Artificial Metalloenzymes: Reaction Scope and Optimiz

Chemical Reviews

118, 142-231

DOI: 10.1021/acs.chemrev.7b00014

Citation Report

#	Article	IF	Citations
2	Supramolecular Anchoring of NCNâ€Pincer Palladium Complexes into a Î²â€Barrel Protein Host: Molecularâ€Docking and Reactivity Insights. European Journal of Inorganic Chemistry, 2017, 2017, 3622-3634.	1.0	11
3	Streptavidin as a Scaffold for Lightâ€Induced Longâ€Lived Charge Separation. Chemistry - A European Journal, 2017, 23, 18019-18024.	1.7	3
4	Importance of Scaffold Flexibility/Rigidity in the Design and Directed Evolution of Artificial Metallo-Î²-lactamases. Journal of the American Chemical Society, 2017, 139, 16772-16779.	6.6	39
5	Artificial Metalloproteins for Binding and Stabilization of a Semiquinone Radical. Inorganic Chemistry, 2017, 56, 13293-13299.	1.9	15
6	Design of an enantioselective artificial metallo-hydratase enzyme containing an unnatural metal-binding amino acid. Chemical Science, 2017, 8, 7228-7235.	3.7	69
7	Manganese(V) Porphycene Complex Responsible for Inert Câ€“H Bond Hydroxylation in a Myoglobin Matrix. Journal of the American Chemical Society, 2017, 139, 18460-18463.	6.6	60
8	Cross-Linked Artificial Enzyme Crystals as Heterogeneous Catalysts for Oxidation Reactions. Journal of the American Chemical Society, 2017, 139, 17994-18002.	6.6	40
9	Catalytic Cyclopropanation by Myoglobin Reconstituted with Iron Porphycene: Acceleration of Catalysis due to Rapid Formation of the Carbene Species. Journal of the American Chemical Society, 2017, 139, 17265-17268.	6.6	110
10	Oxidation catalysis by iron and manganese porphyrins within enzymeâ€like cages. Biopolymers, 2018, 109, e23107.	1.2	40
11	Easy Access to Enantiopure (S)â€and (R)â€Aryl Alkyl Alcohols by a Combination of Gold(III)â€Catalyzed Alkyne Hydration and Enzymatic Reduction. ChemCatChem, 2018, 10, 920-924.	1.8	23
12	Transfer Hydrogenation of Alkenes Using Ethanol Catalyzed by a NCP Pincer Iridium Complex: Scope and Mechanism. Journal of the American Chemical Society, 2018, 140, 4417-4429.	6.6	131
13	Cavity Size Engineering of a Î²-Barrel Protein Generates Efficient Biohybrid Catalysts for Olefin Metathesis. ACS Catalysis, 2018, 8, 3358-3364.	5.5	39
14	Directed Evolution of Protein Catalysts. Annual Review of Biochemistry, 2018, 87, 131-157.	5.0	330
15	Schiff Base Ligands Derived from l -Histidine Methyl Ester: Characterization, Racemization, and Dimerization of Their Transition-Metal Complexes. European Journal of Inorganic Chemistry, 2018, 2018, 1733-1742.	1.0	4
16	An artificial metalloenzyme for carbene transfer based on a biotinylated dirhodium anchored within streptavidin. Catalysis Science and Technology, 2018, 8, 2294-2298.	2.1	41
17	Regulation of both the structure and function by a de novo designed disulfide bond: a case study of heme proteins in myoglobin. Chemical Communications, 2018, 54, 4356-4359.	2.2	19
18	Photoâ€Driven Hydrogen Evolution by an Artificial Hydrogenase Utilizing the Biotinâ€Streptavidin Technology. Helvetica Chimica Acta, 2018, 101, e1800036.	1.0	11
19	Harnessing the Coordination Chemistry of 1,4,7â€Triazacyclononane for Biomimicry and Radiopharmaceutical Applications. ChemPlusChem, 2018, 83, 554-564.	1.3	23

#	Article	IF	Citations
20	Methodologies for â€œWiringâ€•Redox Proteins/Enzymes to Electrode Surfaces. Chemistry - A European Journal, 2018, 24, 12164-12182.	1.7	96
21	Proteins as Macromolecular Ligands for Metalâ€Catalysed Asymmetric Transfer Hydrogenation of Ketones in Aqueous Medium. European Journal of Inorganic Chemistry, 2018, 2018, 1383-1393.	1.0	13
22	A Chiral Ligand Assembly That Confers Oneâ€Electron O₂ Reduction Activity for a Cu²⁺â€Selective Metallohydrogel. Angewandte Chemie - International Edition, 2018, 57, 3504-3508.	7.2	25
23	A Threeâ€Component Organometallic Tyrosine Bioconjugation. Angewandte Chemie - International Edition, 2018, 57, 2827-2830.	7.2	49
24	Global Structural Flexibility of Metalloproteins Regulates Reactivity of Transition Metal Ion in the Protein Core: An Experimental Study Using Thiolâ€subtilisin as a Model Protein. Chemistry - A European Journal, 2018, 24, 2767-2775.	1.7	4
25	Chimeric Streptavidins as Host Proteins for Artificial Metalloenzymes. ACS Catalysis, 2018, 8, 1476-1484.	5.5	33
26	Artificial Metalloenzyme Design with Unnatural Amino Acids and Non-Native Cofactors. ACS Catalysis, 2018, 8, 1851-1863.	5.5	79
27	Opportunities and challenges for combining chemo- and biocatalysis. Nature Catalysis, 2018, 1, 12-22.	16.1	479
28	A Chiral Ligand Assembly That Confers Oneâ€Electron O₂ Reduction Activity for a Cu²⁺â€Selective Metallohydrogel. Angewandte Chemie, 2018, 130, 3562-3566.	1.6	4
29	An Artificial Heme Enzyme for Cyclopropanation Reactions. Angewandte Chemie, 2018, 130, 7911-7915.	1.6	26
30	An Artificial Heme Enzyme for Cyclopropanation Reactions. Angewandte Chemie - International Edition, 2018, 57, 7785-7789.	7.2	98
31	A Threeâ€Component Organometallic Tyrosine Bioconjugation. Angewandte Chemie, 2018, 130, 2877-2880.	1.6	11
32	Catalytic Organic Reactions in Water toward Sustainable Society. Chemical Reviews, 2018, 118, 679-746.	23.0	541
33	8-Amino-5,6,7,8-tetrahydroquinoline in iridium(<scp>iii</scp>) biotinylated Cp* complex as artificial imine reductase. New Journal of Chemistry, 2018, 42, 18773-18776.	1.4	20
34	On-cell catalysis by surface engineering of live cells with an artificial metalloenzyme. Communications Chemistry, 2018, 1, .	2.0	37
35	Extending the application of biocatalysis to meet the challenges of drug development. Nature Reviews Chemistry, 2018, 2, 409-421.	13.8	290
36	Olefin metathesis catalysts embedded in Î²-barrel proteins: creating artificial metalloproteins for olefin metathesis. Beilstein Journal of Organic Chemistry, 2018, 14, 2861-2871.	1.3	16
37	Evolution of a highly active and enantiospecific metalloenzyme from short peptides. Science, 2018, 362, 1285-1288.	6.0	116

#	Article	IF	Citations
38	Production and manipulation of blue copper oxidases for technological applications. Methods in Enzymology, 2018, 613, 17-61.	0.4	4
39	Artificial Heme Enzymes for the Construction of Gold-Based Biomaterials. International Journal of Molecular Sciences, 2018, 19, 2896.	1.8	16
40	Rhodium at the chemistryâ€“biology interface. Dalton Transactions, 2018, 47, 14855-14860.	1.6	30
41	Genetic Engineering of an Artificial Metalloenzyme for Transfer Hydrogenation of a Self-Immolative Substrate in Escherichia coliâ€™s Periplasm. Journal of the American Chemical Society, 2018, 140, 13171-13175.	6.6	58
42	Metalloporphyrins: Bioinspired Oxidation Catalysts. ACS Catalysis, 2018, 8, 10784-10808.	5.5	122
43	Artificial Metalloenzymes as Catalysts for Oxidative Lignin Degradation. ACS Sustainable Chemistry and Engineering, 2018, 6, 15100-15107.	3.2	21
44	Heavy Metal Removal by Bioaccumulation Using Genetically Engineered Microorganisms. Frontiers in Bioengineering and Biotechnology, 2018, 6, 157.	2.0	203
45	A Rationally Designed Myoglobin Exhibits a Catalytic Dehalogenation Efficiency More than 1000-Fold That of a Native Dehaloperoxidase. ACS Catalysis, 2018, 8, 9619-9624.	5.5	42
46	Enzyme-like Click Catalysis by a Copper-Containing Single-Chain Nanoparticle. Journal of the American Chemical Society, 2018, 140, 13695-13702.	6.6	100
47	Spectroscopic and metal binding properties of a de novo metalloprotein binding a tetrazinc cluster. Biopolymers, 2018, 109, e23339.	1.2	15
48	Reversible catalyst anchoring. Nature Catalysis, 2018, 1, 639-640.	16.1	4
49	A designed heme-[4Fe-4S] metalloenzyme catalyzes sulfite reduction like the native enzyme. Science, 2018, 361, 1098-1101.	6.0	109
50	Hydrogen evolution from water catalyzed by cobalt-mimochrome VI*a, a synthetic mini-protein. Chemical Science, 2018, 9, 8582-8589.	3.7	71
51	KÃ¼nstliche Metalloproteine fÃ¼r die Olefinmetathese. Nachrichten Aus Der Chemie, 2018, 66, 857-861.	0.0	1
52	Repurposing Biocatalysts to Control Radical Polymerizations. ACS Macro Letters, 2018, 7, 1111-1119.	2.3	50
53	Intracellular Chemistry: Integrating Molecular Inorganic Catalysts with Living Systems. Chemistry - A European Journal, 2018, 24, 10584-10594.	1.7	58
54	E. coli surface display of streptavidin for directed evolution of an allylic deallylase. Chemical Science, 2018, 9, 5383-5388.	3.7	79
55	Multicore Artificial Metalloenzymes Derived from Acylated Proteins as Catalysts for the Enantioselective Dihydroxylation and Epoxidation of Styrene Derivatives. Chemistry - A European Journal, 2018, 24, 10859-10867.	1.7	7

#	Article	IF	Citations
56	Intracellular Deprotection Reactions Mediated by Palladium Complexes Equipped with Designed Phosphine Ligands. ACS Catalysis, 2018, 8, 6055-6061.	5.5	78
57	A cell-penetrating artificial metalloenzyme regulates a gene switch in a designer mammalian cell. Nature Communications, 2018, 9, 1943.	5.8	101
58	A designer enzyme for hydrazone and oxime formation featuring an unnatural catalytic aniline residue. Nature Chemistry, 2018, 10, 946-952.	6.6	99
59	Mn(III)-Iodosylarene Porphyrins as an Active Oxidant in Oxidation Reactions: Synthesis, Characterization, and Reactivity Studies. Inorganic Chemistry, 2018, 57, 10232-10240.	1.9	30
60	Capture and characterization of a reactive haemâ€“carbenoid complex in an artificial metalloenzyme. Nature Catalysis, 2018, 1, 578-584.	16.1	93
61	Photosensitised Multiheme Cytochromes as Lightâ€Driven Molecular Wires and Resistors. ChemBioChem, 2018, 19, 2206-2215.	1.3	10
62	Ferritin encapsulation of artificial metalloenzymes: engineering a tertiary coordination sphere for an artificial transfer hydrogenase. Dalton Transactions, 2018, 47, 10837-10841.	1.6	28
63	Cyclotrimerization of phenylacetylene catalyzed by a cobalt half-sandwich complex embedded in an engineered variant of transmembrane protein FhuA. Organic and Biomolecular Chemistry, 2018, 16, 5452-5456.	1.5	12
64	Engineering a bifunctional copper site in the cupredoxin fold by loop-directed mutagenesis. Chemical Science, 2018, 9, 6692-6702.	3.7	8
65	Osmium(II)/R-pybox vs ruthenium(II)/R-pybox complexes in the catalytic asymmetric transfer hydrogenation of arylketones. Molecular Catalysis, 2018, 456, 75-86.	1.0	6
66	Ligand libraries for high throughput screening of homogeneous catalysts. Chemical Society Reviews, 2018, 47, 5038-5060.	18.7	63
67	The plasticity of redox cofactors: from metalloenzymes to redox-active DNA. Nature Reviews Chemistry, 2018, 2, 231-243.	13.8	13
68	Redox-switchable siderophore anchor enables reversible artificial metalloenzyme assembly. Nature Catalysis, 2018, 1, 680-688.	16.1	51
69	Biocatalystâ€“artificial metalloenzyme cascade based on alcohol dehydrogenase. Chemical Science, 2018, 9, 7447-7454.	3.7	29
70	Fluorescence Spectroscopic Insight into the Supramolecular Interactions in DNAâ€Based Enantioselective Sulfoxidation. ChemBioChem, 2018, 19, 2233-2240.	1.3	5
71	Myoglobinâ€Catalyzed Cî”H Functionalization of Unprotected Indoles. Angewandte Chemie - International Edition, 2018, 57, 9911-9915.	7.2	113
72	Crystalline protein scaffolds as a defined environment for the synthesis of bioinorganic materials. Dalton Transactions, 2018, 47, 10382-10387.	1.6	11
73	Catalytic promiscuity enabled by photoredox catalysis in nicotinamide-dependent oxidoreductases. Nature Chemistry, 2018, 10, 770-775.	6.6	125

#	Article	IF	Citations
74	Receptor-Based Artificial Metalloenzymes on Living Human Cells. Journal of the American Chemical Society, 2018, 140, 8756-8762.	6.6	57
75	Electrochemical strategies for Câ€“H functionalization and Câ€“N bond formation. Chemical Society Reviews, 2018, 47, 5786-5865.	18.7	736
76	Myoglobinâ€Catalyzed Câˆ’H Functionalization of Unprotected Indoles. Angewandte Chemie, 2018, 130, 10059-10063.	1.6	23
77	The enzyme-like catalytic hydrogen abstraction reaction mechanisms of cyclic hydrocarbons with magnesium-diluted Fe-MOF-74. RSC Advances, 2019, 9, 23622-23632.	1.7	4
78	Vancomycin-Iridium (III) Interaction: An Unexplored Route for Enantioselective Imine Reduction. Molecules, 2019, 24, 2771.	1.7	6
79	Recent advances in the engineering and application of streptavidin-like molecules. Applied Microbiology and Biotechnology, 2019, 103, 7355-7365.	1.7	16
80	Artificial Metalloenzymes: Challenges and Opportunities. ACS Central Science, 2019, 5, 1120-1136.	5.3	153
81	Catalytic Nanoassemblies Formed by Short Peptides Promote Highly Enantioselective Transfer Hydrogenation. ACS Nano, 2019, 13, 9292-9297.	7.3	25
82	Catalytic recycling of NAD(P)H. Journal of Inorganic Biochemistry, 2019, 199, 110777.	1.5	38
83	Engineering Metalloprotein Functions in Designed and Native Scaffolds. Trends in Biochemical Sciences, 2019, 44, 1022-1040.	3.7	76
84	Nanobiohybrids: a new concept for metal nanoparticles synthesis. Chemical Communications, 2019, 55, 9583-9589.	2.2	59
85	The Third Generation of Artificial Dye-Decolorizing Peroxidase Rationally Designed in Myoglobin. ACS Catalysis, 2019, 9, 7888-7893.	5.5	29
86	Molecular basis for the plasticity of aromatic prenyltransferases in hapalindole biosynthesis. Beilstein Journal of Organic Chemistry, 2019, 15, 1545-1551.	1.3	10
87	Siteâ€Selective Functionalization of (sp³)Câˆ’H Bonds Catalyzed by Artificial Metalloenzymes Containing an Iridiumâ€Porphyrin Cofactor. Angewandte Chemie - International Edition, 2019, 58, 13954-13960.	7.2	62
88	Siteâ€Selective Functionalization of (sp 3)Câˆ’H Bonds Catalyzed by Artificial Metalloenzymes Containing an Iridiumâ€Porphyrin Cofactor. Angewandte Chemie, 2019, 131, 14092-14098.	1.6	5
89	Rational Design of Artificial Metalloproteins and Metalloenzymes with Metal Clusters. Molecules, 2019, 24, 2743.	1.7	29
90	Organometallic compounds in drug discovery: Past, present and future. Drug Discovery Today: Technologies, 2020, 37, 117-124.	4.0	32
91	Biocompatibility and therapeutic potential of glycosylated albumin artificial metalloenzymes. Nature Catalysis, 2019, 2, 780-792.	16.1	110

#	Article	IF	Citations
92	Artificial Î²-propeller protein-based hydrolases. Chemical Communications, 2019, 55, 8880-8883.	2.2	11
93	ACS Central Science Virtual Issue on Bioinspired Catalysis. ACS Central Science, 2019, 5, 1732-1735.	5.3	8
94	Global Analysis of the Role of Terrestrial Water Storage in the Evapotranspiration Estimated from the Budyko Framework at Annual to Monthly Time Scales. Journal of Hydrometeorology, 2019, 20, 2003-2021.	0.7	17
95	Recent developments on creation of artificial metalloenzymes. Tetrahedron Letters, 2019, 60, 151226.	0.7	19
96	Intramolecular Electron Transfer Governs Photoinduced Hydrogen Evolution by Nickel-Substituted Rubredoxin: Resolving Elementary Steps in Solar Fuel Generation. Journal of Physical Chemistry B, 2019, 123, 9792-9800.	1.2	8
98	Olefin Metathesis in Confined Geometries: A Biomimetic Approach toward Selective Macrocyclization. Journal of the American Chemical Society, 2019, 141, 19014-19022.	6.6	60
99	Recent advances in the field of artificial hemoproteins: New efficient eco-compatible biocatalysts for nitrene-, oxene- and carbene-transfer reactions. Journal of Porphyrins and Phthalocyanines, 2019, 23, 1273-1285.	0.4	9
100	Cu II â€Containing 1â€Aminocyclopropane Carboxylic Acid Oxidase Is an Efficient Stereospecific Dielsâ€“Alderase. Angewandte Chemie, 2019, 131, 14747-14751.	1.6	3
101	Cu^{II}â€Containing 1â€Aminocyclopropane Carboxylic Acid Oxidase Is an Efficient Stereospecific Dielsâ€“Alderase. Angewandte Chemie - International Edition, 2019, 58, 14605-14609.	7.2	12
102	Towards the online computer-aided design of catalytic pockets. Nature Chemistry, 2019, 11, 872-879.	6.6	710
103	A trade-off for covalent and intercalation binding modes: a case study for Copper (II) ions and singly modified DNA nucleoside. Scientific Reports, 2019, 9, 12602.	1.6	2
104	Biocatalysis. , 2019, , .		8
105	Breaking Symmetry: Engineering Single-Chain Dimeric Streptavidin as Host for Artificial Metalloenzymes. Journal of the American Chemical Society, 2019, 141, 15869-15878.	6.6	35
106	Minimalist de Novo Design of Protein Catalysts. ACS Catalysis, 2019, 9, 9265-9275.	5.5	28
107	New Artificial Biomimetic Enzyme Analogues based on Iron(II/III) Schiff Base Complexes: An Effect of (Benz)imidazole Organic Moieties on Phenoxazinone Synthase and DNA Recognition. Molecules, 2019, 24, 3173.	1.7	15
108	Size-Tunable Targeting-Triggered Nanophotosensitizers Based on Self-Assembly of a Phthalocyanineâ€“Biotin Conjugate for Photodynamic Therapy. ACS Applied Materials & Interfaces, 2019, 11, 36435-36443.	4.0	40
109	Atroposelective antibodies as a designed protein scaffold for artificial metalloenzymes. Scientific Reports, 2019, 9, 13551.	1.6	3
110	Evaluating the impacts of amino acids in the second and outer coordination spheres of Rh-bis(diphosphine) complexes for CO2 hydrogenation. Faraday Discussions, 2019, 215, 123-140.	1.6	11

#	Article	IF	Citations
111	Biocatalytic Strategies towards [4+2] Cycloadditions. Chemistry - A European Journal, 2019, 25, 6864-6877.	1.7	38
112	Biohybrid catalysts for sequential one-pot reactions based on an engineered transmembrane protein. Catalysis Science and Technology, 2019, 9, 942-946.	2.1	12
113	Câ€“C couplings in water by micellar catalysis at low loadings from a recyclable polymer-supported Pd(<scp>ii</scp>)â€“NHC nanocatalyst. Polymer Chemistry, 2019, 10, 460-466.	1.9	33
114	Streptavidin interfacing as a general strategy to localize fluorescent membrane tension probes in cells. Chemical Science, 2019, 10, 310-319.	3.7	20
115	Directed Evolution of Artificial Metalloenzymes: A Universal Means to Tune the Selectivity of Transition Metal Catalysts?. Accounts of Chemical Research, 2019, 52, 336-344.	7.6	92
116	Nobleâ^'Metal Substitution in Hemoproteins: An Emerging Strategy for Abiological Catalysis. Accounts of Chemical Research, 2019, 52, 326-335.	7.6	104
117	Enhancement of protein stability by an additional disulfide bond designed in human neuroglobin. RSC Advances, 2019, 9, 4172-4179.	1.7	13
118	Highly Active Catalysis of Cobalt Tetrakis(pentafluorophenyl)porphyrin Promoted by Chitosan for Cyclohexane Oxidation in Responseâ€Surfaceâ€Methodologyâ€Optimized Reaction Conditions. ChemistryOpen, 2019, 8, 104-113.	0.9	19
119	A rational quest for selectivity through precise ligand-positioning in tandem DNA-catalysed Friedelâ€“Crafts alkylation/asymmetric protonation. Chemical Science, 2019, 10, 2875-2881.	3.7	24
120	Catalysis Concepts in Medicinal Inorganic Chemistry. Chemistry - A European Journal, 2019, 25, 6651-6660.	1.7	35
121	Encapsulation of dihydrogenphosphate ions as a cyclic dimer to the cavities of site-specifically modified indolocarbazole-pyridine foldamers. Organic Chemistry Frontiers, 2019, 6, 299-303.	2.3	6
123	Biocatalytic Strategy for Highly Diastereoâ€•and Enantioselective Synthesis of 2,3â€Dihydrobenzofuranâ€Based Tricyclic Scaffolds. Angewandte Chemie, 2019, 131, 10254-10258.	1.6	7
124	Î±,Î²â€Unsaturated 2â€Acylâ€Imidazoles in Asymmetric Biohybrid Catalysis. ChemCatChem, 2019, 11, 5686-5704.	1.8	13
125	A catalytically active [Mn]-hydrogenase incorporating a non-native metal cofactor. Nature Chemistry, 2019, 11, 669-675.	6.6	55
126	Unique Tyr-heme double cross-links in F43Y/T67R myoglobin: an artificial enzyme with a peroxidase activity comparable to that of native peroxidases. Chemical Communications, 2019, 55, 6610-6613.	2.2	17
127	Improved Electro- and Photocatalytic Water Reduction by Confined Cobalt Catalysts in Streptavidin. ACS Catalysis, 2019, 9, 5837-5846.	5.5	28
128	Biocatalytic Strategy for Highly Diastereoâ€•and Enantioselective Synthesis of 2,3â€Dihydrobenzofuranâ€Based Tricyclic Scaffolds. Angewandte Chemie - International Edition, 2019, 58, 10148-10152.	7.2	57
129	Thermodynamic Hydricity of [FeFe]-Hydrogenases. Journal of the American Chemical Society, 2019, 141, 7212-7222.	6.6	12

#	Article	IF	Citations
130	The Effect of Cofactor Binding on the Conformational Plasticity of the Biological Receptors in Artificial Metalloenzymes: The Case Study of LmrR. Frontiers in Chemistry, 2019, 7, 211.	1.8	9
131	Can Machine Learning Revolutionize Directed Evolution of Selective Enzymes?. Advanced Synthesis and Catalysis, 2019, 361, 2377-2386.	2.1	87
132	Aqueous olefin metathesis: recent developments and applications. Beilstein Journal of Organic Chemistry, 2019, 15, 445-468.	1.3	45
133	Engineered MOFs and Enzymes for the Synthesis of Active Pharmaceutical Ingredients. ChemCatChem, 2019, 11, 5671-5685.	1.8	27
134	Beyond the Second Coordination Sphere: Engineering Dirhodium Artificial Metalloenzymes To Enable Protein Control of Transition Metal Catalysis. Accounts of Chemical Research, 2019, 52, 576-584.	7.6	79
135	Functionalized Artificial Bidomain Proteins Based on an Î±-Solenoid Protein Repeat Scaffold: A New Class of Artificial Dielsâ€“Alderases. ACS Omega, 2019, 4, 4437-4447.	1.6	21
136	Asymmetric Î´-Lactam Synthesis with a Monomeric Streptavidin Artificial Metalloenzyme. Journal of the American Chemical Society, 2019, 141, 4815-4819.	6.6	106
137	N-Lipidated Amino Acids and Peptides Immobilized on Cellulose Able to Split Amide Bonds. Materials, 2019, 12, 578.	1.3	1
138	Enhanced thermal conductivity of networked stainless steel/ZnO/PU composite for thermal pad application. Materials Research Express, 2019, 6, 076526.	0.8	6
139	Integrated Computational Study of the Cu-Catalyzed Hydration of Alkenes in Water Solvent and into the Context of an Artificial Metallohydratase. ACS Catalysis, 2019, 9, 4616-4626.	5.5	10
140	Photo-Biocatalysis: Biotransformations in the Presence of Light. ACS Catalysis, 2019, 9, 4115-4144.	5.5	219
141	Bioinspired Artificial [FeFe]-Hydrogenase with a Synthetic H-Cluster. ACS Catalysis, 2019, 9, 4495-4501.	5.5	17
142	Evaluation of dicopper azacryptand complexes in aqueous CuAAC reactions and their tolerance toward biological thiols. Dalton Transactions, 2019, 48, 9751-9758.	1.6	9
143	De Novo Design of Four-Helix Bundle Metalloproteins: One Scaffold, Diverse Reactivities. Accounts of Chemical Research, 2019, 52, 1148-1159.	7.6	99
144	Hemoproteins Reconstituted with Artificial Metal Complexes as Biohybrid Catalysts. Accounts of Chemical Research, 2019, 52, 945-954.	7.6	118
145	Chemical Optimization of Whole-Cell Transfer Hydrogenation Using Carbonic Anhydrase as Host Protein. ACS Catalysis, 2019, 9, 4173-4178.	5.5	41
146	LmrR: A Privileged Scaffold for Artificial Metalloenzymes. Accounts of Chemical Research, 2019, 52, 545-556.	7.6	102
147	Artificial Metalloenzymes Based on the Biotinâ€“Streptavidin Technology: Enzymatic Cascades and Directed Evolution. Accounts of Chemical Research, 2019, 52, 585-595.	7.6	121

#	Article	IF	Citations
148	Artificially Created Metalloenzyme Consisting of an Organometallic Complex Immobilized to a Protein Matrix. , 2019, , 307-328.		0
149	Expansion of Redox Chemistry in Designer Metalloenzymes. Accounts of Chemical Research, 2019, 52, 557-565.	7.6	35
150	An efficient, step-economical strategy for the design of functional metalloproteins. Nature Chemistry, 2019, 11, 434-441.	6.6	57
151	A catalytic proteinâ€“proteomimetic complex: using aromatic oligoamide foldamers as activators of RNase S. Chemical Science, 2019, 10, 3956-3962.	3.7	15
152	The importance of catalytic promiscuity for enzyme design and evolution. Nature Reviews Chemistry, 2019, 3, 687-705.	13.8	177
153	Hydroxo Iron(III) Sites in a Metalâ€“Organic Framework: Proton-Coupled Electron Transfer and Catalytic Oxidation of Alcohol with Molecular Oxygen. ACS Applied Materials & Interfaces, 2019, 11, 45621-45628.	4.0	25
154	Chemoenzymatic cascade for stilbene production from cinnamic acid catalyzed by ferulic acid decarboxylase and an artificial metathease. Catalysis Science and Technology, 2019, 9, 5572-5576.	2.1	26
155	The necessity of free and uncrowded coordination environments in biomimetic complex models: oxidative coupling by mixed-ligand cobalt(<scp>ii</scp>) complexes of diazeneâ€“disulfonamide. New Journal of Chemistry, 2019, 43, 18322-18330.	1.4	13
156	Catalytic and biophysical investigation of rhodium hydroformylase. Catalysis Science and Technology, 2019, 9, 6428-6437.	2.1	9
157	Recent advances in metallopolymer-based drug delivery systems. RSC Advances, 2019, 9, 37009-37051.	1.7	18
158	Directed Evolution of a Designer Enzyme Featuring an Unnatural Catalytic Amino Acid. Angewandte Chemie, 2019, 131, 2105-2109.	1.6	11
159	Origin of High Stereocontrol in Olefin Cyclopropanation Catalyzed by an Engineered Carbene Transferase. ACS Catalysis, 2019, 9, 1514-1524.	5.5	52
160	Protein Scaffold Activates Catalytic CO₂ Hydrogenation by a Rhodium Bis(diphosphine) Complex. ACS Catalysis, 2019, 9, 620-625.	5.5	30
161	Directed Evolution of a Designer Enzyme Featuring an Unnatural Catalytic Amino Acid. Angewandte Chemie - International Edition, 2019, 58, 2083-2087.	7.2	63
162	Whole-cell based synthetic enzyme cascadesâ€”light and shadow of a promising technology. Current Opinion in Chemical Biology, 2019, 49, 84-90.	2.8	44
163	Auf dem Weg zur Evolution artifizieller Metalloenzyme â€“ aus einem Proteinâ€Engineeringâ€Blickwinkel. Angewandte Chemie, 2019, 131, 4500-4511.	1.6	7
164	Towards the Evolution of Artificial Metalloenzymesâ€”A Protein Engineer's Perspective. Angewandte Chemie - International Edition, 2019, 58, 4454-4464.	7.2	64
165	Intracellular Catalysis with Selected Metal Complexes and Metallic Nanoparticles: Advances toward the Development of Catalytic Metallodrugs. Chemical Reviews, 2019, 119, 829-869.	23.0	155

#	Article	IF	Citations
166	Selection, Addiction and Catalysis: Emerging Trends for the Incorporation of Noncanonical Amino Acids into Peptides and Proteins in Vivo. ChemBioChem, 2019, 20, 1357-1364.	1.3	14
167	Dual-site aqua mononuclear nickel(II) complexes of non-heme tetradentate ligands: Synthesis, characterization and reactivity. Inorganica Chimica Acta, 2019, 486, 425-434.	1.2	3
168	Peptide Nanomaterials Designed from Natural Supramolecular Systems. Chemical Record, 2019, 19, 843-858.	2.9	39
169	Metallopolymers for advanced sustainable applications. Chemical Society Reviews, 2019, 48, 558-636.	18.7	139
170	Rationalization of stereoselectivity in enzyme reactions. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2019, 9, e1403.	6.2	5
171	Rational design of heme enzymes for biodegradation of pollutants toward a green future. Biotechnology and Applied Biochemistry, 2020, 67, 484-494.	1.4	31
172	Nanozymes and aptamer-based biosensing. Materials Science for Energy Technologies, 2020, 3, 127-135.	1.0	21
173	Bioorthogonal Conjugation of Transition Organometallic Complexes to Peptides and Proteins: Strategies and Applications. European Journal of Inorganic Chemistry, 2020, 2020, 21-35.	1.0	17
174	Reductive Amination and Enantioselective Amine Synthesis by Photoredox Catalysis. European Journal of Organic Chemistry, 2020, 2020, 1288-1293.	1.2	22
175	Biosystems design by directed evolution. AICHE Journal, 2020, 66, e16716.	1.8	23
176	Fighting Deactivation: Classical and Emerging Strategies for Efficient Stabilization of Molecular Electrocatalysts. Chemistry - A European Journal, 2020, 26, 3991-4000.	1.7	16
177	Advances in ultrahigh-throughput screening for directed enzyme evolution. Chemical Society Reviews, 2020, 49, 233-262.	18.7	182
178	Structureâ€“activity relationship study of half-sandwich metal complexes in aqueous transfer hydrogenation catalysis. Inorganic Chemistry Frontiers, 2020, 7, 583-591.	3.0	30
179	Highly Efficient Cyclic Dinucleotide Based Artificial Metalloribozymes for Enantioselective Friedelâ€“Crafts Reactions in Water. Angewandte Chemie, 2020, 132, 3472-3477.	1.6	1
180	Artificial water-soluble systems inspired by [FeFe]-hydrogenases for electro- and photocatalytic hydrogen production. International Journal of Hydrogen Energy, 2020, 45, 4305-4327.	3.8	32
181	Genetically engineered proteins with two active sites for enhanced biocatalysis and synergistic chemo- and biocatalysis. Nature Catalysis, 2020, 3, 319-328.	16.1	90
183	Expanding the enzyme universe with genetically encoded unnatural amino acids. Nature Catalysis, 2020, 3, 193-202.	16.1	131
184	A palladium-catalyst stabilized in the chiral environment of a monoclonal antibody in water. Chemical Communications, 2020, 56, 1605-1607.	2.2	12

#	Article	IF	Citations
185	Highly Efficient Cyclic Dinucleotide Based Artificial Metalloribozymes for Enantioselective Friedelâ€“Crafts Reactions in Water. Angewandte Chemie - International Edition, 2020, 59, 3444-3449.	7.2	8
186	A Dense-Shell Macromolecular Scaffold for Catalyst- or Substrate-Guided Catalysis in a Cellular Environment. , 2020, 2, 89-94.		16
187	Designed Streptococcus pyogenes Sortase A Accepts Branched Amines as Nucleophiles in Sortagging. Bioconjugate Chemistry, 2020, 31, 2476-2481.	1.8	13
188	Evolution of strept(avidin)-based artificial metalloenzymes in organometallic catalysis. Chemical Communications, 2020, 56, 14519-14540.	2.2	2
189	Aromatic foldamers as scaffolds for metal second coordination sphere design. Chemical Science, 2020, 11, 12178-12186.	3.7	7
190	Vanadium compounds promote biocatalysis in cells through actions on cell membranes. Catalysis Today, 2022, 388-389, 216-223.	2.2	3
191	Proteins as diverse, efficient, and evolvable scaffolds for artificial metalloenzymes. Chemical Communications, 2020, 56, 9586-9599.	2.2	28
192	Artificial Metalloenzymes: From Selective Chemical Transformations to Biochemical Applications. Molecules, 2020, 25, 2989.	1.7	10
193	Mimochrome, a metalloporphyrinâ€based catalytic Swiss knifeâ€. Biotechnology and Applied Biochemistry, 2020, 67, 495-515.	1.4	26
194	Contributions of primary coordination ligands and importance of outer sphere interactions in UFsc, a de novo designed protein with high affinity for metal ions. Journal of Inorganic Biochemistry, 2020, 212, 111224.	1.5	5
195	Designer metalloenzymes for synthetic biology: Enzyme hybrids for catalysis. Current Opinion in Chemical Biology, 2020, 58, 63-71.	2.8	25
196	Visible light photocatalysis â€“ from racemic to asymmetric activation strategies. Chemical Communications, 2020, 56, 11169-11190.	2.2	71
197	A Selective Sulfide Oxidation Catalyzed by Heterogeneous Artificial Metalloenzymes Iron@NikA. Chemistry - A European Journal, 2020, 26, 16633-16638.	1.7	4
198	Unlocking the Full Evolutionary Potential of Artificial Metalloenzymes Through Direct Metal-Protein Coordination. Johnson Matthey Technology Review, 2020, 64, 407-418.	0.5	6
199	Artificial Metalloprotein Nanoanalogues: In Situ Catalytic Production of Oxygen to Enhance Photoimmunotherapeutic Inhibition of Primary and Abscopal Tumor Growth. Small, 2020, 16, e2004345.	5.2	17
200	Metalâ€Templated Design of Chemically Switchable Protein Assemblies with Highâ€Affinity Coordination Sites. Angewandte Chemie, 2020, 132, 22124-22128.	1.6	4
201	The various levels of integration of chemo- and bio-catalysis towards hybrid catalysis. Catalysis Science and Technology, 2020, 10, 7082-7100.	2.1	27
202	A Cu(II)â€“ATP complex efficiently catalyses enantioselective Dielsâ€–Alder reactions. Nature Communications, 2020, 11, 4792.	5.8	13

#	Article	IF	Citations
203	Asymmetric Catalysis Mediated by Synthetic Peptides, Version 2.0: Expansion of Scope and Mechanisms. Chemical Reviews, 2020, 120, 11479-11615.	23.0	115
204	Cofactor Binding Dynamics Influence the Catalytic Activity and Selectivity of an Artificial Metalloenzyme. ACS Catalysis, 2020, 10, 11783-11790.	5.5	24
205	Asymmetric Hydrogenation of 1-aryl substituted-3,4-Dihydroisoquinolines with Iridium Catalysts Bearing Different Phosphorus-Based Ligands. Catalysts, 2020, 10, 914.	1.6	4
206	Electrochemiluminescence-Repurposed Abiological Catalysts in Full Protein Tag for Ultrasensitive Immunoassay. Analytical Chemistry, 2020, 92, 14076-14084.	3.2	9
207	Photoenzymatic Generation of Unstabilized Alkyl Radicals: An Asymmetric Reductive Cyclization. Journal of the American Chemical Society, 2020, 142, 15673-15677.	6.6	76
208	FhuAâ€“Grubbsâ€“Hoveyda Biohybrid Catalyst Embedded in a Polymer Film Enables Catalysis in Neat Substrates. ACS Catalysis, 2020, 10, 10946-10953.	5.5	5
209	Functional and morphological adaptation in DNA protocells via signal processing prompted by artificial metalloenzymes. Nature Nanotechnology, 2020, 15, 914-921.	15.6	76
210	Incorporation of a Cp*Rh(III)-dithiophosphate Cofactor with Latent Activity into a Protein Scaffold Generates a Biohybrid Catalyst Promoting C(sp²)â€“H Bond Functionalization. Inorganic Chemistry, 2020, 59, 14457-14463.	1.9	12
211	Where silyleneâ€“silicon centres matter in the activation of small molecules. Chemical Society Reviews, 2020, 49, 6733-6754.	18.7	137
212	Nanocatalysis Meets Biology. Topics in Organometallic Chemistry, 2020, , 243-278.	0.7	0
213	Metalâ€Templated Design of Chemically Switchable Protein Assemblies with Highâ€Affinity Coordination Sites. Angewandte Chemie - International Edition, 2020, 59, 21940-21944.	7.2	24
215	Enzyme-Associated Pericyclic Reactions. , 2020, , 187-227.		1
216	Design and Evaluation of Artificial Hybrid Photoredox Biocatalysts. ChemBioChem, 2020, 21, 3146-3150.	1.3	10
217	Clickable artificial hemeâ€peroxidases for the development of functional nanomaterials. Biotechnology and Applied Biochemistry, 2020, 67, 549-562.	1.4	8
218	Synergistic catalysis in an artificial enzyme. Nature Catalysis, 2020, 3, 184-185.	16.1	13
219	Intracellular Reactions Promoted by Bis(histidine) Miniproteins Stapled Using Palladium(II) Complexes. Angewandte Chemie - International Edition, 2020, 59, 9149-9154.	7.2	61
220	Enzymes with noncanonical amino acids. Current Opinion in Chemical Biology, 2020, 55, 136-144.	2.8	41
221	Recent Advances in Enzyme-Nanostructure Biocatalysts with Enhanced Activity. Catalysts, 2020, 10, 338.	1.6	50

#	Article	IF	Citations
222	Evolution of Isolated Atoms and Clusters in Catalysis. Trends in Chemistry, 2020, 2, 383-400.	4.4	138
223	Molecular Modeling for Artificial Metalloenzyme Design and Optimization. Accounts of Chemical Research, 2020, 53, 896-905.	7.6	29
224	Artificial iron hydrogenase made by covalent grafting of KnÃ¶lker's complex into xylanase: Application in asymmetric hydrogenation of an aryl ketone in water. Biotechnology and Applied Biochemistry, 2020, 67, 563-573.	1.4	7
225	Structures and esterolytic reactivity of novel binuclear copper(<scp>ii</scp>) complexes with reduced <scp>l</scp>-serine Schiff bases as mimic carboxylesterases. Dalton Transactions, 2020, 49, 10261-10269.	1.6	9
226	Streptavidin-Hosted Organocatalytic Aldol Addition. Molecules, 2020, 25, 2457.	1.7	9
227	A Hydroxyquinolineâ€Based Unnatural Amino Acid for the Design of Novel Artificial Metalloenzymes. ChemBioChem, 2020, 21, 3077-3081.	1.3	15
228	An Artificial Hemoprotein with Inducible Peroxidaseâ€and Monooxygenaseâ€Like Activities. Chemistry - A European Journal, 2020, 26, 14929-14937.	1.7	9
229	Design and Engineering of Metal Catalysts for Bio-orthogonal Catalysis in Living Systems. ACS Applied Bio Materials, 2020, 3, 4717-4746.	2.3	37
230	A novel magnetically separable laccaseâ€mediator catalyst system for the aerobic oxidation of alcohols and 2â€substitutedâ€2,3â€dihydroquinazolinâ€4(1H)â€ones under mild conditions. Applied Organometallic Chemistry, 2020, 34, e5899.	1.7	10
231	Intracellular Rutheniumâ€Promoted (2+2+2) Cycloadditions. Angewandte Chemie, 2020, 132, 17781-17786.	1.6	13
232	Intracellular Rutheniumâ€Promoted (2+2+2) Cycloadditions. Angewandte Chemie - International Edition, 2020, 59, 17628-17633.	7.2	41
233	Proteomimetics as protein-inspired scaffolds with defined tertiary folding patterns. Nature Chemistry, 2020, 12, 331-337.	6.6	90
234	Biological and Bioinspired Inorganic Nâ€“N Bond-Forming Reactions. Chemical Reviews, 2020, 120, 5252-5307.	23.0	48
235	Mechanisms of peptide and phosphoester hydrolysis catalyzed by two promiscuous metalloenzymes (insulin degrading enzyme and glycerophosphodiesterase) and their synthetic analogues. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2020, 10, e1466.	6.2	14
236	A dual biomimetic process for the selective aerobic oxidative coupling of primary amines using pyrogallol as a precatalyst. Isolation of the [5 + 2] cycloaddition redox intermediates. Green Chemistry, 2020, 22, 1894-1905.	4.6	20
237	Cupin Variants as a Macromolecular Ligand Library for Stereoselective Michael Addition of Nitroalkanes. Angewandte Chemie - International Edition, 2020, 59, 7717-7720.	7.2	10
238	Artificial Glycoproteins as a Scaffold for Targeted Drug Therapy. Small, 2020, 16, e1906890.	5.2	22
239	Cupin Variants as a Macromolecular Ligand Library for Stereoselective Michael Addition of Nitroalkanes. Angewandte Chemie, 2020, 132, 7791-7794.	1.6	0

#	Article	IF	Citations
240	Synergistic catalysis in an artificial enzyme by simultaneous action of two abiological catalytic sites. Nature Catalysis, 2020, 3, 289-294.	16.1	98
241	Mechanistic study of carboxylic acid and phosphate ester cleavage by oximate metal complexes surpassing the limiting reactivity of highly basic free oximate anions. Dalton Transactions, 2020, 49, 2452-2467.	1.6	3
242	Electrochemical characterization of the artificial metalloenzyme papain-[(Î·6-arene)Ru(1,10-phenanthroline)Cl]+. Journal of Electroanalytical Chemistry, 2020, 859, 113882.	1.9	1
243	Molecular Design and Regulation of Metalloenzyme Activities through Two Novel Approaches: Ferritin and P450s. Bulletin of the Chemical Society of Japan, 2020, 93, 379-392.	2.0	16
244	Engineering new catalytic activities in enzymes. Nature Catalysis, 2020, 3, 203-213.	16.1	465
245	Emerging strategies for expanding the toolbox of enzymes in biocatalysis. Current Opinion in Chemical Biology, 2020, 55, 45-51.	2.8	86
246	Intracellular Reactions Promoted by Bis(histidine) Miniproteins Stapled Using Palladium(II) Complexes. Angewandte Chemie, 2020, 132, 9234-9239.	1.6	18
247	Halogen-containing semiconductors: From artificial photosynthesis to unconventional computing. Coordination Chemistry Reviews, 2020, 415, 213316.	9.5	21
248	Synthesis and Characterization of a Binuclear Copper(II)-dipyriamethyrin Complex: [Cu2(dipyriamethyrin)(Î¼2-1,1-acetato)2]. Molecules, 2020, 25, 1446.	1.7	5
249	Enzyme Immobilization on Graphite Oxide (GO) Surface via One-Pot Synthesis of GO/Metalâ€“Organic Framework Composites for Large-Substrate Biocatalysis. ACS Applied Materials & Interfaces, 2020, 12, 23119-23126.	4.0	45
250	Late-Stage Diversification of Natural Products. ACS Central Science, 2020, 6, 622-635.	5.3	203
251	Tuning the reactivity of cobalt-based H2 production electrocatalysts via the incorporation of the peripheral basic functionalities. Coordination Chemistry Reviews, 2020, 416, 213335.	9.5	46
252	The Quest for Xenobiotic Enzymes: From New Enzymes for Chemistry to a Novel Chemistry of Life. ChemBioChem, 2020, 21, 2241-2249.	1.3	13
253	Artificial Metalloenzymes based on TetR Proteins and Cu(II) for Enantioselective Friedelâ€Crafts Alkylation Reactions. ChemCatChem, 2020, 12, 3190-3194.	1.8	8
254	Artificial Iron Proteins: Modeling the Active Sites in Non-Heme Dioxygenases. Inorganic Chemistry, 2020, 59, 6000-6009.	1.9	10
255	A Mechanistic Rationale Approach Revealed the Unexpected Chemoselectivity of an Artificial Ru-Dependent Oxidase: A Dual Experimental/Theoretical Approach. ACS Catalysis, 2020, 10, 5631-5645.	5.5	7
256	Unusual KIE and dynamics effects in the Fe-catalyzed hetero-Diels-Alder reaction of unactivated aldehydes and dienes. Nature Communications, 2020, 11, 1850.	5.8	30
257	Bioinspired design of an artificial peroxidase: introducing key residues of native peroxidases into F43Y myoglobin with a Tyr-heme cross-link. Dalton Transactions, 2020, 49, 5029-5033.	1.6	11

#	Article	IF	Citations
258	Enabling protein-hosted organocatalytic transformations. RSC Advances, 2020, 10, 16147-16161.	1.7	5
259	Unlocking the therapeutic potential of artificial metalloenzymes. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2020, 96, 79-94.	1.6	12
260	Molecular Dynamics Simulation and Kinetic Study of Fluoride Binding to V21C/V66C Myoglobin with a Cytoglobin-like Disulfide Bond. International Journal of Molecular Sciences, 2020, 21, 2512.	1.8	3
261	Synthesis of N-Substituted Indoles via Aqueous Ring-Closing Metathesis. Catalysis Letters, 2021, 151, 1-7.	1.4	6
262	Integrating abiotic chemical catalysis and enzymatic catalysis in living cells. Organic and Biomolecular Chemistry, 2021, 19, 37-45.	1.5	9
263	Directed Evolution of a Cp*Rh^{III}â€Linked Biohybrid Catalyst Based on a Screening Platform with Affinity Purification. ChemBioChem, 2021, 22, 679-685.	1.3	10
264	Artificial metalloenzymes: The powerful alliance between protein scaffolds and organometallic catalysts. Current Opinion in Green and Sustainable Chemistry, 2021, 28, 100420.	3.2	9
265	Cell mimicry as a bottomâ€up strategy for hierarchical engineering of<scp>natureâ€inspired</scp>entities. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2021, 13, e1683.	3.3	18
266	Exploring and Adapting the Molecular Selectivity of Artificial Metalloenzymes. Bulletin of the Chemical Society of Japan, 2021, 94, 382-396.	2.0	14
267	Exploring the copper binding ability of Mets7 hCtrâ€1 protein domain and His7 derivative: An insight in Michael addition catalysis. Journal of Peptide Science, 2021, 27, e3289.	0.8	9
268	Enhancing Biosynthesis and Manipulating Flux in Whole Cells with Abiotic Catalysis. ChemBioChem, 2021, 22, 469-477.	1.3	5
269	Artificial Enzymes for Dielsâ€Alder Reactions. ChemBioChem, 2021, 22, 443-459.	1.3	11
270	[FeFe] Hydrogenases and Their Functional Models. , 2021, , 731-756.		4
271	Stepwise nitrosylation of the nonheme iron site in an engineered azurin and a molecular basis for nitric oxide signaling mediated by nonheme iron proteins. Chemical Science, 2021, 12, 6569-6579.	3.7	2
272	Intracellular Unnatural Catalysis Enabled by an Artificial Metalloenzyme. Methods in Molecular Biology, 2021, 2312, 287-300.	0.4	0
273	Mechanistic insight into oxygen atom transfer reactions by mononuclear manganese(<scp>iv</scp>)â€“oxo adducts. Dalton Transactions, 2021, 50, 3577-3585.	1.6	10
274	Myoglobins engineered with artificial cofactors serve as artificial metalloenzymes and models of natural enzymes. Dalton Transactions, 2021, 50, 1940-1949.	1.6	32
275	An artificial ruthenium-containing Î²-barrel protein for alkeneâ€“alkyne coupling reaction. Organic and Biomolecular Chemistry, 2021, 19, 2912-2916.	1.5	6

#	Article	IF	Citations
276	Chemogenetic engineering of nitrobindin toward an artificial epoxygenase. Catalysis Science and Technology, 2021, 11, 4491-4499.	2.1	5
277	Biosynthesis of nanoparticles and their roles in numerous areas. Comprehensive Analytical Chemistry, 2021, , 1-47.	0.7	8
278	New horizons for catalysis disclosed by supramolecular chemistry. Chemical Society Reviews, 2021, 50, 7681-7724.	18.7	117
279	Rational Construction of an Artificial Binuclear Copper Monooxygenase in a Metalâ€“Organic Framework. Journal of the American Chemical Society, 2021, 143, 1107-1118.	6.6	70
280	Solar fuels and feedstocks: the quest for renewable black gold. Energy and Environmental Science, 2021, 14, 1402-1419.	15.6	25
281	Biomimetic Metalâ€“Organic Frameworks: Construction and Catalytic Performance. Monographs in Supramolecular Chemistry, 2021, , 370-395.	0.2	0
282	Construction of Multistep Catalytic Systems in Protein Assemblies. Fundamental Biomedical Technologies, 2021, , 29-44.	0.2	0
283	Power of Biocatalysis for Organic Synthesis. ACS Central Science, 2021, 7, 55-71.	5.3	186
284	Minimalistic peptidic scaffolds harbouring an artificial carbene-containing amino acid modulate reductase activity. Chemical Communications, 2021, 57, 9068-9071.	2.2	2
285	A computational approach to understand the role of metals and axial ligands in artificial heme enzyme catalyzed Câ€“H insertion. Physical Chemistry Chemical Physics, 2021, 23, 9500-9511.	1.3	15
286	Transfer hydrogenations catalyzed by streptavidin-hosted secondary amine organocatalysts. Chemical Communications, 2021, 57, 1919-1922.	2.2	10
287	Structure, reactivity, and spectroscopy of nitrogenase-related synthetic and biological clusters. Chemical Society Reviews, 2021, 50, 8743-8761.	18.7	13
288	Bioorganometallics: Artificial Metalloenzymes With Organometallic Moieties. , 2021, , .		1
289	Artificial Metalloproteins with Dinuclear Ironâ€“Hydroxido Centers. Journal of the American Chemical Society, 2021, 143, 2384-2393.	6.6	10
290	Recent advance of chemoenzymatic catalysis for the synthesis of chemicals: Scope and challenge. Chinese Journal of Chemical Engineering, 2021, 30, 146-167.	1.7	5
291	In Vivo Assembly of Artificial Metalloenzymes and Application in Wholeâ€Cell Biocatalysis**. Angewandte Chemie - International Edition, 2021, 60, 5913-5920.	7.2	45
292	Degradation of a Main Plastic Pollutant Polyethylene Terephthalate by Two Distinct Proteases (Neprilysin and Cutinase-like Enzyme). Journal of Chemical Information and Modeling, 2021, 61, 764-776.	2.5	13
293	Abiotic reduction of ketones with silanes catalysed by carbonic anhydrase through an enzymatic zinc hydride. Nature Chemistry, 2021, 13, 312-318.	6.6	30

#	Article	IF	Citations
294	Efficient Lewis acid catalysis of an abiological reaction in a de novo protein scaffold. Nature Chemistry, 2021, 13, 231-235.	6.6	46
295	Alternative Strategy to Obtain Artificial Imine Reductase by Exploiting Vancomycin/D-Ala-D-Ala Interactions with an Iridium Metal Complex. Inorganic Chemistry, 2021, 60, 2976-2982.	1.9	5
296	In Vivo Assembly of Artificial Metalloenzymes and Application in Wholeâ€Cell Biocatalysis**. Angewandte Chemie, 2021, 133, 5978-5985.	1.6	10
297	Enzyme Catalyst Engineering toward the Integration of Biocatalysis and Chemocatalysis. Trends in Biotechnology, 2021, 39, 1173-1183.	4.9	58
298	Controlled Ligand Exchange Between Ruthenium Organometallic Cofactor Precursors and a NaÃ¯ve Protein Scaffold Generates Artificial Metalloenzymes Catalysing Transfer Hydrogenation. Angewandte Chemie - International Edition, 2021, 60, 10919-10927.	7.2	3
299	Functionalization of Ruthenium Olefin-Metathesis Catalysts for Interdisciplinary Studies in Chemistry and Biology. Catalysts, 2021, 11, 359.	1.6	13
300	Controlled Ligand Exchange Between Ruthenium Organometallic Cofactor Precursors and a NaÃ¯ve Protein Scaffold Generates Artificial Metalloenzymes Catalysing Transfer Hydrogenation. Angewandte Chemie, 2021, 133, 11014-11022.	1.6	0
301	Engineering Thermostability in Artificial Metalloenzymes to Increase Catalytic Activity. ACS Catalysis, 2021, 11, 3620-3627.	5.5	16
302	Chemical modifications of proteins and their applications in metalloenzyme studies. Synthetic and Systems Biotechnology, 2021, 6, 32-49.	1.8	22
303	Construction of a whole-cell biohybrid catalyst using a Cp*Rh(III)-dithiophosphate complex as a precursor of a metal cofactor. Journal of Inorganic Biochemistry, 2021, 216, 111352.	1.5	8
304	Asymmetric O-to-C Aryloxycarbonyl Migration of Indolyl Carbonates Using Single-Handed Dynamic Helical Polyquinoxalines Bearing 4-Aminopyridyl Groups as Chiral Nucleophilic Catalysts. Bulletin of the Chemical Society of Japan, 2021, 94, 943-949.	2.0	10
305	Hydride surprise. Nature Chemistry, 2021, 13, 297-299.	6.6	0
306	Synthesis and Pyrolysis of Soluble Cyclic Hf-Schiff Base Polymers. Chinese Journal of Polymer Science (English Edition), 2021, 39, 659.	2.0	2
307	Selfâ€Assembled Multivalent Agâ€SR Coordination Polymers with Phosphataseâ€Like Activity. Chemistry - A European Journal, 2021, 27, 7646-7650.	1.7	5
308	Recent Advances in Biocatalysis with Chemical Modification and Expanded Amino Acid Alphabet. Chemical Reviews, 2021, 121, 6173-6245.	23.0	62
309	Light-Driven CO2 Reduction by Co-Cytochrome b562. Frontiers in Molecular Biosciences, 2021, 8, 609654.	1.6	10
311	Chemogenetic Evolution of a Peroxidase-like Artificial Metalloenzyme. ACS Catalysis, 2021, 11, 5079-5087.	5.5	21
312	Substrate promiscuity of a de novo designed peroxidase. Journal of Inorganic Biochemistry, 2021, 217, 111370.	1.5	8

#	Article	IF	Citations
313	Tools and Methods for Investigating Synthetic Metal-Catalyzed Reactions in Living Cells. ACS Catalysis, 2021, 11, 5148-5165.	5.5	26
314	Diversifying Metalâ€“Ligand Cooperative Catalysis in Semiâ€Synthetic [Mn]â€Hydrogenases. Angewandte Chemie, 2021, 133, 13462-13469.	1.6	0
315	Biomimetic metal-oxidant adducts as active oxidants in oxidation reactions. Coordination Chemistry Reviews, 2021, 435, 213807.	9.5	35
316	Engineering a Metathesis-Catalyzing Artificial Metalloenzyme Based on HaloTag. ACS Catalysis, 2021, 11, 6343-6347.	5.5	16
317	Unlocking Iminium Catalysis in Artificial Enzymes to Create a Friedelâ€“Crafts Alkylase. ACS Catalysis, 2021, 11, 6763-6770.	5.5	19
318	Diversifying Metalâ€“Ligand Cooperative Catalysis in Semiâ€Synthetic [Mn]â€Hydrogenases. Angewandte Chemie - International Edition, 2021, 60, 13350-13357.	7.2	11
319	Biodegradation of aromatic pollutants by metalloenzymes: A structural-functional-environmental perspective. Coordination Chemistry Reviews, 2021, 434, 213774.	9.5	33
320	Speciality Grand Challenges in Organometallic Catalysis. Frontiers in Catalysis, 2021, 1, .	1.8	2
321	Weakly Non-Covalent Docking of Amino-Acid Schiff Base Zn(II) Complex to Lysozyme. Key Engineering Materials, 0, 888, 105-110.	0.4	1
323	Repurposing metalloproteins as mimics of natural metalloenzymes for small-molecule activation. Journal of Inorganic Biochemistry, 2021, 219, 111430.	1.5	10
324	Well-dispersed Pt nanoparticles with tunable sizes on dendritic porous silica nanospheres as an artificial enzyme. Journal of Alloys and Compounds, 2021, 865, 158862.	2.8	6
325	Recent advancements in enzyme-mediated crosslinkable hydrogels: In vivo-mimicking strategies. APL Bioengineering, 2021, 5, 021502.	3.3	39
326	Synergistic Catalysis of Tandem Michael Addition/Enantioselective Protonation Reactions by an Artificial Enzyme. ACS Catalysis, 2021, 11, 9366-9369.	5.5	12
327	Functionalized Prion-Inspired Amyloids for Biosensor Applications. Biomacromolecules, 2021, 22, 2822-2833.	2.6	12
328	Design of artificial metalloenzymes for the reduction of nicotinamide cofactors. Journal of Inorganic Biochemistry, 2021, 220, 111446.	1.5	9
329	One-pot synthesis of AuAgPd trimetallic nanoparticles with peroxidase-like activity for colorimetric assays. Analytical and Bioanalytical Chemistry, 2021, 413, 5383-5393.	1.9	9
331	Engineering Dirhodium Artificial Metalloenzymes for Diazo Coupling Cascade Reactions**. Angewandte Chemie - International Edition, 2021, 60, 23672-23677.	7.2	10
332	Engineering Dirhodium Artificial Metalloenzymes for Diazo Coupling Cascade Reactions**. Angewandte Chemie, 0, , .	1.6	0

#	Article	IF	Citations
333	In Vivo Assembly of a Genetically Encoded Artificial Metalloenzyme for Hydrogen Production. ACS Synthetic Biology, 2021, 10, 2116-2120.	1.9	3
334	Striking gold with chimeric proteins. Nature Catalysis, 2021, 4, 639-640.	16.1	2
336	Directed Evolution of a Surface-Displayed Artificial Allylic Deallylase Relying on a GFP Reporter Protein. ACS Catalysis, 2021, 11, 10705-10712.	5.5	7
337	Protein Assembly by Design. Chemical Reviews, 2021, 121, 13701-13796.	23.0	123
338	Exporting Metalâ€Carbene Chemistry to Live Mammalian Cells: Copperâ€Catalyzed Intracellular Synthesis of Quinoxalines Enabled by Nâ^'H Carbene Insertions. Angewandte Chemie, 2021, 133, 22188-22196.	1.6	3
339	Design and evolution of chimeric streptavidin for protein-enabled dual gold catalysis. Nature Catalysis, 2021, 4, 643-653.	16.1	32
340	Exporting Metalâ€Carbene Chemistry to Live Mammalian Cells: Copperâ€Catalyzed Intracellular Synthesis of Quinoxalines Enabled by Nâ^'H Carbene Insertions. Angewandte Chemie - International Edition, 2021, 60, 22017-22025.	7.2	23
341	Repurposed and artificial heme enzymes for cyclopropanation reactions. Journal of Inorganic Biochemistry, 2021, 222, 111523.	1.5	11
342	Mimicking Enzymes: The Quest for Powerful Catalysts from Simple Molecules to Nanozymes. ACS Catalysis, 2021, 11, 11501-11509.	5.5	45
344	Câ€“H Bond Cleavage by Bioinspired Nonheme Metal Complexes. Inorganic Chemistry, 2021, 60, 13759-13783.	1.9	36
345	Design of artificial metalloenzymes with multiple inorganic elements: The more the merrier. Journal of Inorganic Biochemistry, 2021, 223, 111552.	1.5	8
346	Engineered and artificial metalloenzymes for selective Câ€“H functionalization. Current Opinion in Green and Sustainable Chemistry, 2021, 31, 100494.	3.2	41
347	Semi-synthetic hydrogenasesâ€"inÂvitro and inÂvivo applications. Current Opinion in Green and Sustainable Chemistry, 2021, 32, 100521.	3.2	5
348	Interfacing non-enzymatic catalysis with living microorganisms. RSC Chemical Biology, 2021, 2, 1073-1083.	2.0	16
349	Molecular understanding of heteronuclear active sites in hemeâ€“copper oxidases, nitric oxide reductases, and sulfite reductases through biomimetic modelling. Chemical Society Reviews, 2021, 50, 2486-2539.	18.7	30
350	Porous Silica-Based Organic-Inorganic Hybrid Catalysts: A Review. Catalysts, 2021, 11, 79.	1.6	29
351	[NiFe] Hydrogenases: A Paradigm for Bioinorganic Hydrogen Conversion. , 2021, , 707-730.		3
352	Advances in Metalloprotein Design and Engineering: Strategies Employed and Insights Gained. , 2021, , 900-928.		0

#	Article	IF	Citations
353	Design and engineering of artificial metalloproteins: from de novo metal coordination to catalysis. Protein Engineering, Design and Selection, 2021, 34, .	1.0	14
354	Simultaneous oxidative and reductive reactions in one system by atomic design. Nature Catalysis, 2021, 4, 134-143.	16.1	132
355	Metalâ€Terpyridine Complexes in Catalytic Application â€“ A Spotlight on the Last Decade. ChemCatChem, 2020, 12, 2890-2941.	1.8	56
356	DNAâ€Based Asymmetric Inverse Electronâ€Demand Heteroâ€Dielsâ€“Alder. Chemistry - A European Journal, 2020, 26, 3519-3523.	1.7	10
357	Enantioselective Hydroxylation of Benzylic C(sp³)â€“H Bonds by an Artificial Iron Hydroxylase Based on the Biotinâ€“Streptavidin Technology. Journal of the American Chemical Society, 2020, 142, 10617-10623.	6.6	34
358	Ruthenium, Osmium and Iridium in the Fight Against Cancer. 2-Oxoglutarate-Dependent Oxygenases, 2019, , 31-61.	0.8	3
359	Carbapenems as water soluble organocatalysts. Wellcome Open Research, 2018, 3, 107.	0.9	3
360	A protein scaffold enables hydrogen evolution for a Ni-bisdiphosphine complex. Dalton Transactions, 2021, 50, 15754-15759.	1.6	2
361	Artificial metalloenzymes in a nutshell: the quartet for efficient catalysis. Biological Chemistry, 2022, 403, 403-412.	1.2	5
362	Unnatural biosynthesis by an engineered microorganism with heterologously expressed natural enzymes and an artificial metalloenzyme. Nature Chemistry, 2021, 13, 1186-1191.	6.6	56
363	Engineering and emerging applications of artificial metalloenzymes with whole cells. Nature Catalysis, 2021, 4, 814-827.	16.1	38
365	Designing of Artificial Metalloenzymes. , 2019, , 177-191.		0
368	Phenoxazinone Synthase-like Activity of Rationally Designed Heme Enzymes Based on Myoglobin. Biochemistry, 2023, 62, 369-377.	1.2	10
369	Current Applications of Artificial Metalloenzymes and Future Developments. , 2021, , 363-411.		1
370	Rhodamine B oxidation promoted by P450-bioinspired Jacobsen catalysts/cellulose systems. RSC Advances, 2021, 11, 33823-33834.	1.7	1
371	Computationally driven design of an artificial metalloenzyme using supramolecular anchoring strategies of iridium complexes to alcohol dehydrogenase. Faraday Discussions, 2022, 234, 315-335.	1.6	3
372	Streptavidin (Sav)-Based Artificial Metalloenzymes: Cofactor Design Considerations and Large-Scale Expression of Host Protein Variants. Springer Protocols, 2020, , 213-235.	0.1	0
373	Recent Advances in Iridium-Catalysed Transfer Hydrogenation Reactions. Topics in Organometallic Chemistry, 2020, , 67-152.	0.7	0

#	Article	IF	Citations
374	Influence of structural and thermal factors on phenoxazinone synthase activities catalysed by coordinatively saturated cobalt(III) octahedral complexes bearing diazeneâ€“disulfonamide NâŒƒNâŒƒNÂchelators. , 2020, 23, 169-183.		0
375	Artificial imine reductases: developments and future directions. RSC Chemical Biology, 2020, 1, 369-378.	2.0	3
376	Reaction Parameterization as a Tool for Development in Organometallic Catalysis. , 2021, , .		2
377	Tuning the Reactivity of a Substrate for SNAPâ€Tag Expands Its Application for Recognitionâ€Driven DNAâ€Protein Conjugation. Chemistry - A European Journal, 2021, 27, 18118-18128.	1.7	6
378	Engineered Nanoenzymes with Multifunctional Properties for Nextâ€Generation Biological and Environmental Applications. Advanced Functional Materials, 2022, 32, 2108650.	7.8	43
379	Biocatalytic Alkylation Chemistry: Building Molecular Complexity with High Selectivity. ChemPlusChem, 2022, 87, .	1.3	10
380	Macrocylases as synthetic tools for ligand synthesis: enzymatic synthesis of cyclic peptides containing metal-binding amino acids. Royal Society Open Science, 2021, 8, 211098.	1.1	4
381	An ATPâ€“Cu(<scp>ii</scp>) catalyst efficiently catalyzes enantioselective Michael reactions in water. Green Chemistry, 2021, 23, 9876-9880.	4.6	4
382	Towards a Synthetic Biology Toolset for Metallocluster Enzymes in Biosynthetic Pathways: What We Know and What We Need. Molecules, 2021, 26, 6930.	1.7	4
383	PCET to bound-superoxide by NADH and NADHX in aqueous-acid media: a kinetic inspection. Journal of Chemical Sciences, 2021, 133, 1.	0.7	0
384	Iridium-Complex-Functionalized Magnetic Nanoparticles for Fluorescent Detection of Mercapto Drugs. ACS Applied Nano Materials, 0, , .	2.4	3
385	The expanding utility of iron-sulfur clusters: Their functional roles in biology, synthetic small molecules, maquettes and artificial proteins, biomimetic materials, and therapeutic strategies. Coordination Chemistry Reviews, 2022, 453, 214229.	9.5	15
386	A Dual Anchoring Strategy for the Directed Evolution of Improved Artificial Transfer Hydrogenases Based on Carbonic Anhydrase. ACS Central Science, 2021, 7, 1874-1884.	5.3	17
387	Chemical modification of enzymes to improve biocatalytic performance. Biotechnology Advances, 2021, 53, 107868.	6.0	32
388	Successes and Challenges in Multiscale Modelling of Artificial Metalloenzymes: the Case Study of POP-Rh2 Cyclopropanase. Faraday Discussions, 2022, , .	1.6	1
389	Assembly and Evolution of Artificial Metalloenzymes within E. coli Nissle 1917 for Enantioselective and Site-Selective Functionalization of Câ€H and Câ•C Bonds. Journal of the American Chemical Society, 2022, 144, 883-890.	6.6	16
390	Emerging artificial metalloenzymes for asymmetric hydrogenation reactions. Current Opinion in Chemical Biology, 2022, 66, 102096.	2.8	3
391	Opportunities for interfacing organometallic catalysts with cellular metabolism. , 2021, , .		0

#	Article	IF	Citations
392	Heterogenization of Molecular Water Oxidation Catalysts in Electrodes for (Photo)Electrochemical Water Oxidation. Water (Switzerland), 2022, 14, 371.	1.2	12
393	Design of enzyme-metal hybrid catalysts for organic synthesis. Cell Reports Physical Science, 2022, 3, 100742.	2.8	8
394	The synthesis and characterization of a magnetic histidine Schiff base palladium complex and its efficiency investigation in the nitroarene pollutants reduction and dyes degradation. Applied Organometallic Chemistry, 0, , .	1.7	1
395	Controlled Uptake of an Iridium Complex inside Engineered apoâ€Ferritin Nanocages: Study of Structure and Catalysis**. Angewandte Chemie, 0, , .	1.6	1
396	Synthetic prodrug design enables biocatalytic activation in mice to elicit tumor growth suppression. Nature Communications, 2022, 13, 39.	5.8	34
397	Transition metal mediated bioorthogonal release. Chem Catalysis, 2022, 2, 39-51.	2.9	13
398	Enzyme-metal nanobiohybrids in chemobiocatalytic cascade processes. , 2022, , 189-210.		0
399	Combining chemistry and protein engineering for new-to-nature biocatalysis. , 2022, 1, 18-23.		80
400	Organo/Transition-Metal Combined Catalysis Rejuvenates Both in Asymmetric Synthesis. Journal of the American Chemical Society, 2022, 144, 2415-2437.	6.6	92
401	Synthesis of an Organometallic Alkyl-Co(III) Complex with Amidoquinoline Directing Groups via C(sp3)â€“H Activation and Its UVâ€“vis/NMR Spectroscopic, Crystallographic, DFT, and Electrochemical Studies. Bulletin of the Chemical Society of Japan, 2022, 95, 400-409.	2.0	0
402	Controlled Uptake of an Iridium Complex inside Engineered apoâ€Ferritin Nanocages: Study of Structure and Catalysis**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	8
403	Incorporation of metal-chelating unnatural amino acids into halotag for allylic deamination. Journal of Organometallic Chemistry, 2022, 962, 122272.	0.8	4
404	Tandem Friedelâ€Craftsâ€Alkylationâ€Enantioselectiveâ€Protonation by Artificial Enzyme Iminium Catalysis. ChemCatChem, 2022, 14, .	1.8	7
405	Chemical Bonding in Homogenous Catalysis â€“ Seen Through the Eyes of Vibrational Spectroscopy. , 2024, , 622-648.		0
406	Strategies for the application of metalâ€“organic frameworks in catalytic reactions. RSC Advances, 2022, 12, 10114-10125.	1.7	16
407	Progress, Challenges, and Opportunities with Artificial Metalloenzymes in Biosynthesis. Biochemistry, 2023, 62, 221-228.	1.2	15
408	Functional Conversion of Acetyl-Coenzyme a Synthase to a Nickel Superoxide Dismutase via Rational Design of Coordination Microenvironment for the Nid-Site. International Journal of Molecular Sciences, 2022, 23, 2652.	1.8	2
409	Photobiocatalysis for Abiological Transformations. Accounts of Chemical Research, 2022, 55, 1087-1096.	7.6	73

#	Article	IF	Citations
410	Enzyme Immobilization and Co-Immobilization: Main Framework, Advances and Some Applications. Processes, 2022, 10, 494.	1.3	44
411	Overcoming universal restrictions on metal selectivity by protein design. Nature, 2022, 603, 522-527.	13.7	32
412	Carbohydrateâ€Functionalized Triazolylidene Iridium Complexes: Hydrogenation Catalysis in Water with Asymmetric Induction. ChemCatChem, 2022, 14, .	1.8	2
413	Derivatives of Natural Organocatalytic Cofactors and Artificial Organocatalytic Cofactors as Catalysts in Enzymes. ChemBioChem, 2022, 23, .	1.3	3
414	Artificial Enzymes Combining Proteins with Proline Polymers for Asymmetric Aldol Reactions in Water. ACS Catalysis, 2022, 12, 4777-4783.	5.5	7
417	Teaching natural enzymes new radical tricks. Science, 2021, 374, 1558-1559.	6.0	1
421	Design of Artificial Enzymes Bearing Several Active Centers: New Trends, Opportunities and Problems. International Journal of Molecular Sciences, 2022, 23, 5304.	1.8	16
422	Chalcogen and Hydrogen Bonds at the Periphery of Arylhydrazone Metal Complexes. Crystal Growth and Design, 2022, 22, 3932-3940.	1.4	12
423	The 2022 solar fuels roadmap. Journal Physics D: Applied Physics, 2022, 55, 323003.	1.3	58
424	Organometallic catalysis in aqueous and biological environments: harnessing the power of metal carbenes. Chemical Science, 2022, 13, 6478-6495.	3.7	14
425	Artificial Metalloproteins: At the Interface between Biology and Chemistry. Jacs Au, 2022, 2, 1252-1265.	3.6	10
426	A synthetic tactic to substitute axial ligands in sterically demanding Ru(<scp>ii</scp>)porphyrinates. Dalton Transactions, 0, , .	1.6	1
427	Transition Metal Scaffolds Used To Bring Newâ€toâ€Nature Reactions into Biological Systems. European Journal of Inorganic Chemistry, 2022, 2022, .	1.0	4
428	An Artificial Metalloenzyme Based on a Copper Heteroscorpionate Enables sp³ Câ€“H Functionalization via Intramolecular Carbene Insertion. Journal of the American Chemical Society, 2022, 144, 11676-11684.	6.6	11
429	Artificial metalloenzymes based on protein assembly. Coordination Chemistry Reviews, 2022, 469, 214593.	9.5	9
430	Spotting Trends in Organocatalyzed and Other Organomediated (De)polymerizations and Polymer Functionalizations. Angewandte Chemie - International Edition, 2022, 61, .	7.2	11
431	Spotting Trends in Organocatalyzed and Other Organomediated (De)polymerizations and Polymer Functionalizations. Angewandte Chemie, 0, , .	1.6	0
432	A screening method for binding synthetic metallo-complexes to haem proteins. Analytical Biochemistry, 2022, 653, 114788.	1.1	4

#	Article	IF	Citations
433	Rational Design of an Artificial Hydrolytic Nuclease by Introduction of AÂSodium Copper Chlorophyllin in L29e Myoglobin. SSRN Electronic Journal, 0, , .	0.4	0
434	Recent development towards alkene hydroformylation catalysts integrating traditional homo- and heterogeneous catalysis. Catalysis Science and Technology, 2022, 12, 4962-4982.	2.1	8
435	Oxidation and Peroxygenation of Câ€“H Bonds by Artificial Cu Peptides (ArCuPs): Improved Catalysis via Selective Outer Sphere Modifications. ACS Catalysis, 2022, 12, 8341-8351.	5.5	0
436	A Cu-based metal-organic framework with two types of connecting nodes as catalyst for oxygen activation. Chinese Chemical Letters, 2023, 34, 107635.	4.8	2
437	Selective Confinement of Rareâ€Earthâ€Metal Hydrates by a Capped Metalloâ€Cage under Aqueous Conditions. Angewandte Chemie, 0, , .	1.6	1
438	Designing Artificial Metalloenzymes by Tuning of the Environment beyond the Primary Coordination Sphere. Chemical Reviews, 2022, 122, 11974-12045.	23.0	54
439	Biocatalytic Friedelâ€Crafts Reactions. ChemCatChem, 2022, 14, .	1.8	11
440	Selective Confinement of Rareâ€Earthâ€Metal Hydrates by a Capped Metalloâ€Cage under Aqueous Conditions. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
441	Recent advancements in enzymeâ€incorporated nanomaterials: Synthesis, mechanistic formation, and applications. Biotechnology and Bioengineering, 2022, 119, 2609-2638.	1.7	9
442	Peroxidase Activity of Myoglobin Variants Reconstituted with Artificial Cofactors. ChemBioChem, 2022, 23, .	1.3	6
443	An artificial metalloprotein with metal-adaptive coordination sites and Ni-dependent quercetinase activity. Journal of Inorganic Biochemistry, 2022, 235, 111914.	1.5	0
444	Redesigning Enzymes for Biocatalysis: Exploiting Structural Understanding for Improved Selectivity. Frontiers in Molecular Biosciences, 0, 9, .	1.6	8
445	Radical Termination via Î²-Scission Enables Photoenzymatic Allylic Alkylation Using â€œEneâ€•Reductases. ACS Catalysis, 2022, 12, 9801-9805.	5.5	15
446	Rational design of an artificial hydrolytic nuclease by introduction of a sodium copper chlorophyllin in L29E myoglobin. Journal of Inorganic Biochemistry, 2022, 235, 111943.	1.5	2
447	[FeFe]-Hydrogenases: Structure, Mechanism, and Metallocluster Biosynthesis. , 2022, , .		0
448	Tuning through-space interactions via the secondary coordination sphere of an artificial metalloenzyme leads to enhanced Rh(<scp>iii</scp>)-catalysis. Chemical Science, 2022, 13, 9220-9224.	3.7	4
449	Enhanced Photocatalytic Degradation with Sustainable CaO Nanorods Doped with Ce and Cellulose Nanocrystals: In Silico Molecular Docking Studies. ACS Omega, 2022, 7, 27503-27515.	1.6	8
450	Cooperativity between the Substrate and Ligand in Palladium-Catalyzed Allylic Alkylation Using 1-Aryl-1-propynes. Journal of Organic Chemistry, 2022, 87, 10366-10371.	1.7	1

#	Article	IF	Citations
451	Review on Recent Developments in Biocatalysts for Friedelâ€“Crafts Reactions. ACS Catalysis, 2022, 12, 10742-10763.	5.5	8
452	Hemin-catalyzed controlled oxidative cyanation of secondary amine for the synthesis of Î±-aminonitriles and Î±-iminonitriles. Molecular Catalysis, 2022, 529, 112576.	1.0	3
453	Incorporation of an Asymmetric Moâ^'Feâ^'S Cluster as an Artificial Cofactor into Nitrogenase. ChemBioChem, 0, , .	1.3	2
454	Peptide nanocatalysts. , 2023, , 173-206.		1
455	Engineered myoglobin as a catalyst for atom transfer radical cyclisation. Chemical Communications, 2022, 58, 10989-10992.	2.2	6
457	Ultrahighâ€Throughput Screening of an Artificial Metalloenzyme using Double Emulsions**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	3
458	Ultrahighâ€Throughput Screening of an Artificial Metalloenzyme using Double Emulsions. Angewandte Chemie, 0, , .	1.6	0
459	Synthetic Biology: Bottom-Up Assembly of Molecular Systems. Chemical Reviews, 2022, 122, 16294-16328.	23.0	32
460	Copper-Containing Artificial Polyenzymes as a Clickase for Bioorthogonal Chemistry. Bioconjugate Chemistry, 2022, 33, 1892-1899.	1.8	2
461	Recent Advances in Alkenyl sp‹sup›2‹/sup› Câ€“H and Câ€“F Bond Functionalizations: Scope, Mechanism, and Applications. Chemical Reviews, 2022, 122, 17479-17646.	23.0	78
462	The expanded landscape of metalloproteins by genetic incorporation of noncanonical amino acids. Bulletin of the Korean Chemical Society, 0, , .	1.0	1
463	Biomimetics for purple acid phosphatases: A historical perspective. Journal of Inorganic Biochemistry, 2023, 238, 112061.	1.5	4
464	A versatile artificial metalloenzyme scaffold enabling direct bioelectrocatalysis in solution. Science Advances, 2022, 8, .	4.7	2
465	Microalgae biorefinery: An integrated route for the sustainable production of high-value-added products. Energy Conversion and Management: X, 2022, 16, 100323.	0.9	17
466	Hydrolytic reactivity of novel copper(II) complexes with reduced N-salicylate threonine Schiff bases: distinguishable effects of various micelles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 655, 130279.	2.3	1
467	Therapeutic in vivo synthetic chemistry using an artificial metalloenzyme with glycosylated human serum albumin. Advances in Carbohydrate Chemistry and Biochemistry, 2022, , .	0.4	1
468	Tailoring Proteinâ€“Polymer Conjugates as Efficient Artificial Enzymes for Aqueous Asymmetric Aldol Reactions. ACS Synthetic Biology, 2022, 11, 3797-3804.	1.9	0
469	Design and directed evolution of noncanonical Î²-stereoselective metalloglycosidases. Nature Communications, 2022, 13, .	5.8	1

#	Article	IF	Citations
470	In vivo Biocatalytic Cascades Featuring an Artificialâ€Enzymeâ€Catalyzed Newâ€toâ€Nature Reaction. Angewandte Chemie, 0, , .	1.6	0
471	Biocatalytic Enantioselective Synthesis of Atropisomers. Accounts of Chemical Research, 2022, 55, 3362-3375.	7.6	20
472	In Vivo Biocatalytic Cascades Featuring an Artificialâ€Enzymeâ€Catalysed Newâ€toâ€Nature Reaction**. Angewandte Chemie - International Edition, 2023, 62, .	7.2	2
473	Catalysis toward metal-based substrates: A new prospect for inorganic chemistry. Chem Catalysis, 2023, 3, 100459.	2.9	2
474	Enzyme immobilization on nanomaterials and nanostructured supports. , 2023, , 231-247.		0
475	Artificial metalloenzyme with peroxidase-like activity based on periodic mesoporous organosilica with ionic-liquid framework. Microporous and Mesoporous Materials, 2023, 348, 112384.	2.2	0
476	Designing multifunctional biocatalytic cascade system by multi-enzyme co-immobilization on biopolymers and nanostructured materials. International Journal of Biological Macromolecules, 2023, 227, 535-550.	3.6	10
477	Genetically Encoded Phosphine Ligand for Metalloprotein Design. Journal of the American Chemical Society, 2022, 144, 22831-22837.	6.6	4
478	Design of Artificial Enzymes: Insights into Protein Scaffolds. ChemBioChem, 2023, 24, .	1.3	6
480	A Photoenzymatic Strategy forÂ Radicalâ€mediated Stereoselective Hydroalkylation with Diazo Compounds. Angewandte Chemie, 0, , .	1.6	0
481	Miniprotein-Based Artificial Retroaldolase. ACS Catalysis, 2022, 12, 15424-15430.	5.5	3
482	A Photoenzymatic Strategy for Radicalâ€Mediated Stereoselective Hydroalkylation with Diazo Compounds. Angewandte Chemie - International Edition, 2023, 62, .	7.2	14
483	Molecular Complementarity of Proteomimetic Materials for Targetâ€Specific Recognition and Recognitionâ€Mediated Complex Functions. Advanced Materials, 2023, 35, .	11.1	1
485	Tapping into abiological reaction chemistries in biocatalysis. Chem Catalysis, 2023, , 100493.	2.9	0
486	Chemoenzymatic Synthesis of Phenol Diarylamine Using Non-Heme Diiron N-Oxygenase. ACS Catalysis, 2023, 13, 1412-1417.	5.5	2
487	Mechanistic and structural characterization of an iridium-containing cytochrome reveals kinetically relevant cofactor dynamics. Nature Catalysis, 2023, 6, 39-51.	16.1	4
490	Spiers Memorial Lecture: Shielding the active site: a streptavidin superoxide-dismutase chimera as a host protein for asymmetric transfer hydrogenation. Faraday Discussions, 0, , .	1.6	1
491	Engineering an Oxygenâ€Binding Protein for Photocatalytic CO₂Reductions in Water. Angewandte Chemie, 2023, 135, .	1.6	2

#	Article	IF	Citations
492	How to Build a Metalloenzyme: Lessons from a Protein-Based Model of Acetyl Coenzyme A Synthase. Accounts of Chemical Research, 0, , .	7.6	1
493	A Bis(imidazole)-based cysteine labeling tool for metalloprotein assembly. Journal of Inorganic Biochemistry, 2023, 244, 112206.	1.5	0
494	The past, present, and future of artificial zinc finger proteins: design strategies and chemical and biological applications. Journal of Biological Inorganic Chemistry, 2023, 28, 249-261.	1.1	5
495	Classifying <scp>metalâ€binding</scp> sites with neural networks. Protein Science, 2023, 32, .	3.1	2
496	Reactivity Tuning of Metalâ€Free Artificial Photoenzymes through Binding Site Specific Bioconjugation. European Journal of Organic Chemistry, 2023, 26, .	1.2	3
497	Decarboxylative 1,4-Addition of Î±-Oxocarboxylic Acids with Michael Acceptors Enabled by Direct Excitation of Flavin-Dependent â€œEneâ€•Reductases. ACS Sustainable Chemistry and Engineering, 2023, 11, 4064-4072.	3.2	1
498	Unnaturally Distorted Hexagonal Protein Ring Alternatingly Reorganized from Two Distinct Chemically Modified Proteins. Bioconjugate Chemistry, 0, , .	1.8	0
499	Evolutionary Engineering of a Cp*Rh(III) Complex-Linked Artificial Metalloenzyme with a Chimeric Î²-Barrel Protein Scaffold. Journal of the American Chemical Society, 0, , .	6.6	1
500	An artificial metallolyase with pliable 2-His-1-carboxylate facial triad for stereoselective Michael addition. Chemical Science, 2023, 14, 3932-3937.	3.7	3
501	Enzyme Grafting with a Cofactor-Decorated Metal-Organic Capsule for Solar-to-Chemical Conversion. Journal of the American Chemical Society, 2023, 145, 6719-6729.	6.6	6
502	Engineering an Oxygenâ€Binding Protein for Photocatalytic CO₂Reductions in Water. Angewandte Chemie - International Edition, 2023, 62, .	7.2	2
503	Switching Type I/Type II Reactions by Turning a Photoredox Catalyst into a Photo-Driven Artificial Metalloenzyme. ACS Catalysis, 2023, 13, 4134-4141.	5.5	2
504	First and second sphere interactions accelerate non-native N-alkylation catalysis by the thermostable, methanol-tolerant B₁₂-dependent enzyme MtaC. Chemical Communications, 2023, 59, 4798-4801.	2.2	3
505	Iridium(<scp>iii</scp>) polypyridine artificial metalloenzymes with tunable photophysical properties: a new platform for visible light photocatalysis in aqueous solution. Dalton Transactions, 0, , .	1.6	1
506	Versatile Triphenylphosphine-Containing Polymeric Catalysts and Elucidation of Structureâ€“Function Relationships. Journal of the American Chemical Society, 2023, 145, 9686-9692.	6.6	4
517	Atomically Accurate Design of Metalloproteins with Predefined Coordination Geometries. Journal of the American Chemical Society, 0, , .	6.6	0
526	Catalyst-free mechanochemistry as a versatile tool in synthetic chemistry: a review. Green Chemistry, 2023, 25, 6120-6148.	4.6	2
537	Environmental remediation and protection. , 2023, , 451-476.		0

#	Article	IF	Citations
541	Converting a Cysteine-Rich Natively Noncatalytic Protein to an Artificial Hydrogenase. Chemical Communications, 0, , .	2.2	0
544	Synthesis and Application of Novel Chiral Cp Ligands in Transition Metal Catalysis. Topics in Organometallic Chemistry, 2023, , .	0.7	1
547	Novel enzymatic tools for Câ€“C bond formation through the development of new-to-nature biocatalysis. Advances in Catalysis, 2023, , .	0.1	0
558	A Co(TAML)-based artificial metalloenzyme for asymmetric radical-type oxygen atom transfer catalysis. Chemical Communications, 2023, 59, 14567-14570.	2.2	0
561	Biocatalytic reductive aminations with NAD(P)H-dependent enzymes: enzyme discovery, engineering and synthetic applications. Chemical Society Reviews, 2024, 53, 227-262.	18.7	3
567	%V_{Bur} index and steric maps: from predictive catalysis to machine learning. Chemical Society Reviews, 2024, 53, 853-882.	18.7	8
572	An artificial nickel chlorinase based on the biotinâ€“streptavidin technology. Chemical Communications, 2024, 60, 1944-1947.	2.2	0