Yilin Hu

List of Publications by Year in Descending Order

121 papers	4,647 citations	40 h-index	65 g-index
132 ext. papers	5,467 ext. citations	12 avg, IF	5.96 L-index

#	Paper	IF	Citations
121	Radical SAM-dependent formation of a nitrogenase cofactor core on NifB.. *Journal of Inorganic Biochemistry*, **2022**, 233, 111837	4.2	
120	Tracing the incorporation of the "ninth sulfur" into the nitrogenase cofactor precursor with selenite and tellurite. *Nature Chemistry*, **2021**, 13, 1228-1234	17.6	0
119	Assembly and Function of Nitrogenase **2021**, 155-184		1
118	Probing the All-Ferrous States of Methanogen Nitrogenase Iron Proteins. *Jacs Au*, **2021**, 1, 119-123		2
117	An EPR and VTVH MCD spectroscopic investigation of the nitrogenase assembly protein NifB. *Journal of Biological Inorganic Chemistry*, **2021**, 26, 403-410	3.7	
116	X-Ray Crystallographic Analysis of NifB with a Full Complement of Clusters: Structural Insights into the Radical SAM-Dependent Carbide Insertion During Nitrogenase Cofactor Assembly. *Angewandte Chemie - International Edition*, **2021**, 60, 2364-2370	16.4	12
115	Characterization of a Mo-Nitrogenase Variant Containing a Citrate-Substituted Cofactor. *ChemBioChem*, **2021**, 22, 151-155	3.8	1
114	X-Ray Crystallographic Analysis of NifB with a Full Complement of Clusters: Structural Insights into the Radical SAM-Dependent Carbide Insertion During Nitrogenase Cofactor Assembly. *Angewandte Chemie*, **2021**, 133, 2394-2400	3.6	2
113	Nitrogenase: Structure, Function and Mechanism **2021**, 634-658		
112	Response to Comment on "Structural evidence for a dynamic metallocofactor during N reduction by Mo-nitrogenase". *Science*, **2021**, 371,	33.3	7
111	Structural evidence for a dynamic metallocofactor during N reduction by Mo-nitrogenase. *Science*, **2020**, 368, 1381-1385	33.3	57
110	Reactivity, Mechanism, and Assembly of the Alternative Nitrogenases. *Chemical Reviews*, **2020**, 120, 5107-5157	65.1	56
109	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. *Angewandte Chemie*, **2020**, 132, 6954-6960	3.6	
108	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. *Angewandte Chemie - International Edition*, **2020**, 59, 6887-6893	16.4	6
107	Current Understanding of the Biosynthetic and Catalytic Mechanisms of Mo-Nitrogenase **2020**, 332-348		
106	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	3.8	2
105	A V-Nitrogenase Variant Containing a Citrate-Substituted Cofactor. *ChemBioChem*, **2020**, 21, 1742-1748	3.8	5

104	Electrochemical Characterization of Isolated Nitrogenase Cofactors from Azotobacter vinelandii. *ChemBioChem*, **2020**, 21, 1773-1778	3.8	5
103	Identity and function of an essential nitrogen ligand of the nitrogenase cofactor biosynthesis protein NifB. *Nature Communications*, **2020**, 11, 1757	17.4	10
102	Reactivity of [FeS] Clusters toward C1 Substrates: Mechanism, Implications, and Potential Applications. *Accounts of Chemical Research*, **2019**, 52, 1168-1176	24.3	6
101	Spectroscopic Characterization of an Eight-Iron Nitrogenase Cofactor Precursor that Lacks the "9 Sulfur". *Angewandte Chemie - International Edition*, **2019**, 58, 14703-14707	16.4	17
100	Structural and Mechanistic Insights into CO Activation by Nitrogenase Iron Protein. *Chemistry - A European Journal*, **2019**, 25, 13078-13082	4.8	2
99	Structural Analysis of a Nitrogenase Iron Protein from Methanosarcina acetivorans: Implications for CO Capture by a Surface-Exposed [FeS] Cluster. *MBio*, **2019**, 10,	7.8	5
98	Spectroscopic Characterization of an Eight-Iron Nitrogenase Cofactor Precursor that Lacks the 9th Sulfur *Angewandte Chemie*, **2019**, 131, 14845-14849	3.6	6
97	Strategies Towards Capturing Nitrogenase Substrates and Intermediates via Controlled Alteration of Electron Fluxes. *Chemistry - A European Journal*, **2019**, 25, 2389-2395	4.8	8
96	Hydrogenases. *Methods in Molecular Biology*, **2019**, 1876, 65-88	1.4	3
95	Purification of Nitrogenase Proteins. *Methods in Molecular Biology*, **2019**, 1876, 111-124	1.4	3
94	Nitrogenases. *Methods in Molecular Biology*, **2019**, 1876, 3-24	1.4	10
93	Electron Paramagnetic Resonance Spectroscopy of Metalloproteins. *Methods in Molecular Biology*, **2019**, 1876, 197-211	1.4	4
92	Computational Methods for Modeling Metalloproteins. *Methods in Molecular Biology*, **2019**, 1876, 245-266	1.4	4
91	Tracing the 'ninth sulfur' of the nitrogenase cofactor via a semi-synthetic approach. *Nature Chemistry*, **2018**, 10, 568-572	17.6	41
90	A VTVH MCD and EPR Spectroscopic Study of the Maturation of the "Second" Nitrogenase P-Cluster. *Inorganic Chemistry*, **2018**, 57, 4719-4725	5.1	9
89	Evaluation of the Catalytic Relevance of the CO-Bound States of V-Nitrogenase. *Angewandte Chemie - International Edition*, **2018**, 57, 3411-3414	16.4	16
88	Evaluation of the Catalytic Relevance of the CO-Bound States of V-Nitrogenase. *Angewandte Chemie*, **2018**, 130, 3469-3472	3.6	5
87	A Comparative Analysis of the CO-Reducing Activities of MoFe Proteins Containing Mo- and V-Nitrogenase Cofactors. *ChemBioChem*, **2018**, 19, 649-653	3.8	15

86	Characterization of an M-Cluster-Substituted Nitrogenase VFe Protein. *MBio*, **2018**, 9,	7.8	12
85	The Fe Protein: An Unsung Hero of Nitrogenase. *Inorganics*, **2018**, 6, 25	2.9	19
84	Probing the coordination and function of FeS modules in nitrogenase assembly protein NifB. *Nature Communications*, **2018**, 9, 2824	17.4	29
83	Current Understanding of the Biosynthesis of the Unique Nitrogenase Cofactor Core. *Structure and Bonding*, **2018**, 15-31	0.9	2
82	Reduction and Condensation of Aldehydes by the Isolated Cofactor of Nitrogenase. *ACS Central Science*, **2018**, 4, 1430-1435	16.8	11
81	Ambient conversion of CO2 to hydrocarbons by biogenic and synthetic [Fe4S4] clusters. *Nature Catalysis*, **2018**, 1, 444-451	36.5	29
80	Radical S-Adenosyl-l-Methionine (SAM) Enzyme Involved in the Maturation of the Nitrogenase Cluster. *Methods in Enzymology*, **2018**, 606, 341-361	1.7	1
79	Activation of CO by Vanadium Nitrogenase. *Chemistry - an Asian Journal*, **2017**, 12, 1985-1996	4.5	21
78	Reduction of C Substrates to Hydrocarbons by the Homometallic Precursor and Synthetic Mimic of the Nitrogenase Cofactor. *Journal of the American Chemical Society*, **2017**, 139, 603-606	16.4	23
77	Nitrogenase Assembly: Strategies and Procedures. *Methods in Enzymology*, **2017**, 595, 261-302	1.7	6
76	Nitrogenase Cofactor Assembly: An Elemental Inventory. *Accounts of Chemical Research*, **2017**, 50, 2834-2841	24.1	23
75	Synthetic Analogues of Nitrogenase Metallocofactors: Challenges and Developments. *Chemistry - A European Journal*, **2017**, 23, 12425-12432	4.8	26
74	Activation and reduction of carbon dioxide by nitrogenase iron proteins. *Nature Chemical Biology*, **2017**, 13, 147-149	11.7	35
73	Cluster assembly in nitrogenase. *Essays in Biochemistry*, **2017**, 61, 271-279	7.6	18
72	Tuning Electron Flux through Nitrogenase with Methanogen Iron Protein Homologues. *Chemistry - A European Journal*, **2017**, 23, 16152-16156	4.8	18
71	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, 9504-8	11.5	17
70	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. *Angewandte Chemie - International Edition*, **2016**, 55, 15633-15636	16.4	33
69	YedY: A Mononuclear Molybdenum Enzyme with a Redox-Active Ligand?. *ChemBioChem*, **2016**, 17, 453-53.8		8

68	Maturation of nitrogenase cofactor-the role of a class E radical SAM methyltransferase NifB. *Current Opinion in Chemical Biology*, **2016**, 31, 188-94	9.7	27
67	Biosynthesis of the Metalloclusters of Nitrogenases. *Annual Review of Biochemistry*, **2016**, 85, 455-83	29.1	74
66	Nitrogenase □eine Geschichte von Kohlenstoffatomen. *Angewandte Chemie*, **2016**, 128, 8356-8367	3.6	9
65	Nitrogenases-A Tale of Carbon Atom(s). *Angewandte Chemie - International Edition*, **2016**, 55, 8216-26	16.4	46
64	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. *Angewandte Chemie*, **2016**, 128, 15862-15865	3.6	10
63	The in vivo hydrocarbon formation by vanadium nitrogenase follows a secondary metabolic pathway. *Nature Communications*, **2016**, 7, 13641	17.4	22
62	Nitrogenase and homologs. *Journal of Biological Inorganic Chemistry*, **2015**, 20, 435-45	3.7	78
61	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, 13845-9	11.5	34
60	Refining the pathway of carbide insertion into the nitrogenase M-cluster. *Nature Communications*, **2015**, 6, 8034	17.4	55
59	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, 14829-33	11.5	45
58	Cofactor specificity motifs and the induced fit mechanism in class I ketol-acid reductoisomerases. *Biochemical Journal*, **2015**, 468, 475-84	3.8	16
57	Catalytic reduction of CN-, CO, and CO2 by nitrogenase cofactors in lanthanide-driven reactions. *Angewandte Chemie - International Edition*, **2015**, 54, 1219-22	16.4	48
56	Combining a Nitrogenase Scaffold and a Synthetic Compound into an Artificial Enzyme. *Angewandte Chemie*, **2015**, 127, 14228-14231	3.6	9
55	Widening the Product Profile of Carbon Dioxide Reduction by Vanadium Nitrogenase. *ChemBioChem*, **2015**, 16, 1993-6	3.8	18
54	Combining a Nitrogenase Scaffold and a Synthetic Compound into an Artificial Enzyme. *Angewandte Chemie - International Edition*, **2015**, 54, 14022-5	16.4	28
53	Insights into hydrocarbon formation by nitrogenase cofactor homologs. *MBio*, **2015**, 6,	7.8	16
52	Differential reduction of CO□by molybdenum and vanadium nitrogenases. *Angewandte Chemie - International Edition*, **2014**, 53, 11543-6	16.4	54
51	Nonenzymatic synthesis of the P-cluster in the nitrogenase MoFe protein: evidence of the involvement of all-ferrous [Fe4S4](0) intermediates. *Biochemistry*, **2014**, 53, 1108-16	3.2	11

50	A journey into the active center of nitrogenase. *Journal of Biological Inorganic Chemistry*, **2014**, 19, 731-63.7		23
49	Structures and Functions of the Active Sites of Nitrogenases **2014**, 199-224		4
48	Biosynthesis of nitrogenase metalloclusters. *Chemical Reviews*, **2014**, 114, 4063-80	68.1	103
47	X-ray spectroscopic observation of an interstitial carbide in NifEN-bound FeMoco precursor. *Journal of the American Chemical Society*, **2013**, 135, 610-2	16.4	87
46	Nitrogenase assembly. *Biochimica Et Biophysica Acta - Bioenergetics*, **2013**, 1827, 1112-22	4.6	56
45	Biosynthesis of the iron-molybdenum cofactor of nitrogenase. *Journal of Biological Chemistry*, **2013**, 288, 13173-7	5.4	46
44	ATP-independent formation of hydrocarbons catalyzed by isolated nitrogenase cofactors. *Angewandte Chemie - International Edition*, **2012**, 51, 1947-9	16.4	54
43	Vanadium nitrogenase: a two-hit wonder?. *Dalton Transactions*, **2012**, 41, 1118-27	4.3	96
42	P+ state of nitrogenase p-cluster exhibits electronic structure of a [Fe4S4]+ cluster. *Journal of the American Chemical Society*, **2012**, 134, 13749-54	16.4	19
41	ATP-Independent Formation of Hydrocarbons Catalyzed by Isolated Nitrogenase Cofactors. *Angewandte Chemie*, **2012**, 124, 1983-1985	3.6	15
40	Radical SAM-dependent carbon insertion into the nitrogenase M-cluster. *Science*, **2012**, 337, 1672-5	33.3	212
39	Protocols for cofactor isolation of nitrogenase. *Methods in Molecular Biology*, **2011**, 766, 239-48	1.4	14
38	Historic overview of nitrogenase research. *Methods in Molecular Biology*, **2011**, 766, 3-7	1.4	19
37	Biosynthesis of the metalloclusters of molybdenum nitrogenase. *Microbiology and Molecular Biology Reviews*, **2011**, 75, 664-77	13.2	40
36	Structure of precursor-bound NifEN: a nitrogenase FeMo cofactor maturase/insertase. *Science*, **2011**, 331, 91-4	33.3	97
35	X-ray emission spectroscopy evidences a central carbon in the nitrogenase iron-molybdenum cofactor. *Science*, **2011**, 334, 974-7	33.3	659
34	Tracing the Hydrogen Source of Hydrocarbons Formed by Vanadium Nitrogenase. *Angewandte Chemie*, **2011**, 123, 5659-5661	3.6	7
33	Spectroscopic Characterization of the Isolated Iron–Molybdenum Cofactor (FeMoco) Precursor from the Protein NifEN. *Angewandte Chemie*, **2011**, 123, 7933-7936	3.6	10

32	Tracing the hydrogen source of hydrocarbons formed by vanadium nitrogenase. *Angewandte Chemie - International Edition*, **2011**, 50, 5545-7	16.4	40
31	Spectroscopic characterization of the isolated iron-molybdenum cofactor (FeMoco) precursor from the protein NifEN. *Angewandte Chemie - International Edition*, **2011**, 50, 7787-90	16.4	51
30	Biosynthesis of Nitrogenase FeMoco. *Coordination Chemistry Reviews*, **2011**, 255, 1218-1224	23.2	60
29	[4Fe4S]2+ clusters exhibit ground-state paramagnetism. *Journal of the American Chemical Society*, **2011**, 133, 6871-3	16.4	11
28	Structural models of the [Fe4S4] clusters of homologous nitrogenase Fe proteins. *Inorganic Chemistry*, **2011**, 50, 7123-8	5.1	26
27	Extending the carbon chain: hydrocarbon formation catalyzed by vanadium/molybdenum nitrogenases. *Science*, **2011**, 333, 753-5	33.3	187
26	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, 8623-7	11.5	63
25	Vanadium nitrogenase reduces CO. *Science*, **2010**, 329, 642	33.3	204
24	Decoding the nitrogenase mechanism: the homologue approach. *Accounts of Chemical Research*, **2010**, 43, 475-84	24.3	40
23	Characterization of isolated nitrogenase FeVco. *Journal of the American Chemical Society*, **2010**, 132, 12612-8	16.4	88
22	Formation of a homocitrate-free iron-molybdenum cluster on NifEN: implications for the role of homocitrate in nitrogenase assembly. *Dalton Transactions*, **2010**, 39, 3124-30	4.3	24
21	Dual functions of NifEN: insights into the evolution and mechanism of nitrogenase. *Dalton Transactions*, **2010**, 39, 2964-71	4.3	6
20	Insertion of heterometals into the NifEN-associated iron-molybdenum cofactor precursor. *Journal of Biological Inorganic Chemistry*, **2010**, 15, 421-8	3.7	4
19	Stepwise formation of P-cluster in nitrogenase MoFe protein. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 18474-8	11.5	43
18	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, 16962-6	11.5	25
17	VTVH-MCD study of the Delta nifB Delta nifZ MoFe protein from Azotobacter vinelandii. *Journal of the American Chemical Society*, **2009**, 131, 4558-9	16.4	24
16	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, 9209-14	11.5	101
15	Optimization of FeMoco maturation on NifEN. *Journal of the American Chemical Society*, **2009**, 131, 9321-5	16.4	44

14	Assembly of nitrogenase MoFe protein. *Biochemistry*, **2008**, 47, 3973-81	3.2	81
13	Conformational differences between Azotobacter vinelandii nitrogenase MoFe proteins as studied by small-angle X-ray scattering. *Biochemistry*, **2007**, 46, 8066-74	3.2	20
12	Molecular insights into nitrogenase FeMo cofactor insertion: the role of His 362 of the MoFe protein alpha subunit in FeMo cofactor incorporation. *Journal of Biological Inorganic Chemistry*, **2007**, 12, 449-60	3.7	18
11	P-cluster maturation on nitrogenase MoFe protein. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 10424-9	11.5	62
10	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, 1238-43	11.5	92
9	FeMo cofactor maturation on NifEN. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 17119-24	11.5	89
8	Molecular insights into nitrogenase FeMoco insertion: TRP-444 of MoFe protein alpha-subunit locks FeMoco in its binding site. *Journal of Biological Chemistry*, **2006**, 281, 30534-41	5.4	23
7	Nitrogenase Fe protein: A molybdate/homocitrate insertase. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 17125-30	11.5	71
6	Variable-temperature, variable-field magnetic circular dichroism spectroscopic study of the metal clusters in the DeltanifB and DeltanifH mofe proteins of nitrogenase from Azotobacter vinelandii. *Biochemistry*, **2006**, 45, 15039-48	3.2	31
5	Nitrogenase reactivity with P-cluster variants. *Proceedings of the National Academy of Sciences of the United States of America*, **2005**, 102, 13825-30	11.5	42
4	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, 3236-41	11.5	102
3	Comparison of iron-molybdenum cofactor-deficient nitrogenase MoFe proteins by X-ray absorption spectroscopy: implications for P-cluster biosynthesis. *Journal of Biological Chemistry*, **2004**, 279, 28276-82	5.4	54
2	Characterization of Azotobacter vinelandii nifZ deletion strains. Indication of stepwise MoFe protein assembly. *Journal of Biological Chemistry*, **2004**, 279, 54963-71	5.4	45
1	The FeMoco-deficient MoFe protein produced by a nifH deletion strain of Azotobacter vinelandii shows unusual P-cluster features. *Journal of Biological Chemistry*, **2002**, 277, 23469-76	5.4	56