrile as a broad spectrum metallo-Î²-lactamase inhibitor. European Journal of Medicinal Chemistry, 2017, 137, 351-364.	5.5	44
64	Enhancement of antibiotic-activity through complexation with metal ions - Combined ITC, NMR, enzymatic and biological studies. Journal of Inorganic Biochemistry, 2017, 167, 134-141.	3.5	43
65	Processivity and enzymatic mechanism of a multifunctional family 5 endoglucanase from Bacillus subtilis BS-5 with potential applications in the saccharification of cellulosic substrates. Biotechnology for Biofuels, 2018, 11, 20.	6.2	43
66	Design, synthesis, and inÂvitro and biological evaluation of potent amino acid-derived thiol inhibitors of the metallo-Î²-lactamase IMP-1. European Journal of Medicinal Chemistry, 2016, 114, 318-327.	5.5	39
67	Catalase vs Peroxidase Activity of a Manganese(II) Compound: Identification of a Mn(III)âˆ’(Î¼-O)₂âˆ’Mn(IV) Reaction Intermediate by Electrospray Ionization Mass Spectrometry and Electron Paramagnetic Resonance Spectroscopy. Inorganic Chemistry, 2009, 48, 4569-4579.	4.0	38
68	An Approach to More Accurate Model Systems for Purple Acid Phosphatases (PAPs). Inorganic Chemistry, 2015, 54, 7249-7263.	4.0	38
69	Structures of fungal and plant acetohydroxyacid synthases. Nature, 2020, 586, 317-321.	27.8	37
70	Structural elements that modulate the substrate specificity of plant purple acid phosphatases: Avenues for improved phosphorus acquisition in crops. Plant Science, 2020, 294, 110445.	3.6	37
71	Spectroscopic and Catalytic Characterization of a Functional Fe^{III}Fe^{II} Biomimetic for the Active Site of Uteroferrin and Protein Cleavage. Inorganic Chemistry, 2012, 51, 2065-2078.	4.0	36
72	Phosphate ester cleavage promoted by a tetrameric iron(III) complex. Journal of Biological Inorganic Chemistry, 2011, 16, 25-32.	2.6	35

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73	Identification and characterization of an unusual metallo-Î²-lactamase from Serratia proteamaculans. Journal of Biological Inorganic Chemistry, 2013, 18, 855-863.	2.6	35
74	Promiscuity comes at a price: Catalytic versatility vs efficiency in different metal ion derivatives of the potential bioremediator GpdQ. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2013, 1834, 425-432.	2.3	35
75	Inhibition studies of purple acid phosphatases: implications for the catalytic mechanism. Journal of the Brazilian Chemical Society, 2006, 17, 1558-1565.	0.6	33
76	Cadmium(II) complexes of the glycerophosphodiester-degrading enzyme GpdQ and a biomimetic N,O ligand. Journal of Biological Inorganic Chemistry, 2008, 13, 1065-1072.	2.6	33
77	Bacterial and Plant Ketol-Acid Reductoisomerases Have Different Mechanisms of Induced Fit during the Catalytic Cycle. Journal of Molecular Biology, 2012, 424, 168-179.	4.2	33
78	Metallo-Î²-Lactamases: A Major Threat to Human Health. American Journal of Molecular Biology, 2014, 04, 89-104.	0.3	33
79	Crystal structure of Mycobacterium tuberculosis ketolâ€acid reductoisomerase at 1.0 Ã… resolution â€“ a potential target for antiâ€tuberculosis drug discovery. FEBS Journal, 2016, 283, 1184-1196.	4.7	33
80	Synthesis and characterization of the tetranuclear iron(iii) complex of a new asymmetric multidentate ligand. A structural model for purple acid phosphatases. Dalton Transactions, 2007, , 5132.	3.3	31
81	A structural and catalytic model for zinc phosphoesterases. Dalton Transactions, 2008, , 6045.	3.3	31
82	Inhibition of purple acid phosphatase with Î±-alkoxynaphthylmethylphosphonic acids. Bioorganic and Medicinal Chemistry Letters, 2009, 19, 163-166.	2.2	31
83	Copper Ions and Coordination Complexes as Novel Carbapenem Adjuvants. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	31
84	Metal Ions Play an Essential Catalytic Role in the Mechanism of Ketolâ€“Acid Reductoisomerase. Chemistry - A European Journal, 2016, 22, 7427-7436.	3.3	30
85	Ca^{II} Binding Regulates and Dominates the Reactivity of a Transitionâ€Metalâ€Ionâ€Dependent Diesterase from <i>Mycobacterium tuberculosis</i>. Chemistry - A European Journal, 2016, 22, 999-1009.	3.3	29
86	Second-Sphere Effects in Dinuclear Fe^{III}Zn^{II} Hydrolase Biomimetics: Tuning Binding and Reactivity Properties. Inorganic Chemistry, 2018, 57, 187-203.	4.0	29
87	Identification of Purple Acid Phosphatase Inhibitors by Fragmentâ€Based Screening: Promising New Leads for Osteoporosis Therapeutics. Chemical Biology and Drug Design, 2012, 80, 665-674.	3.2	28
88	AIMâ€1: An Antibioticâ€Degrading Metallohydrolase That Displays Mechanistic Flexibility. Chemistry - A European Journal, 2016, 22, 17704-17714.	3.3	28
89	Kinetic and Spectroscopic Studies of N694C Lipoxygenase:â€‰ A Probe of the Substrate Activation Mechanism of a Nonheme Ferric Enzyme. Journal of the American Chemical Society, 2007, 129, 7531-7537.	13.7	27
90	Altering the substrate specificity of methyl parathion hydrolase with directed evolution. Archives of Biochemistry and Biophysics, 2015, 573, 59-68.	3.0	27

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91	Visualization of the Reaction Trajectory and Transition State in a Hydrolytic Reaction Catalyzed by a Metalloenzyme. Chemistry - A European Journal, 2017, 23, 4778-4781.	3.3	27
92	Expansin assisted bio-affinity immobilization of endoxylanase from Bacillus subtilis onto corncob residue: Characterization and efficient production of xylooligosaccharides. Food Chemistry, 2019, 282, 101-108.	8.2	27
93	Engineering proton conductivity in melanin using metal doping. Journal of Materials Chemistry B, 2020, 8, 8050-8060.	5.8	27
94	Proteomics Reveals Profound Metabolic Changes in the Alcohol Use Disorder Brain. ACS Chemical Neuroscience, 2019, 10, 2364-2373.	3.5	26
95	Enhancing the catalytic activity of a GH5 processive endoglucanase from Bacillus subtilis BS-5 by site-directed mutagenesis. International Journal of Biological Macromolecules, 2021, 168, 442-452.	7.5	26
96	Structural and Catalytic Characterization of a Heterovalent Mn(II)Mn(III) Complex That Mimics Purple Acid Phosphatases. Inorganic Chemistry, 2009, 48, 10036-10048.	4.0	25
97	Induction of apoptosis in leukemia cell lines by new copper(II) complexes containing naphthyl groups via interaction with death receptors. Journal of Inorganic Biochemistry, 2015, 153, 68-87.	3.5	25
98	Malonate-bound structure of the glycerophosphodiesterase from<i>Enterobacter aerogenes</i>(GpdQ) and characterization of the native Fe²⁺metal-ion preference. Acta Crystallographica Section F: Structural Biology Communications, 2008, 64, 681-685.	0.7	24
99	Promiscuous metallo-Î²-lactamases: MIM-1 and MIM-2 may play an essential role in quorum sensing networks. Journal of Inorganic Biochemistry, 2016, 162, 366-375.	3.5	24
100	Crystal Structures of Staphylococcus aureus Ketolâ€Acid Reductoisomerase in Complex with Two Transition State Analogues that Have Biocidal Activity. Chemistry - A European Journal, 2017, 23, 18289-18295.	3.3	24
101	Metabolic strategies for the degradation of the neuromodulator agmatine in mammals. Metabolism: Clinical and Experimental, 2018, 81, 35-44.	3.4	24
102	The bioremediator glycerophosphodiesterase employs a non-processive mechanism for hydrolysis. Journal of Inorganic Biochemistry, 2010, 104, 211-213.	3.5	23
103	Cadmium(II) Complexes: Mimics of Organophosphate Pesticide Degrading Enzymes and Metallo-Î²-lactamases. Inorganic Chemistry, 2012, 51, 7669-7681.	4.0	23
104	A New Mixed-Valence Mn(II)Mn(III) Compound With Catalase and Superoxide Dismutase Activities. Frontiers in Chemistry, 2018, 6, 491.	3.6	23
105	Synthesis, modelling and kinetic assays of potent inhibitors of purple acid phosphatase. Bioorganic and Medicinal Chemistry Letters, 2011, 21, 3092-3094.	2.2	22
106	Asymmetric zinc(ii) complexes as functional and structural models for phosphoesterases. Dalton Transactions, 2013, 42, 9574.	3.3	22
107	Enabling the Direct Enzymatic Dehydration of <scp>d</scp>-Glycerate to Pyruvate as the Key Step in Synthetic Enzyme Cascades Used in the Cell-Free Production of Fine Chemicals. ACS Catalysis, 2020, 10, 3110-3118.	11.2	22
108	Directed evolution combined with rational design increases activity of GpdQ toward a non-physiological substrate and alters the oligomeric structure of the enzyme. Protein Engineering, Design and Selection, 2011, 24, 861-872.	2.1	21

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109	Insights into an evolutionary strategy leading to antibiotic resistance. Scientific Reports, 2017, 7, 40357.	3.3	21
110	Functional analysis of the Mn2+ requirement in the catalysis of ureohydrolases arginase and agmatinase - a historical perspective. Journal of Inorganic Biochemistry, 2020, 202, 110812.	3.5	21
111	Broad spectrum antibiotic-degrading metallo-Î²-lactamases are phylogenetically diverse. Protein and Cell, 2020, 11, 613-617.	11.0	21
112	Highly efficient synthetic iron-dependent nucleases activate both intrinsic and extrinsic apoptotic death pathways in leukemia cancer cells. Journal of Inorganic Biochemistry, 2013, 128, 38-47.	3.5	19
113	Synthesis, characterization, antibacterial and antitumoral activities of mononuclear zinc complexes containing tridentate amine based ligands with N3 or N2O donor groups. Inorganica Chimica Acta, 2014, 416, 35-48.	2.4	19
114	Catalytic promiscuity: catecholase-like activity and hydrolytic DNA cleavage promoted by a mixed-valence FeIII FeII complex. Journal of the Brazilian Chemical Society, 2010, 21, 1201-1212.	0.6	18
115	Mutation of outer-shell residues modulates metal ion co-ordination strength in a metalloenzyme. Biochemical Journal, 2010, 429, 313-321.	3.7	18
116	Using a Genetically Encoded Fluorescent Amino Acid as a Site-Specific Probe to Detect Binding of Low-Molecular-Weight Compounds. Assay and Drug Development Technologies, 2011, 9, 50-57.	1.2	18
117	Selective Coordination of Gallium(III), Zinc(II), and Copper(II) by an Asymmetric Dinucleating Ligand: A Model for Metallophosphatases. Chemistry - A European Journal, 2015, 21, 18269-18279.	3.3	18
118	The use of SWATH to analyse the dynamic changes of bacterial proteome of carbapanemase-producing Escherichia coli under antibiotic pressure. Scientific Reports, 2018, 8, 3871.	3.3	18
119	Effect of Chemically Distinct Substrates on the Mechanism and Reactivity of a Highly Promiscuous Metallohydrolase. ACS Catalysis, 2020, 10, 3684-3696.	11.2	18
120	Unusual metallo-<i>Î²</i>-lactamases may constitute a new subgroup in this family of enzymes. American Journal of Molecular Biology, 2014, 04, 11-15.	0.3	18
121	Crystallization and preliminary X-ray diffraction data for a purple acid phosphatase from sweet potato. Acta Crystallographica Section D: Biological Crystallography, 1999, 55, 2051-2052.	2.5	17
122	X-Ray Absorption Spectroscopy of Dinuclear Metallohydrolases. Biophysical Journal, 2014, 107, 1263-1272.	0.5	17
123	Î²-Lactam antibiotic-degrading enzymes from non-pathogenic marine organisms: a potential threat to human health. Journal of Biological Inorganic Chemistry, 2015, 20, 639-651.	2.6	17
124	Total Synthesis and Complete Stereostructure of a Marine Macrolide Glycoside, (â^')â€Łyngbyalosideâ€…B. Chemistry - A European Journal, 2016, 22, 6815-6829.	3.3	17
125	Characterization of a highly efficient antibiotic-degrading metallo-Î²-lactamase obtained from an uncultured member of a permafrost community. Metallomics, 2017, 9, 1157-1168.	2.4	17
126	Structural basis of resistance to herbicides that target acetohydroxyacid synthase. Nature Communications, 2022, 13, .	12.8	17

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127	Heterologous expression of human transketolase. International Journal of Biochemistry and Cell Biology, 1998, 30, 369-378.	2.8	16
128	Metallohydrolase biomimetics with catalytic and structural flexibility. Dalton Transactions, 2016, 45, 18510-18521.	3.3	16
129	The Binding Mode of an ADP Analogue to a Metallohydrolase Mimics the Likely Transition State. ChemBioChem, 2019, 20, 1536-1540.	2.6	16
130	Phosphate-bound structure of an organophosphate-degrading enzyme from Agrobacterium radiobacter. Journal of Inorganic Biochemistry, 2012, 106, 19-22.	3.5	15
131	Use of magnetic circular dichroism to study dinuclear metallohydrolases and the corresponding biomimetics. European Biophysics Journal, 2015, 44, 393-415.	2.2	15
132	Asymmetric mono- and dinuclear Ga III and Zn II complexes as models for purple acid phosphatases. Journal of Inorganic Biochemistry, 2016, 162, 343-355.	3.5	15
133	Purple acid phosphatase inhibitors as leads for osteoporosis chemotherapeutics. European Journal of Medicinal Chemistry, 2018, 157, 462-479.	5.5	15
134	Guanidine- and purine-functionalized ligands of FeIIIZnII complexes: effects on the hydrolysis of DNA. Journal of Biological Inorganic Chemistry, 2019, 24, 675-691.	2.6	15
135	Investigating coordination flexibility of glycerophosphodiesterase (GpdQ) through interactions with mono-, di-, and triphosphoester (NPP, BNPP, GPE, and paraoxon) substrates. Physical Chemistry Chemical Physics, 2019, 21, 5499-5509.	2.8	15
136	Discovery, Synthesis and Evaluation of a Ketolâ€Acid Reductoisomerase Inhibitor. Chemistry - A European Journal, 2020, 26, 8958-8968.	3.3	15
137	Determination of the catalytic activity of binuclear metallohydrolases using isothermal titration calorimetry. Journal of Biological Inorganic Chemistry, 2014, 19, 389-398.	2.6	14
138	A Heterodinuclear Fe^{III}Zn^{II} Complex as a Mimic for Purple Acid Phosphatase with Siteâ€Specific Zn^{II} Binding. European Journal of Inorganic Chemistry, 2015, 2015, 3076-3086.	2.0	14
139	Identification of a non-purple tartrate-resistant acid phosphatase: an evolutionary link to Ser/Thr protein phosphatases?. BMC Research Notes, 2008, 1, 78.	1.4	13
140	Penicillin inhibitors of purple acid phosphatase. Bioorganic and Medicinal Chemistry Letters, 2012, 22, 2555-2559.	2.2	13
141	Is Cu^{II} Coordinated to Patellamides inside <i>Prochloron</i> Cells?. Chemistry - A European Journal, 2017, 23, 12264-12274.	3.3	13
142	Structure and mechanism of potent bifunctional Î2-lactam- and homoserine lactone-degrading enzymes from marine microorganisms. Scientific Reports, 2020, 10, 12882.	3.3	13
143	Structural and functional analysis of a FeoB A143S G5 loop mutant explains the accelerated <scp>GDP</scp> release rate. FEBS Journal, 2014, 281, 2254-2265.	4.7	12
144	Engineering Thermostable CYP2D Enzymes for Biocatalysis Using Combinatorial Libraries of Ancestors for Directed Evolution (CLADE). ChemCatChem, 2019, 11, 841-850.	3.7	12

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145	Sequence- and structure-guided improvement of the catalytic performance of a GH11 family xylanase from Bacillus subtilis. Journal of Biological Chemistry, 2021, 297, 101262.	3.4	12
146	Pesticide degradation by immobilised metalloenzymes provides an attractive avenue for bioremediation. EFB Bioeconomy Journal, 2021, 1, 100015.	2.4	12
147	Identification and preliminary characterization of novel B3-type metallo-Î²-lactamases. American Journal of Molecular Biology, 2013, 03, 198-203.	0.3	12
148	Ligand modifications modulate the mechanism of binuclear phosphatase biomimetics. Polyhedron, 2013, 52, 1336-1343.	2.2	11
149	Dinuclear Cobalt(II) Complexes as Metallo-Î²-lactamase Mimics. European Journal of Inorganic Chemistry, 2013, 2013, 3082-3089.	2.0	11
150	Using directed evolution to improve the solubility of the Câ€terminal domain of <i>Escherichia coli</i> aminopeptidaseâ€ƒP. FEBS Journal, 2007, 274, 4742-4751.	4.7	10
151	Exploring the correlation between the sequence composition of the nucleotide binding G5 loop of the FeoB GTPase domain (NFeoB) and intrinsic rate of GDP release. Bioscience Reports, 2014, 34, e00158.	2.4	10
152	Metalloâ€Î²â€lactamases and Their Biomimetic Complexes. European Journal of Inorganic Chemistry, 2014, 2014, 2869-2885.	2.0	10
153	Product release is rate-limiting for catalytic processing by the Dengue virus protease. Scientific Reports, 2016, 6, 37539.	3.3	10
154	Mammalian agmatinases constitute unusual members in the family of Mn 2+ -dependent ureahydrolases. Journal of Inorganic Biochemistry, 2017, 166, 122-125.	3.5	10
155	Formation of Catalytically Active Binuclear Center of Glycerophosphodiesterase: A Molecular Dynamics Study. Journal of Physical Chemistry B, 2018, 122, 5797-5808.	2.6	10
156	Discovery of a Pyrimidinedione Derivative with Potent Inhibitory Activity against Mycobacterium tuberculosis Ketolâ€“Acid Reductoisomerase. Chemistry - A European Journal, 2021, 27, 3130-3141.	3.3	10
157	Analogues of the Herbicide, <i>N</i>-Hydroxy-<i>N</i>-isopropyloxamate, Inhibit <i>Mycobacterium tuberculosis</i> Ketol-Acid Reductoisomerase and Their Prodrugs Are Promising Anti-TB Drug Leads. Journal of Medicinal Chemistry, 2021, 64, 1670-1684.	6.4	10
158	Inteinsâ€"A Focus on the Biotechnological Applications of Splicing-Promoting Proteins. American Journal of Molecular Biology, 2015, 05, 42-56.	0.3	10
159	Insight on the interaction of an agmatinase-like protein with Mn2+ activator ions. Journal of Inorganic Biochemistry, 2015, 145, 65-69.	3.5	9
160	Mechanistic Insight from Calorimetric Measurements of the Assembly of the Binuclear Metal Active Site of Glycerophosphodiesterase (GpdQ) from <i>Enterobacter aerogenes</i>. Biochemistry, 2017, 56, 3328-3336.	2.5	9
161	Deacidification of grass silage press juice by continuous production of acetoin from its lactate via an immobilized enzymatic reaction cascade. Bioresource Technology, 2017, 245, 1084-1092.	9.6	9
162	High resolution crystal structure of a fluoride-inhibited organophosphate-degrading metallohydrolase. Journal of Inorganic Biochemistry, 2017, 177, 287-290.	3.5	9

#	Article	IF	Citations
163	Synthesis, evaluation and structural investigations of potent purple acid phosphatase inhibitors as drug leads for osteoporosis. European Journal of Medicinal Chemistry, 2019, 182, 111611.	5.5	9
164	Towards a sustainable generation of pseudopterosin-type bioactives. Green Chemistry, 2020, 22, 6033-6046.	9.0	9
165	Metal Affinity Immobilization of the Processive Endoglucanase EG5C-1 from <i>Bacillus subtilis</i> on a Recyclable pH-Responsive Polymer. ACS Sustainable Chemistry and Engineering, 2021, 9, 7948-7959.	6.7	9
166	Biotechnological potential and initial characterization of two novel sesquiterpene synthases from Basidiomycota Coniophora puteana for heterologous production of Î´-cadinol. Microbial Cell Factories, 2022, 21, 64.	4.0	9
167	Reaction mechanism of the metallohydrolase CpsB from Streptococcus pneumoniae, a promising target for novel antimicrobial agents. Dalton Transactions, 2017, 46, 13194-13201.	3.3	8
168	Dinuclear copper(II) complexes with derivative triazine ligands as biomimetic models for catechol oxidases and nucleases. Journal of Inorganic Biochemistry, 2020, 213, 111249.	3.5	8
169	Inhibition studies of ketol-acid reductoisomerases from pathogenic microorganisms. Archives of Biochemistry and Biophysics, 2020, 692, 108516.	3.0	8
170	A Potentially Polymerizable Heterodinuclear FeIIIZnII Purple Acid Phosphatase Mimic. Synthesis, Characterization, and Phosphate Ester Hydrolysis Studies. Australian Journal of Chemistry, 2011, 64, 258.	0.9	7
171	Investigation of the identity of the nucleophile initiating the hydrolysis of phosphate esters catalyzed by dinuclear mimics of metallohydrolases. Journal of Inorganic Biochemistry, 2016, 162, 356-365.	3.5	7
172	Kinetic and Structural Characterization of the First B3 Metallo-Î²-Lactamase with an Active-Site Glutamic Acid. Antimicrobial Agents and Chemotherapy, 2021, 65, e0093621.	3.2	7
173	Manganese Metalloproteins. Biological Magnetic Resonance, 2010, , 273-341.	0.4	7
174	Synthesis and evaluation of novel purple acid phosphatase inhibitors. MedChemComm, 2019, 10, 61-71.	3.4	6
175	Towards high-throughput optimization of microbial lipid production: from strain development to process monitoring. Sustainable Energy and Fuels, 2020, 4, 5958-5969.	4.9	6
176	Recent Advances in Heterogeneous Catalytic Systems Containing Metal Ions for Phosphate Ester Hydrolysis. Chemistry - A European Journal, 2021, 27, 877-887.	3.3	6
177	Tartrate-Resistant Acid Phosphatase: A Target for Anti-Osteoporotic Chemotherapeutics. Current Enzyme Inhibition, 2010, 6, 118-129.	0.4	6
178	Structureâ€Guided Modulation of the Catalytic Properties of [2Feâˆ’2S]â€Dependent Dehydratases. ChemBioChem, 2022, 23, .	2.6	6
179	Dihydroxyâ€Acid Dehydratases From Pathogenic Bacteria: Emerging Drug Targets to Combat Antibiotic Resistance. Chemistry - A European Journal, 2022, 28, .	3.3	5
180	A GTPase Chimera Illustrates an Uncoupled Nucleotide Affinity and Release Rate, Providing Insight into the Activation Mechanism. Biophysical Journal, 2014, 107, L45-L48.	0.5	4

#	Article	IF	Citations
181	Efficient Green Light Acclimation of the Green Algae Picochlorum sp. Triggering Geranylgeranylated Chlorophylls. Frontiers in Bioengineering and Biotechnology, 2022, 10, 885977.	4.1	4
182	Relative catalytic efficiencies and transcript levels of three <scp>d</scp>â€•and two <scp>l</scp>â€•lactate dehydrogenases for optically pure <scp>d</scp>â€•lactate production in <i>Sporolactobacillus inulinus</i>. MicrobiologyOpen, 2019, 8, e00704.	3.0	3
183	Rational Design of Potent Inhibitors of a Metallohydrolase Using a Fragmentâ€Based Approach. ChemMedChem, 2021, 16, 3342-3359.	3.2	3
184	Synthesis, Magnetic Properties, and Catalytic Properties of a Nickel(II)-Dependent Biomimetic of Metallohydrolases. Frontiers in Chemistry, 2018, 6, 441.	3.6	2
185	Editorial: Advances in the Development of Artificial Metalloenzymes. Frontiers in Chemistry, 2019, 7, 599.	3.6	2
186	Adaptation of a continuous, calorimetric kinetic assay to study the agmatinase-catalyzed hydrolytic reaction. Analytical Biochemistry, 2020, 595, 113618.	2.4	2
187	Binuclear Non-Heme Iron Enzymes. Biological Magnetic Resonance, 2009, , 269-395.	0.4	2
188	Genome-Guided Analysis of Seven Weed Species Reveals Conserved Sequence and Structural Features of Key Gene Targets for Herbicide Development. Frontiers in Plant Science, 0, 13, .	3.6	2
189	Mammalian-like Purple Acid Phosphatases in Plants. Chemical Research in Chinese Universities, 2006, 22, 263-264.	2.6	1
190	Land and sea: Addressing the challenges facing inter-regional ecosystems in developing a sustainable bioeconomy. EFB Bioeconomy Journal, 2021, 1, 100017.	2.4	1
191	Preface. Journal of Inorganic Biochemistry, 2016, 162, 162-163.	3.5	0
192	LAM-1 from Lysobacter antibioticus: A potent zinc-dependent activity that inactivates Î²-lactam antibiotics. Journal of Inorganic Biochemistry, 2021, 226, 111637.	3.5	0