Yilin Hu

List of Publications by Year
in descending order

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123	5,968	66343	82547
papers	citations	42 h-index	72 g-index

132	132	132	2592
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	X-ray Emission Spectroscopy Evidences a Central Carbon in the Nitrogenase Iron-Molybdenum Cofactor. Science, 2011, 334, 974-977.	12.6	774
2	Vanadium Nitrogenase Reduces CO. Science, 2010, 329, 642-642.	12.6	259
3	Radical SAM-Dependent Carbon Insertion into the Nitrogenase M-Cluster. Science, 2012, 337, 1672-1675.	12.6	244
4	Extending the Carbon Chain: Hydrocarbon Formation Catalyzed by Vanadium/Molybdenum Nitrogenases. Science, 2011, 333, 753-755.	12.6	232
5	Reactivity, Mechanism, and Assembly of the Alternative Nitrogenases. Chemical Reviews, 2020, 120, 5107-5157.	47.7	128
6	Biosynthesis of Nitrogenase Metalloclusters. Chemical Reviews, 2014, 114, 4063-4080.	47.7	122
7	Structural evidence for a dynamic metallocofactor during N ₂ reduction by Mo-nitrogenase. Science, 2020, 368, 1381-1385.	12.6	120
8	Identification of a nitrogenase FeMo cofactor precursor on NifEN complex. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 3236-3241.	7.1	119
9	Structure of Precursor-Bound NifEN: A Nitrogenase FeMo Cofactor Maturase/Insertase. Science, 2011, 331, 91-94.	12.6	115
10	Vanadium nitrogenase: A two-hit wonder?. Dalton Transactions, 2012, 41, 1118-1127.	3.3	110
11	Unique features of the nitrogenase VFe protein from Azotobacter vinelandii. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9209-9214.	7.1	108
12	Structural insights into a protein-bound iron-molybdenum cofactor precursor. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 1238-1243.	7.1	104
13	FeMo cofactor maturation on NifEN. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17119-17124.	7.1	104
14	Biosynthesis of the Metalloclusters of Nitrogenases. Annual Review of Biochemistry, 2016, 85, 455-483.	11.1	104
15	X-ray Spectroscopic Observation of an Interstitial Carbide in NifEN-Bound FeMoco Precursor. Journal of the American Chemical Society, 2013, 135, 610-612.	13.7	98
16	Nitrogenase and homologs. Journal of Biological Inorganic Chemistry, 2015, 20, 435-445.	2.6	98
17	Assembly of Nitrogenase MoFe Protein. Biochemistry, 2008, 47, 3973-3981.	2.5	95
18	Characterization of Isolated Nitrogenase FeVco. Journal of the American Chemical Society, 2010, 132, 12612-12618.	13.7	92

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19	Nitrogenase Fe protein: A molybdate/homocitrate insertase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 17125-17130.	7.1	82
20	P-cluster maturation on nitrogenase MoFe protein. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10424-10429.	7.1	81
21	NifEN-B complex of Azotobacter vinelandii is fully functional in nitrogenase FeMo cofactor assembly. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8623-8627.	7.1	73
22	The FeMoco-deficient MoFe Protein Produced by a nifHDeletion Strain of Azotobacter vinelandii Shows Unusual P-cluster Features. Journal of Biological Chemistry, 2002, 277, 23469-23476.	3.4	71
23	Differential Reduction of CO₂ by Molybdenum and Vanadium Nitrogenases. Angewandte Chemie - International Edition, 2014, 53, 11543-11546.	13.8	71
24	Second and Outer Coordination Sphere Effects in Nitrogenase, Hydrogenase, Formate Dehydrogenase, and CO Dehydrogenase. Chemical Reviews, 2022, 122, 11900-11973.	47.7	70
25	Biosynthesis of nitrogenase FeMoco. Coordination Chemistry Reviews, 2011, 255, 1218-1224.	18.8	68
26	Refining the pathway of carbide insertion into the nitrogenase M-cluster. Nature Communications, 2015, 6, 8034.	12.8	66
27	Nitrogenase assembly. Biochimica Et Biophysica Acta - Bioenergetics, 2013, 1827, 1112-1122.	1.0	65
28	ATPâ€Independent Formation of Hydrocarbons Catalyzed by Isolated Nitrogenase Cofactors. Angewandte Chemie - International Edition, 2012, 51, 1947-1949.	13.8	64
29	Comparison of Iron-Molybdenum Cofactor-deficient Nitrogenase MoFe Proteins by X-ray Absorption Spectroscopy. Journal of Biological Chemistry, 2004, 279, 28276-28282.	3.4	60
30	Identification and characterization of functional homologs of nitrogenase cofactor biosynthesis protein NifB from methanogens. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14829-14833.	7.1	58
31	Spectroscopic Characterization of the Isolated Ironâ€“Molybdenum Cofactor (FeMoco) Precursor from the Protein NifEN. Angewandte Chemie - International Edition, 2011, 50, 7787-7790.	13.8	57
32	Catalytic Reduction of CN^{â^'}, CO, and CO₂ by Nitrogenase Cofactors in Lanthanideâ€Driven Reactions. Angewandte Chemie - International Edition, 2015, 54, 1219-1222.	13.8	55
33	Nitrogenasesâ€”A Tale of Carbon Atom(s). Angewandte Chemie - International Edition, 2016, 55, 8216-8226.	13.8	54
34	Tracing the â€˜ninth sulfurâ€™ of the nitrogenase cofactor via a semi-synthetic approach. Nature Chemistry, 2018, 10, 568-572.	13.6	54
35	Characterization of Azotobacter vinelandii nifZ Deletion Strains. Journal of Biological Chemistry, 2004, 279, 54963-54971.	3.4	53
36	Stepwise formation of P-cluster in nitrogenase MoFe protein. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 18474-18478.	7.1	53

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37	Optimization of FeMoco Maturation on NifEN. Journal of the American Chemical Society, 2009, 131, 9321-9325.	13.7	53
38	Biosynthesis of the Iron-Molybdenum Cofactor of Nitrogenase. Journal of Biological Chemistry, 2013, 288, 13173-13177.	3.4	53
39	Nitrogenase reactivity with P-cluster variants. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13825-13830.	7.1	52
40	Tracing the Hydrogen Source of Hydrocarbons Formed by Vanadium Nitrogenase. Angewandte Chemie - International Edition, 2011, 50, 5545-5547.	13.8	52
41	Activation and reduction of carbon dioxide by nitrogenase iron proteins. Nature Chemical Biology, 2017, 13, 147-149.	8.0	52
42	Ambient conversion of CO2 to hydrocarbons by biogenic and synthetic [Fe4S4] clusters. Nature Catalysis, 2018, 1, 444-451.	34.4	51
43	Biosynthesis of the Metalloclusters of Molybdenum Nitrogenase. Microbiology and Molecular Biology Reviews, 2011, 75, 664-677.	6.6	49
44	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. Angewandte Chemie - International Edition, 2016, 55, 15633-15636.	13.8	44
45	Decoding the Nitrogenase Mechanism: The Homologue Approach. Accounts of Chemical Research, 2010, 43, 475-484.	15.6	41
46	Uncoupling binding of substrate CO from turnover by vanadium nitrogenase. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 13845-13849.	7.1	40
47	Probing the coordination and function of Fe4S4 modules in nitrogenase assembly protein NifB. Nature Communications, 2018, 9, 2824.	12.8	40
48	Synthetic Analogues of Nitrogenase Metallocofactors: Challenges and Developments. Chemistry - A European Journal, 2017, 23, 12425-12432.	3.3	36
49	Variable-Temperature, Variable-Field Magnetic Circular Dichroism Spectroscopic Study of the Metal Clusters in the Î”nifB and Î”nifH MoFe Proteins of Nitrogenase from Azotobacter vinelandii. Biochemistry, 2006, 45, 15039-15048.	2.5	35
50	Combining a Nitrogenase Scaffold and a Synthetic Compound into an Artificial Enzyme. Angewandte Chemie - International Edition, 2015, 54, 14022-14025.	13.8	35
51	Structural Models of the [Fe₄S₄] Clusters of Homologous Nitrogenase Fe Proteins. Inorganic Chemistry, 2011, 50, 7123-7128.	4.0	33
52	The in vivo hydrocarbon formation by vanadium nitrogenase follows a secondary metabolic pathway. Nature Communications, 2016, 7, 13641.	12.8	33
53	Reduction of C₁ Substrates to Hydrocarbons by the Homometallic Precursor and Synthetic Mimic of the Nitrogenase Cofactor. Journal of the American Chemical Society, 2017, 139, 603-606.	13.7	33
54	Molecular Insights into Nitrogenase FeMoco Insertion. Journal of Biological Chemistry, 2006, 281, 30534-30541.	3.4	32

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55	Maturation of nitrogenase cofactor â€" the role of a class E radical SAM methyltransferase NifB. Current Opinion in Chemical Biology, 2016, 31, 188-194.	6.1	32
56	Nitrogenase Cofactor Assembly: An Elemental Inventory. Accounts of Chemical Research, 2017, 50, 2834-2841.	15.6	31
57	Evidence of substrate binding and product release via belt-sulfur mobilization of the nitrogenase cofactor. Nature Catalysis, 2022, 5, 443-454.	34.4	31
58	Catalytic activities of NifEN: Implications for nitrogenase evolution and mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16962-16966.	7.1	28
59	VTVH-MCD Study of the Î"nifBÎ"nifZ MoFe Protein from Azotobacter vinelandii. Journal of the American Chemical Society, 2009, 131, 4558-4559.	13.7	27
60	Formation of a homocitrate-free iron-molybdenum cluster on NifEN: Implications for the role of homocitrate in nitrogenase assembly. Dalton Transactions, 2010, 39, 3124.	3.3	27
61	A journey into the active center of nitrogenase. Journal of Biological Inorganic Chemistry, 2014, 19, 731-736.	2.6	27
62	A Comparative Analysis of the COâ€Reducing Activities of MoFe Proteins Containing Moâ€•and Vâ€Nitrogenase Cofactors. ChemBioChem, 2018, 19, 649-653.	2.6	27
63	Assembly scaffold NifEN: A structural and functional homolog of the nitrogenase catalytic component. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9504-9508.	7.1	26
64	The Fe Protein: An Unsung Hero of Nitrogenase. Inorganics, 2018, 6, 25.	2.7	26
65	Molecular insights into nitrogenase FeMo cofactor insertion: the role of HisÂ362 of the MoFe protein Î± subunit in FeMo cofactor incorporation. Journal of Biological Inorganic Chemistry, 2007, 12, 449-460.	2.6	25
66	Widening the Product Profile of Carbon Dioxide Reduction by Vanadium Nitrogenase. ChemBioChem, 2015, 16, 1993-1996.	2.6	25
67	P⁺ State of Nitrogenase P-Cluster Exhibits Electronic Structure of a [Fe₄S₄]⁺ Cluster. Journal of the American Chemical Society, 2012, 134, 13749-13754.	13.7	24
68	Activation of CO₂ by Vanadium Nitrogenase. Chemistry - an Asian Journal, 2017, 12, 1985-1996.	3.3	24
69	Evaluation of the Catalytic Relevance of the COâ€Bound States of Vâ€Nitrogenase. Angewandte Chemie - International Edition, 2018, 57, 3411-3414.	13.8	24
70	Characterization of an M-Cluster-Substituted Nitrogenase VFe Protein. MBio, 2018, 9, .	4.1	24
71	Spectroscopic Characterization of an Eightâ€Iron Nitrogenase Cofactor Precursor that Lacks the â€œ9th Sulfurâ€• Angewandte Chemie - International Edition, 2019, 58, 14703-14707.	13.8	24
72	Tuning Electron Flux through Nitrogenase with Methanogen Iron Protein Homologues. Chemistry - A European Journal, 2017, 23, 16152-16156.	3.3	24

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73	Conformational Differences between Azotobacter vinelandii Nitrogenase MoFe Proteins As Studied by Small-Angle X-ray Scattering. Biochemistry, 2007, 46, 8066-8074.	2.5	23
74	Xâ€Ray Crystallographic Analysis of NifB with a Full Complement of Clusters: Structural Insights into the Radical SAMâ€Dependent Carbide Insertion During Nitrogenase Cofactor Assembly. Angewandte Chemie - International Edition, 2021, 60, 2364-2370.	13.8	23
75	Historic Overview of Nitrogenase Research. Methods in Molecular Biology, 2011, 766, 3-7.	0.9	22
76	Cluster assembly in nitrogenase. Essays in Biochemistry, 2017, 61, 271-279.	4.7	22
77	Cofactor specificity motifs and the induced fit mechanism in class I ketol-acid reductoisomerases. Biochemical Journal, 2015, 468, 475-484.	3.7	21
78	Insights into Hydrocarbon Formation by Nitrogenase Cofactor Homologs. MBio, 2015, 6, .	4.1	20
79	Nitrogenases. Methods in Molecular Biology, 2019, 1876, 3-24.	0.9	19
80	Response to Comment on â€œStructural evidence for a dynamic metallocofactor during N ₂ reduction by Mo-nitrogenaseâ€• Science, 2021, 371, .	12.6	19
81	Protocols for Cofactor Isolation of Nitrogenase. Methods in Molecular Biology, 2011, 766, 239-248.	0.9	18
82	[4Fe4S]²⁺ Clusters Exhibit Ground-State Paramagnetism. Journal of the American Chemical Society, 2011, 133, 6871-6873.	13.7	16
83	Nonenzymatic Synthesis of the P-Cluster in the Nitrogenase MoFe Protein: Evidence of the Involvement of All-Ferrous [Fe₄S₄]⁰ Intermediates. Biochemistry, 2014, 53, 1108-1116.	2.5	16
84	Identity and function of an essential nitrogen ligand of the nitrogenase cofactor biosynthesis protein NifB. Nature Communications, 2020, 11, 1757.	12.8	16
85	Reduction and Condensation of Aldehydes by the Isolated Cofactor of Nitrogenase. ACS Central Science, 2018, 4, 1430-1435.	11.3	15
86	Reactivity of [Fe₄S₄] Clusters toward C1 Substrates: Mechanism, Implications, and Potential Applications. Accounts of Chemical Research, 2019, 52, 1168-1176.	15.6	15
87	A Vâ€Nitrogenase Variant Containing a Citrateâ€Substituted Cofactor. ChemBioChem, 2020, 21, 1742-1748.	2.6	14
88	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. Angewandte Chemie, 2016, 128, 15862-15865.	2.0	13
89	A VTVH MCD and EPR Spectroscopic Study of the Maturation of the â€œSecondâ€•Nitrogenase P-Cluster. Inorganic Chemistry, 2018, 57, 4719-4725.	4.0	12
90	Tracing the incorporation of the â€œninth sulfurâ€•into the nitrogenase cofactor precursor with selenite and tellurite. Nature Chemistry, 2021, 13, 1228-1234.	13.6	12

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91	Nitrogenase â€“ eine Geschichte von Kohlenstoffatomen. Angewandte Chemie, 2016, 128, 8356-8367.	2.0	11
92	Strategies Towards Capturing Nitrogenase Substrates and Intermediates via Controlled Alteration of Electron Fluxes. Chemistry - A European Journal, 2019, 25, 2389-2395.	3.3	11
93	Dual functions of NifEN: insights into the evolution and mechanism of nitrogenase. Dalton Transactions, 2010, 39, 2964.	3.3	10
94	Evaluation of the Catalytic Relevance of the COâ€Bound States of Vâ€Nitrogenase. Angewandte Chemie, 2018, 130, 3469-3472.	2.0	10
95	Structural Analysis of a Nitrogenase Iron Protein from Methanosarcina acetivorans: Implications for CO ₂ Capture by a Surface-Exposed [Fe ₄ S ₄] Cluster. MBio, 2019, 10, .	4.1	10
96	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. Angewandte Chemie - International Edition, 2020, 59, 6887-6893.	13.8	10
97	YedY: A Mononuclear Molybdenum Enzyme with a Redoxâ€Active Ligand?. ChemBioChem, 2016, 17, 453-455.	2.6	9
98	Nitrogenase Assembly: Strategies and Procedures. Methods in Enzymology, 2017, 595, 261-302.	1.0	9
99	Electrochemical Characterization of Isolated Nitrogenase Cofactors from Azotobacter vinelandii. ChemBioChem, 2020, 21, 1773-1778.	2.6	9
100	Structural and Mechanistic Insights into CO 2 Activation by Nitrogenase Iron Protein. Chemistry - A European Journal, 2019, 25, 13078-13082.	3.3	8
101	Characterization of a Moâ€Nitrogenase Variant Containing a Citrateâ€Substituted Cofactor. ChemBioChem, 2021, 22, 151-155.	2.6	8
102	Probing the All-Ferrous States of Methanogen Nitrogenase Iron Proteins. Jacs Au, 2021, 1, 119-123.	7.9	8
103	Hydrogenases. Methods in Molecular Biology, 2019, 1876, 65-88.	0.9	7
104	Spectroscopic Characterization of an Eightâ€Iron Nitrogenase Cofactor Precursor that Lacks the â€œ9 th Sulfurâ€• Angewandte Chemie, 2019, 131, 14845-14849.	2.0	6
105	Purification of Nitrogenase Proteins. Methods in Molecular Biology, 2019, 1876, 111-124.	0.9	6
106	Electron Paramagnetic Resonance Spectroscopy of Metalloproteins. Methods in Molecular Biology, 2019, 1876, 197-211.	0.9	5
107	Computational Methods for Modeling Metalloproteins. Methods in Molecular Biology, 2019, 1876, 245-266.	0.9	5
108	Insertion of heterometals into the NifEN-associated ironâ€“molybdenum cofactor precursor. Journal of Biological Inorganic Chemistry, 2010, 15, 421-428.	2.6	4

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109	Special Issue on Nitrogenases and Homologous Systems. ChemBioChem, 2020, 21, 1668-1670.	2.6	4
110	Characterization of a Nitrogenase Iron Protein Substituted with a Synthetic [Fe ₄ Se ₄] Cluster. Angewandte Chemie - International Edition, 2022, , .	13.8	4
111	Mackinawiteâ€Supported Reduction of C₁ Substrates into Prebiotically Relevant Precursors. ChemSystemsChem, 2022, 4, .	2.6	4
112	Radical S -Adenosyl- l -Methionine (SAM) Enzyme Involved in the Maturation of the Nitrogenase Cluster. Methods in Enzymology, 2018, 606, 341-361.	1.0	3
113	Electron Paramagnetic Resonance and Magnetic Circular Dichroism Spectra of the Nitrogenase M Cluster Precursor Suggest Sulfur Migration upon Oxidation: A Proposal for Substrate and Inhibitor Binding. ChemBioChem, 2020, 21, 1767-1772.	2.6	3
114	Radical SAM-dependent formation of a nitrogenase cofactor core on NifB. Journal of Inorganic Biochemistry, 2022, 233, 111837.	3.5	3
115	Current Understanding of the Biosynthesis of the Unique Nitrogenase Cofactor Core. Structure and Bonding, 2018, , 15-31.	1.0	2
116	Xâ€Ray Crystallographic Analysis of NifB with a Full Complement of Clusters: Structural Insights into the Radical SAMâ€Dependent Carbide Insertion During Nitrogenase Cofactor Assembly. Angewandte Chemie, 2021, 133, 2394-2400.	2.0	2
117	An EPR and VTVH MCD spectroscopic investigation of the nitrogenase assembly protein NifB. Journal of Biological Inorganic Chemistry, 2021, 26, 403-410.	2.6	1
118	Assembly and Function of Nitrogenase. , 2021, , 155-184.		1
119	Frontispiece: Tuning Electron Flux through Nitrogenase with Methanogen Iron Protein Homologues. Chemistry - A European Journal, 2017, 23, .	3.3	0
120	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. Angewandte Chemie, 2020, 132, 6954-6960.	2.0	0
121	Nitrogenase: Structure, Function and Mechanism. , 2021, , 634-658.		0
122	Current Understanding of the Biosynthetic and Catalytic Mechanisms of Mo-Nitrogenase. , 2020, , 332-348.		0
123	Characterization of a Nitrogenase Iron Protein Substituted with a Synthetic [Fe ₄ Se ₄] Cluster. Angewandte Chemie, 0, , .	2.0	0