Structural Basis of Biological N ₂ O Generat Reductase

Science

330, 1666-1670

DOI: 10.1126/science.1195591

Citation Report

#	Article	IF	Citations
2	Catalyzing NO to N ₂ O in the Nitrogen Cycle. Science, 2010, 330, 1632-1633.	6.0	32
3	Spectroscopic Characterization of Mononitrosyl Complexes in Hemeâ€"Nonheme Diiron Centers within the Myoglobin Scaffold (Fe_BMbs): Relevance to Denitrifying NO Reductase. Biochemistry, 2011, 50, 5939-5947.	1.2	35
4	NO and O2 reactivities of synthetic functional models of nitric oxide reductase and cytochrome c oxidase. Dalton Transactions, 2011, 40, 12633.	1.6	11
5	Quantitative Measurement of Direct Nitrous Oxide Emissions from Microalgae Cultivation. Environmental Science & Technology, 2011, 45, 9449-9456.	4.6	78
6	Low-Spin Heme b₃ in the Catalytic Center of Nitric Oxide Reductase from Pseudomonas nautica. Biochemistry, 2011, 50, 4251-4262.	1.2	34
7	Structural and Electronic Characterization of Non-Heme Fe(II)â€"Nitrosyls as Biomimetic Models of the Fe_B Center of Bacterial Nitric Oxide Reductase. Journal of the American Chemical Society, 2011, 133, 16714-16717.	6.6	88
8	Crystallization chaperone strategies for membrane proteins. Methods, 2011, 55, 293-302.	1.9	32
9	Crystallizing membrane proteins using lipidic bicelles. Methods, 2011, 55, 337-341.	1.9	112
10	Merging the best of two worlds: artificial metalloenzymes for enantioselective catalysis. Chemical Communications, 2011, 47, 8470.	2.2	101
11	Regulation and Function of Versatile Aerobic and Anaerobic Respiratory Metabolism in Pseudomonas aeruginosa. Frontiers in Microbiology, 2011, 2, 103.	1.5	251
12	A Bioinformatics Classifier and Database for Heme-Copper Oxygen Reductases. PLoS ONE, 2011, 6, e19117.	1.1	60
13	Electron transfer to the active site of the bacterial nitric oxide reductase is controlled by ligand binding to heme b3. Biochimica Et Biophysica Acta - Bioenergetics, 2011, 1807, 451-457.	0.5	15
14	Entrance of the proton pathway in cbb ₃ -type heme-copper oxidases. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17661-17666.	3.3	35
15	Biological sources and sinks of nitrous oxide and strategies to mitigate emissions. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 1157-1168.	1.8	399
16	Nitrous oxide production and consumption: regulation of gene expression by gas-sensitive transcription factors. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 1213-1225.	1.8	128
17	Structural basis for nitrous oxide generation by bacterial nitric oxide reductases. Philosophical Transactions of the Royal Society B: Biological Sciences, 2012, 367, 1195-1203.	1.8	47
18	Challenges and opportunities for mitigating nitrous oxide emissions from fertilized cropping systems. Frontiers in Ecology and the Environment, 2012, 10, 562-570.	1.9	220
20	Development of Highly Sensitive Nanosecond Time-Resolved IR Apparatus Applicable to Protein System in H2O. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S150.	0.5	0

#	Article	IF	Citations
22	Crystal structure of the alternative oxidases: New insights into the catalytic cycle. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S102-S103.	0.5	1
25	Nitric oxide coupling mediated by iron porphyrins: the Nâ€“N bond formation step is facilitated by electrons and a proton. Chemical Communications, 2012, 48, 9041.	2.2	14
26	Mechanism for N₂O Generation in Bacterial Nitric Oxide Reductase: A Quantum Chemical Study. Biochemistry, 2012, 51, 5173-5186.	1.2	81
27	Nitric Oxide Dioxygenation Reaction by Oxy-Coboglobin Models: In-situ Low-Temperature FTIR Characterization of Coordinated Peroxynitrite. Journal of the American Chemical Society, 2012, 134, 13861-13870.	6.6	51
28	Functional Importance of a Pair of Conserved Glutamic Acid Residues and of Ca²⁺ Binding in the cbb₃-Type Oxygen Reductases from Rhodobacter sphaeroides and Vibrio cholerae. Biochemistry, 2012, 51, 7290-7296.	1.2	8
29	Bacterial Adaptation of Respiration from Oxic to Microoxic and Anoxic Conditions: Redox Control. Antioxidants and Redox Signaling, 2012, 16, 819-852.	2.5	170
30	Structure and function of bacterial nitric oxide reductases. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1907-1913.	0.5	85
31	Proton transfer in the quinol-dependent nitric oxide reductase from Geobacillus stearothermophilus during reduction of oxygen. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 1914-1920.	0.5	11
32	In silico mutants of nitric oxide reductases provide insights into development of proton pathways in the heme-copper oxidase superfamily. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S150.	0.5	0
33	Structural basis for NO reduction by bacterial nitric oxide reductases. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S103.	0.5	0
35	Sub-micron scale distribution of electron transport compelxes in bacterial membranes, and its influence on electron transfer pathways. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, S149-S150.	0.5	0
36	Crystal structure of quinol-dependent nitric oxide reductase from Geobacillus stearothermophilus. Nature Structural and Molecular Biology, 2012, 19, 238-245.	3.6	106
37	Bacterial oxygen production in the dark. Frontiers in Microbiology, 2012, 3, 273.	1.5	119
38	Reductive Nâ€“N coupling of NO molecules on transition metal complexes leading to N2O. Coordination Chemistry Reviews, 2012, 256, 468-478.	9.5	49
39	A detailed investigation into the electronic structures of macrocyclic iron(II)-nitrosyl compounds and their similarities to ferrous heme-nitrosyls. Inorganica Chimica Acta, 2012, 380, 148-160.	1.2	9
40	The superfamily of hemeâ€“copper oxygen reductases: Types and evolutionary considerations. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 629-637.	0.5	163
41	Molecular structure and function of bacterial nitric oxide reductase. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 680-687.	0.5	52
42	Functional proton transfer pathways in the hemeâ€“copper oxidase superfamily. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 537-544.	0.5	54

#	Article	IF	Citations
43	Biogenesis of cbb3-type cytochrome c oxidase in Rhodobacter capsulatus. Biochimica Et Biophysica Acta - Bioenergetics, 2012, 1817, 898-910.	0.5	85
44	Metalloprotein Design. , 2013, , 565-593.		11
45	Structure and Bonding in Hemeâ€“Nitrosyl Complexes and Implications for Biology. Structure and Bonding, 2013, , 155-223.	1.0	48
46	The hemeâ€copper oxidase superfamily shares a Zn²⁺â€binding motif at the entrance to a proton pathway. FEBS Letters, 2013, 587, 770-774.	1.3	6
47	Reactivity of a nitrosyl ligand on dinuclear ruthenium hydrotris(pyrazolyl)borato complexes toward a NO molecule. Dalton Transactions, 2013, 42, 11626.	1.6	8
48	Mono- and dinuclear non-heme ironâ€“nitrosyl complexes: Models for key intermediates in bacterial nitric oxide reductases. Coordination Chemistry Reviews, 2013, 257, 244-259.	9.5	156
49	Energy transduction by respiratory metallo-enzymes: From molecular mechanism to cell physiology. Coordination Chemistry Reviews, 2013, 257, 64-80.	9.5	29
50	Nitrous oxide reductase. Coordination Chemistry Reviews, 2013, 257, 332-349.	9.5	151
51	Denitrification and aerobic respiration, hybrid electron transport chains and co-evolution. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 136-144.	0.5	319
52	Electrochemical behaviour of bacterial nitric oxide reductaseâ€”Evidence of low redox potential non-heme FeB gives new perspectives on the catalytic mechanism. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 233-238.	0.5	27
53	New concepts and aids to facilitate crystallization. Current Opinion in Structural Biology, 2013, 23, 409-416.	2.6	66
54	Sulfurâ€“nitrogenâ€“carbon removal of Pseudomonas sp. C27 under sulfide stress. Enzyme and Microbial Technology, 2013, 53, 6-12.	1.6	25
55	Crystal structures of nitric oxide reductases provide key insights into functional conversion of respiratory enzymes. IUBMB Life, 2013, 65, 217-226.	1.5	33
56	Diversity and evolution of bioenergetic systems involved in microbial nitrogen compound transformations. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 114-135.	0.5	300
57	Denitrifying Prokaryotes. , 2013, , 405-425.		54
58	Why is the reduction of NO in cytochrome c dependent nitric oxide reductase (cNOR) not electrogenic?. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 826-833.	0.5	25
59	Generation of functional antibodies for mammalian membrane protein crystallography. Current Opinion in Structural Biology, 2013, 23, 563-568.	2.6	38
60	Rational Heme Protein Design: All Roads Lead to Rome. Chemistry - an Asian Journal, 2013, 8, 2534-2544.	1.7	31

#	Article	IF	Citations
62	Electronic Structure and Biologically Relevant Reactivity of Low-Spin {FeNO}⁸ Porphyrin Model Complexes: New Insight from a Bis-Picket Fence Porphyrin. Inorganic Chemistry, 2013, 52, 7766-7780.	1.9	105
63	Unexpected weak magnetic exchange coupling between haem and non-haem iron in the catalytic site of nitric oxide reductase (NorBC) from Paracoccus denitrificans. Biochemical Journal, 2013, 451, 389-394.	1.7	6
64	Maturation of the cytochrome cd1 nitrite reductase NirS from Pseudomonas aeruginosa requires transient interactions between the three proteins NirS, NirN and NirF. Bioscience Reports, 2013, 33, .	1.1	26
65	Cloning and expression analysis of the gastric carcinoma-related gene, ELCOX3. Oncology Letters, 2013, 6, 1744-1748.	0.8	2
66	The Nitric-oxide Reductase from Paracoccus denitrificans Uses a Single Specific Proton Pathway. Journal of Biological Chemistry, 2013, 288, 30626-30635.	1.6	18
67	Characterization of the nitric oxide reductase from Thermus thermophilus. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12613-12618.	3.3	15
69	Nitrous Oxide (N₂O) production in axenic <i>Chlorella vulgaris</i> microalgae cultures: evidence, putative pathways, and potential environmental impacts. Biogeosciences, 2013, 10, 6737-6746.	1.3	50
70	Spectroscopic and Computational Study of a Nonheme Iron Nitrosyl Center in a Biosynthetic Model of Nitric Oxide Reductase. Angewandte Chemie - International Edition, 2014, 53, 2417-2421.	7.2	38
71	A structural and functional perspective on the evolution of the hemeâ€“copper oxidases. FEBS Letters, 2014, 588, 3787-3792.	1.3	26
72	Structures of reduced and ligandâ€bound nitric oxide reductase provide insights into functional differences in respiratory enzymes. Proteins: Structure, Function and Bioinformatics, 2014, 82, 1258-1271.	1.5	29
73	The evolution of respiratory O ₂ /NO reductases: an out-of-the-phylogenetic-box perspective. Journal of the Royal Society Interface, 2014, 11, 20140196.	1.5	38
74	A Third Subunit in Ancestral Cytochrome c -Dependent Nitric Oxide Reductases. Applied and Environmental Microbiology, 2014, 80, 4871-4878.	1.4	5
75	The Molecular Evolution of the Qo Motif. Genome Biology and Evolution, 2014, 6, 1894-1910.	1.1	37
76	Crystallization and preliminary X-ray diffraction analysis of the interleukin-3 alpha receptor bound to the Fab fragment of antibody CSL362. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 358-361.	0.4	8
77	Functional tuning and expanding of myoglobin by rational protein design. Science China Chemistry, 2014, 57, 346-355.	4.2	46
78	A decade of crystallization drops: Crystallization of the cbb₃ cytochrome c oxidase from Pseudomonas stutzeri. Protein Science, 2014, 23, 411-422.	3.1	7
79	Heme versus Non-Heme Iron-Nitroxyl {FeN(H)O}⁸ Complexes: Electronic Structure and Biologically Relevant Reactivity. Accounts of Chemical Research, 2014, 47, 1106-1116.	7.6	71
80	Stabilization of bare divalent Fe(II) cations in Al-rich beta zeolites for superior NO adsorption. Journal of Catalysis, 2014, 315, 1-5.	3.1	29

#	Article	IF	Citations
81	A density functional study on the pK_a of small polyprotic molecules. International Journal of Quantum Chemistry, 2014, 114, 1128-1134.	1.0	30
82	Transferable Denitrification Capability of Thermus thermophilus. Applied and Environmental Microbiology, 2014, 80, 19-28.	1.4	36
83	The Production of Nitrous Oxide by the Heme/Nonheme Diiron Center of Engineered Myoglobins (Fe_BMbs) Proceeds through a trans-Iron-Nitrosyl Dimer. Journal of the American Chemical Society, 2014, 136, 2420-2431.	6.6	48
84	Quantum Chemical Studies of Mechanisms for Metalloenzymes. Chemical Reviews, 2014, 114, 3601-3658.	23.0	494
85	Biochemical and Biophysical Characterization of the Two Isoforms of cbb3-Type Cytochrome c Oxidase from Pseudomonas stutzeri. Journal of Bacteriology, 2014, 196, 472-482.	1.0	20
86	Metalloprotein design using genetic code expansion. Chemical Society Reviews, 2014, 43, 6498-6510.	18.7	72
87	A QM/MM study of nitric oxide reductase-catalysed N₂O formation. Molecular Physics, 2014, 112, 393-397.	0.8	8
88	Zinc Oxide Nanoparticles Cause Inhibition of Microbial Denitrification by Affecting Transcriptional Regulation and Enzyme Activity. Environmental Science & Technology, 2014, 48, 13800-13807.	4.6	148
89	Dinuclear heme and non-heme metal complexes as bioinspired catalysts for oxidation reactions. New Journal of Chemistry, 2014, 38, 518-528.	1.4	7
91	Constructing new proton pathways in nitric oxide reductases. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, e102.	0.5	0
93	Conserved evolutionary units in the hemeâ€copper oxidase superfamily revealed by novel homologous protein families. Protein Science, 2014, 23, 1220-1234.	3.1	10
94	Determination of damage-free crystal structure of an X-rayâ€“sensitive protein using an XFEL. Nature Methods, 2014, 11, 734-736.	9.0	237
95	Steady-state kinetics with nitric oxide reductase (NOR): New considerations on substrate inhibition profile and catalytic mechanism. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 375-384.	0.5	23
96	Biochemistry and Theory of Proton-Coupled Electron Transfer. Chemical Reviews, 2014, 114, 3381-3465.	23.0	399
97	Characterization of quinol-dependent nitric oxide reductase from Geobacillus stearothermophilus: Enzymatic activity and active site structure. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 1019-1026.	0.5	12
98	Metalloenzyme design and engineering through strategic modifications of native protein scaffolds. Current Opinion in Chemical Biology, 2014, 19, 67-75.	2.8	88
99	Metalloproteins Containing Cytochrome, Ironâ€“Sulfur, or Copper Redox Centers. Chemical Reviews, 2014, 114, 4366-4469.	23.0	672
100	Isotopomeric characterization of nitrous oxide produced by reaction of enzymes extracted from nitrifying and denitrifying bacteria. Biogeosciences, 2014, 11, 2679-2689.	1.3	39

#	Article	IF	Citations
103	An electrogenic nitric oxide reductase. FEBS Letters, 2015, 589, 2050-2057.	1.3	46
104	Aerobic and Anaerobic Transformations in Estrogens and Nutrients in Swine Manure: Environmental Consequences. Agriculture (Switzerland), 2015, 5, 697-712.	1.4	6
105	NO Disproportionation at a Mononuclear Site-Isolated Fe²⁺ Center in Fe²⁺-MOF-5. Journal of the American Chemical Society, 2015, 137, 7495-7501.	6.6	96
106	The Crystal Structure of an Integral Membrane Fatty Acid Î±-Hydroxylase. Journal of Biological Chemistry, 2015, 290, 29820-29833.	1.6	52
107	NOx Linkage Isomerization in Metal Complexes. Advances in Inorganic Chemistry, 2015, , 1-86.	0.4	11
108	Metal Enzymes in â€œImpossibleâ€•Microorganisms Catalyzing the Anaerobic Oxidation of Ammonium and Methane. Metal Ions in Life Sciences, 2015, 15, 257-313.	2.8	16
109	New Perspectives on Proton Pumping in Cellular Respiration. Chemical Reviews, 2015, 115, 2196-2221.	23.0	238
110	Converting between the oxides of nitrogen using metalâ€“ligand coordination complexes. Chemical Society Reviews, 2015, 44, 6708-6722.	18.7	76
111	Crystal structure of human stearoylâ€“coenzyme A desaturase in complex with substrate. Nature Structural and Molecular Biology, 2015, 22, 581-585.	3.6	144
112	Structural Symmetry in Membrane Proteins. Annual Review of Biophysics, 2015, 44, 311-337.	4.5	127
113	Proton-Assisted Mechanism of NO Reduction on a Dinuclear Ruthenium Complex. Inorganic Chemistry, 2015, 54, 7181-7191.	1.9	19
114	Bacterial nitric oxide reductase: a mechanism revisited by an ONIOM (DFT:MM) study. Journal of Molecular Modeling, 2015, 21, 130.	0.8	7
115	Computational strategies for the design of new enzymatic functions. Archives of Biochemistry and Biophysics, 2015, 582, 68-79.	1.4	49
116	Nitric oxide metabolism and indole acetic acid biosynthesis cross-talk in Azospirillum brasilense SM. Research in Microbiology, 2015, 166, 174-185.	1.0	19
117	Generation of Recombinant Antibody Fragments for Membrane Protein Crystallization. Methods in Enzymology, 2015, 557, 201-218.	0.4	4
118	Preface for Small-Molecule Activation: From Biological Principles to Energy Applications. Part 2: Small Molecules Related to the Global Nitrogen Cycle. Inorganic Chemistry, 2015, 54, 9229-9233.	1.9	20
119	Recent Advances in Biosynthetic Modeling of Nitric Oxide Reductases and Insights Gained from Nuclear Resonance Vibrational and Other Spectroscopic Studies. Inorganic Chemistry, 2015, 54, 9317-9329.	1.9	21
120	Theoretical investigation of novel two-step decomposition of nitric oxide over Fe(II) ion-exchanged zeolites using DFT calculations. Catalysis Today, 2015, 242, 343-350.	2.2	16

#	Article	IF	Citations
121	Arbuscular mycorrhiza and nitrogen: implications for individual plants through to ecosystems. Plant and Soil, 2015, 386, 1-19.	1.8	369
122	Conversion of Nitric Oxide into Nitrous Oxide as Triggered by the Polarization of Coordinated NO by Hydrogen Bonding. Angewandte Chemie - International Edition, 2016, 55, 5190-5194.	7.2	30
123	A trans-Hyponitrite Intermediate in the Reductive Coupling and Deoxygenation of Nitric Oxide by a Tricopperâ€“Lewis Acid Complex. Journal of the American Chemical Society, 2016, 138, 5008-5011.	6.6	25
124	A bridged di-iron porphyrin hyponitrite complex as a model for biological N2O production from hyponitrite. Nitric Oxide - Biology and Chemistry, 2016, 52, 16-20.	1.2	9
125	Structure of the Membrane-intrinsic Nitric Oxide Reductase from Roseobacter denitrificans. Biochemistry, 2016, 55, 3198-3203.	1.2	13
126	Effect of Outer-Sphere Side Chain Substitutions on the Fate of the trans Ironâ€“Nitrosyl Dimer in Heme/Nonheme Engineered Myoglobins (Fe_BMbs): Insights into the Mechanism of Denitrifying NO Reductases. Biochemistry, 2016, 55, 2091-2099.	1.2	16
127	Mechanistic Insight into the Nitric Oxide Dioxygenation Reaction of Nonheme Iron(III)â€“Superoxo and Manganese(IV)â€“Peroxo Complexes. Angewandte Chemie, 2016, 128, 12591-12595.	1.6	5
128	Mechanistic Insight into the Nitric Oxide Dioxygenation Reaction of Nonheme Iron(III)â€“Superoxo and Manganese(IV)â€“Peroxo Complexes. Angewandte Chemie - International Edition, 2016, 55, 12403-12407.	7.2	23
129	The unusual redox properties of C-type oxidases. Biochimica Et Biophysica Acta - Bioenergetics, 2016, 1857, 1892-1899.	0.5	27
130	Distinct roles of a tyrosine-associated hydrogen-bond network in fine-tuning the structure and function of heme proteins: two cases designed for myoglobin. Molecular BioSystems, 2016, 12, 3139-3145.	2.9	7
131	Helix perturbations in membrane proteins assist in inter-helical interactions and optimal helix positioning in the bilayer. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 2804-2817.	1.4	9
132	Nitric oxide coupling to generate N2O promoted by a single-heme system as examined by density functional theory. Nitric Oxide - Biology and Chemistry, 2016, 60, 69-75.	1.2	2
133	Conversion of Nitric Oxide into Nitrous Oxide as Triggered by the Polarization of Coordinated NO by Hydrogen Bonding. Angewandte Chemie, 2016, 128, 5276-5280.	1.6	4
134	Nitrous Oxide Metabolism in Nitrate-Reducing Bacteria. Advances in Microbial Physiology, 2016, 68, 353-432.	1.0	79
135	Improved free energy profile for reduction of NO in cytochrome c dependent nitric oxide reductase (cNOR). Journal of Computational Chemistry, 2016, 37, 1810-1818.	1.5	22
136	The dual function of flavodiiron proteins: oxygen and/or nitric oxide reductases. Journal of Biological Inorganic Chemistry, 2016, 21, 39-52.	1.1	55
137	Fresh insight to functioning of selected enzymes of the nitrogen cycle. Current Opinion in Chemical Biology, 2016, 31, 103-112.	2.8	13
138	X-ray Structure and Properties of the Ferrous Octaethylporphyrin Nitroxyl Complex. Inorganic Chemistry, 2016, 55, 2070-2075.	1.9	27

#	Article	IF	Citations
139	Protein Network of the Pseudomonas aeruginosa Denitrification Apparatus. Journal of Bacteriology, 2016, 198, 1401-1413.	1.0	60
140	Determining Roles of Accessory Genes in Denitrification by Mutant Fitness Analyses. Applied and Environmental Microbiology, 2016, 82, 51-61.	1.4	31
141	Isotopocule analysis of biologically produced nitrous oxide in various environments. Mass Spectrometry Reviews, 2017, 36, 135-160.	2.8	126
142	Heterologous expression of Halomonas halodenitrificans nitric oxide reductase and its N-terminally truncated NorC subunit in Escherichia coli. Journal of Inorganic Biochemistry, 2017, 169, 61-67.	1.5	5
143	Genome-Resolved Meta-Omics Ties Microbial Dynamics to Process Performance in Biotechnology for Thiocyanate Degradation. Environmental Science & Technology, 2017, 51, 2944-2953.	4.6	51
144	Insights into proton translocation in cbb 3 oxidase from MD simulations. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 396-406.	0.5	5
145	Understanding the choice of copper by heme-copper oxidase using biosynthetic models in myoglobin. Inorganic Chemistry Frontiers, 2017, 4, 918-920.	3.0	10
146	Bioinformatics evaluation of novel ribosome display-selected single chain variable fragment (scFv) structure with factor H binding protein through docking. Journal of Theoretical and Computational Chemistry, 2017, 16, 1750021.	1.8	6
147	Rational design of metalloenzymes: From single to multiple active sites. Coordination Chemistry Reviews, 2017, 336, 1-27.	9.5	122
148	Can Reduction of NO to N₂O in Cytochrome c Dependent Nitric Oxide Reductase Proceed through a Trans-Mechanism?. Biochemistry, 2017, 56, 120-131.	1.2	43
149	Dynamics of nitric oxide controlled by protein complex in bacterial system. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9888-9893.	3.3	35
150	Insights into the recognition and electron transfer steps in nitric oxide reductase from Marinobacter hydrocarbonoclasticus. Journal of Inorganic Biochemistry, 2017, 177, 402-411.	1.5	11
151	Analysis of multiple haloarchaeal genomes suggests that the quinoneâ€dependent respiratory nitric oxide reductase is an important source of nitrous oxide in hypersaline environments. Environmental Microbiology Reports, 2017, 9, 788-796.	1.0	19
152	Modulation of protein function in membrane mimetics: Characterization of P. denitrificans cNOR in nanodiscs or liposomes. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 1951-1961.	1.4	6
153	The mechanism for oxygen reduction in cytochrome c dependent nitric oxide reductase (cNOR) as obtained from a combination of theoretical and experimental results. Biochimica Et Biophysica Acta - Bioenergetics, 2017, 1858, 884-894.	0.5	12
155	Molecular insight into the dynamic central metabolic pathways of Achromobacter xylosoxidans CF-S36 during heterotrophic nitrogen removal processes. Journal of Bioscience and Bioengineering, 2017, 123, 46-55.	1.1	26
156	Microbiology and Biochemistry ofÂAnaerobic Treatment. , 2017, , 231-259.		0
157	The Biocoordination Chemistry of Nitric Oxide With Heme and Nonheme Iron Centers. , 2017, , .		3

#	Article	IF	Citations
158	Oxidation catalysis by iron and manganese porphyrins within enzymeâ€like cages. Biopolymers, 2018, 109, e23107.	1.2	40
159	Pseudomonas aeruginosa overexpression system of nitric oxide reductase for in vivo and in vitro mutational analyses. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 333-341.	0.5	5
160	The microbial nitrogen-cycling network. Nature Reviews Microbiology, 2018, 16, 263-276.	13.6	2,269
161	The pH dependency of Nâ€converting enzymatic processes, pathways and microbes: effect on net N₂O production. Environmental Microbiology, 2018, 20, 1623-1640.	1.8	80
162	Oxygen Activation and Energy Conservation by Cytochrome c Oxidase. Chemical Reviews, 2018, 118, 2469-2490.	23.0	294
163	De Novo Design of Tetranuclear Transition Metal Clusters Stabilized by Hydrogen-Bonded Networks in Helical Bundles. Journal of the American Chemical Society, 2018, 140, 1294-1304.	6.6	32
164	Arbuscular mycorrhizal fungi reduce nitrous oxide emissions from N₂O hotspots. New Phytologist, 2018, 220, 1285-1295.	3.5	113
165	Diversifying Anaerobic Respiration Strategies to Compete in the Rhizosphere. Frontiers in Environmental Science, 2018, 6, .	1.5	33
166	Nitric Oxide Reductase Activity in Hemeâ€“Nonheme Binuclear Engineered Myoglobins through a One-Electron Reduction Cycle. Journal of the American Chemical Society, 2018, 140, 17389-17393.	6.6	15
167	Reversing nitrogen fixation. Nature Reviews Chemistry, 2018, 2, 278-289.	13.8	157
168	Mechanisms for enzymatic reduction of nitric oxide to nitrous oxide - A comparison between nitric oxide reductase and cytochrome c oxidase. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1223-1234.	0.5	20
169	Redox Activity of Cytochromes from the Respiratory Chain. , 2018, , 451-469.		1
170	Synthetic Fe/Cu Complexes: Toward Understanding Heme-Copper Oxidase Structure and Function. Chemical Reviews, 2018, 118, 10840-11022.	23.0	166
171	Heme redox potentials hold the key to reactivity differences between nitric oxide reductase and heme-copper oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6195-6200.	3.3	41
172	Continuous measurements of nitrous oxide isotopomers during incubation experiments. Biogeosciences, 2018, 15, 767-780.	1.3	30
173	Upon further analysis, neither cytochrome c554 from Nitrosomonas europaea nor its F156A variant display NO reductase activity, though both proteins bind nitric oxide reversibly. Journal of Biological Inorganic Chemistry, 2018, 23, 861-878.	1.1	5
174	Characterization of the quinol-dependent nitric oxide reductase from the pathogen Neisseria meningitidis, an electrogenic enzyme. Scientific Reports, 2018, 8, 3637.	1.6	22
175	Surface-Enhanced Infrared Absorption Spectroscopy of Bacterial Nitric Oxide Reductase under Electrochemical Control Using a Vibrational Probe of Carbon Monoxide. Journal of Physical Chemistry Letters, 2018, 9, 5196-5200.	2.1	17

#	Article	IF	Citations
176	O₂ Reduction by Biosynthetic Models of Cytochrome c Oxidase: Insights into Role of Proton Transfer Residues from Perturbed Active Sites Models of CcO. ACS Catalysis, 2018, 8, 8915-8924.	5.5	28
177	Physiological and transcriptomic insights into the cold adaptation mechanism of a novel heterotrophic nitrifying and aerobic denitrifying-like bacterium Pseudomonas indoloxydans YY-1. International Biodeterioration and Biodegradation, 2018, 134, 16-24.	1.9	16
178	The insertion of the non-heme FeB cofactor into nitric oxide reductase from P. denitrificans depends on NorQ and NorD accessory proteins. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 1051-1058.	0.5	18
179	Bacterial denitrifying nitric oxide reductases and aerobic respiratory terminal oxidases use similar delivery pathways for their molecular substrates. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 712-724.	0.5	10
180	Nitric Oxide, an Old Molecule With Noble Functions in Pseudomonas aeruginosa Biology. Advances in Microbial Physiology, 2018, 72, 117-145.	1.0	19
181	Hydrogen bond assisted photoinduced intramolecular electron transfer and proton coupled electron transfer in an ultrafast time domain using a ruthenium-anthraquinone dyadâ€. Photochemical and Photobiological Sciences, 2019, 18, 2430-2441.	1.6	12
182	Mononuclear, Nonheme, High-Spin {FeNO}7/8 Complexes Supported by a Sterically Encumbered N4S-Thioether Ligand. Inorganic Chemistry, 2019, 58, 9576-9580.	1.9	10
183	Rational Design of Artificial Metalloproteins and Metalloenzymes with Metal Clusters. Molecules, 2019, 24, 2743.	1.7	29
184	Copper(I) Complex Mediated Nitric Oxide Reductive Coupling: Ligand Hydrogen Bonding Derived Proton Transfer Promotes N₂O_(g) Release. Journal of the American Chemical Society, 2019, 141, 17962-17967.	6.6	20
185	Response of N2O production rate to ocean acidification in the western North Pacific. Nature Climate Change, 2019, 9, 954-958.	8.1	31
186	Structures and Properties of Dinitrosyl Iron and Cobalt Complexes Ligated by Bis(3,5-diisopropyl-1-pyrazolyl)methane. Inorganics, 2019, 7, 116.	1.2	5
187	Activation of Non-Heme Iron-Nitrosyl Complexes: Turning Up the Heat. ACS Catalysis, 2019, 9, 10499-10518.	5.5	30
188	Biological nitrogen removal from wastewater using sulphur-driven autotrophic denitrification. Applied Microbiology and Biotechnology, 2019, 103, 6023-6039.	1.7	99
189	Removal of nutrients and emission of nitrous oxide during simultaneous nitrification, denitrification and phosphorus removal process with metal ions addition. International Biodeterioration and Biodegradation, 2019, 142, 143-150.	1.9	15
190	The anti-sigma factor MucA of Pseudomonas aeruginosa: Dramatic differences of a mucA22 vs. a Î”mucA mutant in anaerobic acidified nitrite sensitivity of planktonic and biofilm bacteria in vitro and during chronic murine lung infection. PLoS ONE, 2019, 14, e0216401.	1.1	10
191	Disturbances of electron production, transport and utilization caused by chlorothalonil are responsible for the deterioration of soil denitrification. Soil Biology and Biochemistry, 2019, 134, 100-107.	4.2	21
192	Stable Ferrous Mononitroxyl {FeNO}8 Complex with a Hindered Hydrotris(pyrazolyl)borate Coligand: Structure, Spectroscopic Characterization, and Reactivity Toward NO and O2. Inorganic Chemistry, 2019, 58, 4059-4062.	1.9	19
193	Tailor made iron porphyrins for investigating axial ligand and distal environment contributions to electronic structure and reactivity. Coordination Chemistry Reviews, 2019, 386, 183-208.	9.5	29

#	Article	IF	Citations
194	Biosensor for direct bioelectrocatalysis detection of nitric oxide using nitric oxide reductase incorporated in carboxylated single-walled carbon nanotubes/lipidic 3 bilayer nanocomposite. Bioelectrochemistry, 2019, 127, 76-86.	2.4	26
195	The phenomenon of UV-Vis spectroscopic changing due the binding of CO to the nitric oxide reductase from Bacillus Azotoformans. IOP Conference Series: Materials Science and Engineering, 2019, 509, 012141.	0.3	0
196	Dimeric structures of quinol-dependent nitric oxide reductases (qNORs) revealed by cryoâ€“electron microscopy. Science Advances, 2019, 5, eaax1803.	4.7	14
197	Monomeric structure of an active form of bovine cytochrome c oxidase. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19945-19951.	3.3	36
198	Functional interactions between nitrite reductase and nitric oxide reductase from Paracoccus denitrificans. Scientific Reports, 2019, 9, 17234.	1.6	7
199	(Hydr)oxo-bridged heme complexes: From structure to reactivity. Journal of Porphyrins and Phthalocyanines, 2019, 23, 1286-1307.	0.4	4
200	Structural diversity and flexibility of diabodies. Methods, 2019, 154, 136-142.	1.9	17
201	Combined genome-centric metagenomics and stable isotope probing unveils the microbial pathways of aerobic methane oxidation coupled to denitrification process under hypoxic conditions. Bioresource Technology, 2020, 318, 124043.	4.8	11
202	Activation of O₂and NO in heme-copper oxidases â€“ mechanistic insights from computational modelling. Chemical Society Reviews, 2020, 49, 7301-7330.	18.7	15
203	Mimochrome, a metalloporphyrinâ€based catalytic Swiss knifeâ€. Biotechnology and Applied Biochemistry, 2020, 67, 495-515.	1.4	26
204	Redox Properties of the Membrane Proteins from the Respiratory Chain. Chemical Reviews, 2020, 120, 10244-10297.	23.0	33
205	A guide to membrane protein Xâ€ray crystallography. FEBS Journal, 2021, 288, 5788-5804.	2.2	50
206	A critical review of aerobic denitrification: Insights into the intracellular electron transfer. Science of the Total Environment, 2020, 731, 139080.	3.9	138
207	Benzylsuccinate Synthase is Post-Transcriptionally Regulated in the Toluene-Degrading Denitrifier Magnetospirillum sp. Strain 15-1. Microorganisms, 2020, 8, 681.	1.6	6
208	Structure and Mechanism of a Unique Diiron Center in Mammalian Stearoyl-CoA Desaturase. Journal of Molecular Biology, 2020, 432, 5152-5161.	2.0	35
209	Timing of NO Binding and Protonation in the Catalytic Reaction of Bacterial Nitric Oxide Reductase as Established by Time-Resolved Spectroscopy. Bulletin of the Chemical Society of Japan, 2020, 93, 825-833.	2.0	15
210	Visualizing the protons in a metalloenzyme electron proton transfer pathway. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6484-6490.	3.3	22
211	Comparative differential cuproproteomes of Rhodobacter capsulatus reveal novel copper homeostasis related proteins. Metallomics, 2020, 12, 572-591.	1.0	12

#	Article	IF	Citations
212	Biological and Bioinspired Inorganic Nâ€“N Bond-Forming Reactions. Chemical Reviews, 2020, 120, 5252-5307.	23.0	48
213	Transcriptomic Response of Nitrosomonas europaea Transitioned from Ammonia- to Oxygen-Limited Steady-State Growth. MSystems, 2020, 5, .	1.7	33
214	Heterologous expression and functional study of nitric oxide reductase catalytic reduction peptide from Achromobacter denitrificans strain TB. Chemosphere, 2020, 253, 126739.	4.2	8
215	Adsorption and valence electronic states of nitric oxide on metal surfaces. Surface Science Reports, 2021, 76, 100500.	3.8	14
216	Bacterial nitric oxide metabolism: Recent insights in rhizobia. Advances in Microbial Physiology, 2021, 78, 259-315.	1.0	13
217	Architecture of bacterial respiratory chains. Nature Reviews Microbiology, 2021, 19, 319-330.	13.6	92
218	Mechanisms of Energy Transduction by Charge Translocating Membrane Proteins. Chemical Reviews, 2021, 121, 1804-1844.	23.0	30
219	Reactivity and Structure of Complexes of Small Molecules: Nitric Oxide. , 2021, , 806-874.		5
220	The importance of exact exchangeâ€”A methodological investigation of NO reduction in hemeâ€“copper oxidases. Journal of Chemical Physics, 2021, 154, 055103.	1.2	8
221	NO Dynamics in Microbial Denitrification System. Chemistry Letters, 2021, 50, 280-288.	0.7	6
222	Spectroscopic Evidence of Hyponitrite Radical Intermediate in NO Disproportionation at a MOFâ€Supported Mononuclear Copper Site. Angewandte Chemie - International Edition, 2021, 60, 7845-7850.	7.2	11
223	Impact of membrane protein-lipid interactions on formation of bilayer lipid membranes on SAM-modified gold electrode. Electrochimica Acta, 2021, 373, 137888.	2.6	8
224	Spectroscopic Evidence of Hyponitrite Radical Intermediate in NO Disproportionation at a MOFâ€Supported Mononuclear Copper Site. Angewandte Chemie, 2021, 133, 7924-7929.	1.6	4
225	Small-Molecule Tunnels in Metalloenzymes Viewed as Extensions of the Active Site. Accounts of Chemical Research, 2021, 54, 2185-2195.	7.6	28
226	Transcriptional and Post-transcriptional Control of the Nitrate Respiration in Bacteria. Frontiers in Molecular Biosciences, 2021, 8, 667758.	1.6	33
227	NO Reduction to N₂O Triggered by a Dinuclear Dinitrosyl Iron Complex via the Associated Pathways of Hyponitrite Formation and NO Disproportionation. Inorganic Chemistry, 2021, 60, 15874-15889.	1.9	10
228	Fungal denitrification revisited â€“ Recent advancements and future opportunities. Soil Biology and Biochemistry, 2021, 157, 108250.	4.2	49
229	Arbuscular mycorrhizal fungi potentially regulate N2O emissions from agricultural soils via altered expression of denitrification genes. Science of the Total Environment, 2021, 774, 145133.	3.9	27

#	Article	IF	Citations
230	Effect of metal and metal oxide engineered nano particles on nitrogen bio-conversion and its mechanism: A review. Chemosphere, 2022, 287, 132097.	4.2	13
231	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
232	Arbuscular Mycorrhiza in Sustainable Plant Nitrogen Nutrition: Mechanisms and Impact. Soil Biology, 2021, , 407-436.	0.6	1
233	Nickel-mediated Nâ€“N bond formation and N₂O liberation via nitrogen oxyanion reduction. Chemical Science, 2021, 12, 10664-10672.	3.7	8
234	Heterotrophic Denitrification and Paracoccus spp. as Tools for Bioremediation. , 2016, , 209-226.		1
235	Rational Design of an Artificial Nuclease by Engineering a Hetero-Dinuclear Center of Mg-Heme in Myoglobin. ACS Catalysis, 2020, 10, 14359-14365.	5.5	17
236	Oxygen Reduction and Proton Translocation by Respiratory Cytochrome c Oxidase. 2-Oxoglutarate-Dependent Oxygenases, 2018, , 311-333.	0.8	1
237	Structure and Function of Membrane-bound Bacterial Nitric Oxide Reductases. 2-Oxoglutarate-Dependent Oxygenases, 2018, , 334-350.	0.8	1
238	The active form of quinol-dependent nitric oxide reductase from Neisseria meningitidis is a dimer. IUCrJ, 2020, 7, 404-415.	1.0	10
239	Molecular Dynamics Simulations Reveal Proton Transfer Pathways in Cytochrome C-Dependent Nitric Oxide Reductase. PLoS Computational Biology, 2012, 8, e1002674.	1.5	27
240	Nitrous Oxide Production in Sputum from Cystic Fibrosis Patients with Chronic Pseudomonas aeruginosa Lung Infection. PLoS ONE, 2014, 9, e84353.	1.1	86
241	Investigating the Proton Donor in the NO Reductase from Paracoccus denitrificans. PLoS ONE, 2016, 11, e0152745.	1.1	11
244	Cytochrome cM Is Probably a Membrane Protein Similar to the C Subunit of the Bacterial Nitric Oxide Reductase. Applied Sciences (Switzerland), 2021, 11, 9396.	1.3	1
246	Nitric Oxide is a Bioproduct in Prokaryotes. , 2012, , 19-46.		0
247	Novel clear native electrophoresis using modified CBB G-250. Seibutsu Butsuri Kagaku, 2014, 58, 18-20.	0.1	0
248	NO Reduction by Co-adsorbed Water Molecules on Cu(110). Springer Theses, 2017, , 63-72.	0.0	0
249	Mechanisms of Nitric Oxide Sensing and Detoxification by Bacterial Hemoproteins. 2-Oxoglutarate-Dependent Oxygenases, 2018, , 351-369.	0.8	0
254	Functional Studies on Hemoproteins and Heme-enzymes Based on Their Molecular Structures. Bulletin of Japan Society of Coordination Chemistry, 2020, 75, 51-56.	0.1	0

#	Article	IF	Citations
255	A Narrative Review on Oral and Periodontal Bacteria Microbiota Photobiomodulation, through Visible and Near-Infrared Light: From the Origins to Modern Therapies. International Journal of Molecular Sciences, 2022, 23, 1372.	1.8	19
256	Theoretical Modeling of Redox Potentials of Biomolecules. Molecules, 2022, 27, 1077.	1.7	9
257	The Biologically Relevant Coordination Chemistry of Iron and Nitric Oxide: Electronic Structure and Reactivity. Chemical Reviews, 2021, 121, 14682-14905.	23.0	109
258	Cultivation and metabolic insights of an uncultured clade, Bacteroidetes <scp>VC2</scp>.1 Bac22 (Candidatus Sulfidibacteriales ord. nov.), from deepâ€sea hydrothermal vents. Environmental Microbiology, 2022, 24, 2484-2501.	1.8	7
259	Disproportionation of Nitric Oxide at a Surfaceâ€Bound Nickel Porphyrinoid. Angewandte Chemie - International Edition, 2022, 61, .	7.2	4
260	Management Strategies to Mitigate N2O Emissions in Agriculture. Life, 2022, 12, 439.	1.1	37
261	Disproportionation of Nitric Oxide at a Surfaceâ€Bound Nickel Porphyrinoid. Angewandte Chemie, 0, , .	1.6	0
263	Mechanism of substrate inhibition in cytochrome-c dependent NO reductases from denitrifying bacteria (cNORs). Journal of Inorganic Biochemistry, 2022, 231, 111781.	1.5	1
264	X-ray Crystal Structures of Methane Monooxygenase Hydroxylase Complexes with Variants of Its Regulatory Component: Correlations with Altered Reaction Cycle Dynamics. Biochemistry, 2022, 61, 21-33.	1.2	2
265	A Commensal Streptococcus Dysregulates the Pseudomonas aeruginosa Nitrosative Stress Response. Frontiers in Cellular and Infection Microbiology, 2022, 12, .	1.8	3
266	Clumped isotope signatures of nitrous oxide formed by bacterial denitrification. Geochimica Et Cosmochimica Acta, 2022, 328, 120-129.	1.6	1
268	Proximal and distal mechanisms through which arbuscular mycorrhizal associations alter terrestrial denitrification. Plant and Soil, 2022, 476, 315-336.	1.8	7
269	Incomplete denitrification phenotypes in diverse Thermus species from diverse geothermal spring sediments and adjacent soils in southwest China. Extremophiles, 2022, 26, .	0.9	4
270	Advances in Research Into and Applications of Heterotrophic Nitrifying and Aerobic Denitrifying Microorganisms. Frontiers in Environmental Science, 0, 10, .	1.5	9
271	Exploring the secrets of hyphosphere of arbuscular mycorrhizal fungi: processes and ecological functions. Plant and Soil, 2022, 481, 1-22.	1.8	35
272	Evolution of quinol oxidation within the hemeâ€'copper oxidoreductase superfamily. Biochimica Et Biophysica Acta - Bioenergetics, 2022, 1863, 148907.	0.5	11
273	An aerobic denitrifier Pseudomonas stutzeri Y23 from an oil reservoir and its heterotrophic denitrification performance in laboratory-scale sequencing batch reactors. International Biodeterioration and Biodegradation, 2022, 174, 105471.	1.9	6
274	DNA Methyltransferase Regulates Nitric Oxide Homeostasis and Virulence in a Chronically Adapted Pseudomonas aeruginosa Strain. MSystems, 2022, 7, .	1.7	10

#	Article	IF	Citations
275	Membrane fatty acid desaturase: biosynthesis, mechanism, and architecture. Applied Microbiology and Biotechnology, 0, , .	1.7	5
276	Advances in X-ray crystallography methods to study structural dynamics of macromolecules. , 2023, , 309-355.		5
279	Reductive NO Coupling at Dicopper Center via a [Cu₂(NO)₂]²⁺ Diamond-Core Intermediate. Journal of the American Chemical Society, 2022, 144, 22633-22640.	6.6	2
280	Trapping of a Mononitrosyl Nonheme Intermediate of Nitric Oxide Reductase by Cryo-Photolysis of Caged Nitric Oxide. Journal of Physical Chemistry B, 2023, 127, 846-854.	1.2	2
281	Municipal wastewater contains antibiotic treatment using O2 transfer membrane based biofilm reactor: Interaction between regular pollutants metabolism and sulfamethoxazole degradation. Science of the Total Environment, 2023, 879, 163060.	3.9	7
282	Calcium-bound structure of bovine cytochrome c oxidase. Biochimica Et Biophysica Acta - Bioenergetics, 2023, 1864, 148956.	0.5	0
283	Insights into the structure-function relationship of the NorQ/NorD chaperones from Paracoccus denitrificans reveal shared principles of interacting MoxR AAA+/VWA domain proteins. BMC Biology, 2023, 21, .	1.7	0
284	Lowâ€Valent Manganese Atoms Stabilized on Ceria for Nitrous Oxide Synthesis. Advanced Materials, 2023, 35, .	11.1	4
288	Denitrifying Woodchip Bioreactors: A Microbial Solution for Nitrate in Agricultural Wastewaterâ€”A Review. Journal of Microbiology, 0, , .	1.3	0