

Yilin Hu

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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	X-ray emission spectroscopy evidences a central carbon in the nitrogenase iron-molybdenum cofactor. <i>Science</i> , 2011 , 334, 974-7	33.3	659
120	Radical SAM-dependent carbon insertion into the nitrogenase M-cluster. <i>Science</i> , 2012 , 337, 1672-5	33.3	212
119	Vanadium nitrogenase reduces CO. <i>Science</i> , 2010 , 329, 642	33.3	204
118	Extending the carbon chain: hydrocarbon formation catalyzed by vanadium/molybdenum nitrogenases. <i>Science</i> , 2011 , 333, 753-5	33.3	187
117	Biosynthesis of nitrogenase metalloclusters. <i>Chemical Reviews</i> , 2014 , 114, 4063-80	68.1	103
116	Identification of a nitrogenase FeMo cofactor precursor on NifEN complex. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 3236-41	11.5	102
115	Unique features of the nitrogenase VFe protein from <i>Azotobacter vinelandii</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 9209-14	11.5	101
114	Structure of precursor-bound NifEN: a nitrogenase FeMo cofactor maturase/insertase. <i>Science</i> , 2011 , 331, 91-4	33.3	97
113	Vanadium nitrogenase: a two-hit wonder?. <i>Dalton Transactions</i> , 2012 , 41, 1118-27	4.3	96
112	Structural insights into a protein-bound iron-molybdenum cofactor precursor. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 1238-43	11.5	92
111	FeMo cofactor maturation on NifEN. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 17119-24	11.5	89
110	Characterization of isolated nitrogenase FeVco. <i>Journal of the American Chemical Society</i> , 2010 , 132, 12612-8	16.4	88
109	X-ray spectroscopic observation of an interstitial carbide in NifEN-bound FeMoco precursor. <i>Journal of the American Chemical Society</i> , 2013 , 135, 610-2	16.4	87
108	Assembly of nitrogenase MoFe protein. <i>Biochemistry</i> , 2008 , 47, 3973-81	3.2	81
107	Nitrogenase and homologs. <i>Journal of Biological Inorganic Chemistry</i> , 2015 , 20, 435-45	3.7	78
106	Biosynthesis of the Metalloclusters of Nitrogenases. <i>Annual Review of Biochemistry</i> , 2016 , 85, 455-83	29.1	74
105	Nitrogenase Fe protein: A molybdate/homocitrate insertase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 17125-30	11.5	71

104	NifEN-B complex of <i>Azotobacter vinelandii</i> is fully functional in nitrogenase FeMo cofactor assembly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 8623-7	11.5	63
103	P-cluster maturation on nitrogenase MoFe protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 10424-9	11.5	62
102	Biosynthesis of Nitrogenase FeMoco. <i>Coordination Chemistry Reviews</i> , 2011 , 255, 1218-1224	23.2	60
101	Structural evidence for a dynamic metallocofactor during N reduction by Mo-nitrogenase. <i>Science</i> , 2020 , 368, 1381-1385	33.3	57
100	Reactivity, Mechanism, and Assembly of the Alternative Nitrogenases. <i>Chemical Reviews</i> , 2020 , 120, 5107-5156	68.1	56
99	Nitrogenase assembly. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2013 , 1827, 1112-22	4.6	56
98	The FeMoco-deficient MoFe protein produced by a nifH deletion strain of <i>Azotobacter vinelandii</i> shows unusual P-cluster features. <i>Journal of Biological Chemistry</i> , 2002 , 277, 23469-76	5.4	56
97	Refining the pathway of carbide insertion into the nitrogenase M-cluster. <i>Nature Communications</i> , 2015 , 6, 8034	17.4	55
96	Differential reduction of CO by molybdenum and vanadium nitrogenases. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 11543-6	16.4	54
95	ATP-independent formation of hydrocarbons catalyzed by isolated nitrogenase cofactors. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 1947-9	16.4	54
94	Comparison of iron-molybdenum cofactor-deficient nitrogenase MoFe proteins by X-ray absorption spectroscopy: implications for P-cluster biosynthesis. <i>Journal of Biological Chemistry</i> , 2004 , 279, 28276-82	5.4	54
93	Spectroscopic characterization of the isolated iron-molybdenum cofactor (FeMoco) precursor from the protein NifEN. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 7787-90	16.4	51
92	Catalytic reduction of CN-, CO, and CO ₂ by nitrogenase cofactors in lanthanide-driven reactions. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 1219-22	16.4	48
91	Biosynthesis of the iron-molybdenum cofactor of nitrogenase. <i>Journal of Biological Chemistry</i> , 2013 , 288, 13173-7	5.4	46
90	Nitrogenases-A Tale of Carbon Atom(s). <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 8216-26	16.4	46
89	Identification and characterization of functional homologs of nitrogenase cofactor biosynthesis protein NifB from methanogens. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 14829-33	11.5	45
88	Characterization of <i>Azotobacter vinelandii</i> nifZ deletion strains. Indication of stepwise MoFe protein assembly. <i>Journal of Biological Chemistry</i> , 2004 , 279, 54963-71	5.4	45
87	Optimization of FeMoco maturation on NifEN. <i>Journal of the American Chemical Society</i> , 2009 , 131, 9321-5	15.4	44

86	Stepwise formation of P-cluster in nitrogenase MoFe protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 18474-8	11.5	43
85	Nitrogenase reactivity with P-cluster variants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 13825-30	11.5	42
84	Tracing the 'ninth sulfur' of the nitrogenase cofactor via a semi-synthetic approach. <i>Nature Chemistry</i> , 2018 , 10, 568-572	17.6	41
83	Biosynthesis of the metalloclusters of molybdenum nitrogenase. <i>Microbiology and Molecular Biology Reviews</i> , 2011 , 75, 664-77	13.2	40
82	Tracing the hydrogen source of hydrocarbons formed by vanadium nitrogenase. <i>Angewandte Chemie - International Edition</i> , 2011 , 50, 5545-7	16.4	40
81	Decoding the nitrogenase mechanism: the homologue approach. <i>Accounts of Chemical Research</i> , 2010 , 43, 475-84	24.3	40
80	Activation and reduction of carbon dioxide by nitrogenase iron proteins. <i>Nature Chemical Biology</i> , 2017 , 13, 147-149	11.7	35
79	Uncoupling binding of substrate CO from turnover by vanadium nitrogenase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 13845-9	11.5	34
78	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 15633-15636	16.4	33
77	Variable-temperature, variable-field magnetic circular dichroism spectroscopic study of the metal clusters in the DeltanifB and DeltanifH mofe proteins of nitrogenase from <i>Azotobacter vinelandii</i> . <i>Biochemistry</i> , 2006 , 45, 15039-48	3.2	31
76	Probing the coordination and function of FeS modules in nitrogenase assembly protein NifB. <i>Nature Communications</i> , 2018 , 9, 2824	17.4	29
75	Ambient conversion of CO ₂ to hydrocarbons by biogenic and synthetic [Fe ₄ S ₄] clusters. <i>Nature Catalysis</i> , 2018 , 1, 444-451	36.5	29
74	Combining a Nitrogenase Scaffold and a Synthetic Compound into an Artificial Enzyme. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 14022-5	16.4	28
73	Maturation of nitrogenase cofactor-the role of a class E radical SAM methyltransferase NifB. <i>Current Opinion in Chemical Biology</i> , 2016 , 31, 188-94	9.7	27
72	Synthetic Analogues of Nitrogenase Metallocofactors: Challenges and Developments. <i>Chemistry - A European Journal</i> , 2017 , 23, 12425-12432	4.8	26
71	Structural models of the [Fe ₄ S ₄] clusters of homologous nitrogenase Fe proteins. <i>Inorganic Chemistry</i> , 2011 , 50, 7123-8	5.1	26
70	Catalytic activities of NifEN: implications for nitrogenase evolution and mechanism. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 16962-6	11.5	25
69	Formation of a homocitrate-free iron-molybdenum cluster on NifEN: implications for the role of homocitrate in nitrogenase assembly. <i>Dalton Transactions</i> , 2010 , 39, 3124-30	4.3	24

68	VTVH-MCD study of the Delta nifB Delta nifZ MoFe protein from <i>Azotobacter vinelandii</i> . <i>Journal of the American Chemical Society</i> , 2009 , 131, 4558-9	16.4	24
67	Reduction of C Substrates to Hydrocarbons by the Homometallic Precursor and Synthetic Mimic of the Nitrogenase Cofactor. <i>Journal of the American Chemical Society</i> , 2017 , 139, 603-606	16.4	23
66	Nitrogenase Cofactor Assembly: An Elemental Inventory. <i>Accounts of Chemical Research</i> , 2017 , 50, 2834-2841	16.4	23
65	A journey into the active center of nitrogenase. <i>Journal of Biological Inorganic Chemistry</i> , 2014 , 19, 731-637	16.4	23
64	Molecular insights into nitrogenase FeMoco insertion: TRP-444 of MoFe protein alpha-subunit locks FeMoco in its binding site. <i>Journal of Biological Chemistry</i> , 2006 , 281, 30534-41	5.4	23
63	The in vivo hydrocarbon formation by vanadium nitrogenase follows a secondary metabolic pathway. <i>Nature Communications</i> , 2016 , 7, 13641	17.4	22
62	Activation of CO by Vanadium Nitrogenase. <i>Chemistry - an Asian Journal</i> , 2017 , 12, 1985-1996	4.5	21
61	Conformational differences between <i>Azotobacter vinelandii</i> nitrogenase MoFe proteins as studied by small-angle X-ray scattering. <i>Biochemistry</i> , 2007 , 46, 8066-74	3.2	20
60	The Fe Protein: An Unsung Hero of Nitrogenase. <i>Inorganics</i> , 2018 , 6, 25	2.9	19
59	P+ state of nitrogenase p-cluster exhibits electronic structure of a [Fe ₄ S ₄] ⁺ cluster. <i>Journal of the American Chemical Society</i> , 2012 , 134, 13749-54	16.4	19
58	Historic overview of nitrogenase research. <i>Methods in Molecular Biology</i> , 2011 , 766, 3-7	1.4	19
57	Cluster assembly in nitrogenase. <i>Essays in Biochemistry</i> , 2017 , 61, 271-279	7.6	18
56	Widening the Product Profile of Carbon Dioxide Reduction by Vanadium Nitrogenase. <i>ChemBioChem</i> , 2015 , 16, 1993-6	3.8	18
55	Molecular insights into nitrogenase FeMo cofactor insertion: the role of His 362 of the MoFe protein alpha subunit in FeMo cofactor incorporation. <i>Journal of Biological Inorganic Chemistry</i> , 2007 , 12, 449-60	3.7	18
54	Tuning Electron Flux through Nitrogenase with Methanogen Iron Protein Homologues. <i>Chemistry - A European Journal</i> , 2017 , 23, 16152-16156	4.8	18
53	Assembly scaffold NifEN: A structural and functional homolog of the nitrogenase catalytic component. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 9504-8	11.5	17
52	Spectroscopic Characterization of an Eight-Iron Nitrogenase Cofactor Precursor that Lacks the "9 Sulfur". <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 14703-14707	16.4	17
51	Evaluation of the Catalytic Relevance of the CO-Bound States of V-Nitrogenase. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 3411-3414	16.4	16

50	Cofactor specificity motifs and the induced fit mechanism in class I ketol-acid reductoisomerases. <i>Biochemical Journal</i> , 2015 , 468, 475-84	3.8	16
49	Insights into hydrocarbon formation by nitrogenase cofactor homologs. <i>MBio</i> , 2015 , 6,	7.8	16
48	A Comparative Analysis of the CO-Reducing Activities of MoFe Proteins Containing Mo- and V-Nitrogenase Cofactors. <i>ChemBioChem</i> , 2018 , 19, 649-653	3.8	15
47	ATP-Independent Formation of Hydrocarbons Catalyzed by Isolated Nitrogenase Cofactors. <i>Angewandte Chemie</i> , 2012 , 124, 1983-1985	3.6	15
46	Protocols for cofactor isolation of nitrogenase. <i>Methods in Molecular Biology</i> , 2011 , 766, 239-48	1.4	14
45	Characterization of an M-Cluster-Substituted Nitrogenase VFe Protein. <i>MBio</i> , 2018 , 9,	7.8	12
44	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. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 2364-2370	16.4	12
43	Nonenzymatic synthesis of the P-cluster in the nitrogenase MoFe protein: evidence of the involvement of all-ferrous [Fe ₄ S ₄](0) intermediates. <i>Biochemistry</i> , 2014 , 53, 1108-16	3.2	11
42	[4Fe ₄ S ₄] ²⁺ clusters exhibit ground-state paramagnetism. <i>Journal of the American Chemical Society</i> , 2011 , 133, 6871-3	16.4	11
41	Reduction and Condensation of Aldehydes by the Isolated Cofactor of Nitrogenase. <i>ACS Central Science</i> , 2018 , 4, 1430-1435	16.8	11
40	Spectroscopic Characterization of the Isolated Iron-Molybdenum Cofactor (FeMoco) Precursor from the Protein NifEN. <i>Angewandte Chemie</i> , 2011 , 123, 7933-7936	3.6	10
39	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. <i>Angewandte Chemie</i> , 2016 , 128, 15862-15865	3.6	10
38	Nitrogenases. <i>Methods in Molecular Biology</i> , 2019 , 1876, 3-24	1.4	10
37	Identity and function of an essential nitrogen ligand of the nitrogenase cofactor biosynthesis protein NifB. <i>Nature Communications</i> , 2020 , 11, 1757	17.4	10
36	A VTVH MCD and EPR Spectroscopic Study of the Maturation of the "Second" Nitrogenase P-Cluster. <i>Inorganic Chemistry</i> , 2018 , 57, 4719-4725	5.1	9
35	Combining a Nitrogenase Scaffold and a Synthetic Compound into an Artificial Enzyme. <i>Angewandte Chemie</i> , 2015 , 127, 14228-14231	3.6	9
34	Nitrogenase Eine Geschichte von Kohlenstoffatomen. <i>Angewandte Chemie</i> , 2016 , 128, 8356-8367	3.6	9
33	YedY: A Mononuclear Molybdenum Enzyme with a Redox-Active Ligand?. <i>ChemBioChem</i> , 2016 , 17, 453-53.8	3.8	8

32	Strategies Towards Capturing Nitrogenase Substrates and Intermediates via Controlled Alteration of Electron Fluxes. <i>Chemistry - A European Journal</i> , 2019 , 25, 2389-2395	4.8	8
31	Tracing the Hydrogen Source of Hydrocarbons Formed by Vanadium Nitrogenase. <i>Angewandte Chemie</i> , 2011 , 123, 5659-5661	3.6	7
30	Response to Comment on "Structural evidence for a dynamic metallocofactor during N reduction by Mo-nitrogenase". <i>Science</i> , 2021 , 371,	33.3	7
29	Nitrogenase Assembly: Strategies and Procedures. <i>Methods in Enzymology</i> , 2017 , 595, 261-302	1.7	6
28	Reactivity of [FeS] Clusters toward C1 Substrates: Mechanism, Implications, and Potential Applications. <i>Accounts of Chemical Research</i> , 2019 , 52, 1168-1176	24.3	6
27	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 6887-6893	16.4	6
26	Spectroscopic Characterization of an Eight-Iron Nitrogenase Cofactor Precursor that Lacks the 9th Sulfur. <i>Angewandte Chemie</i> , 2019 , 131, 14845-14849	3.6	6
25	Dual functions of NifEN: insights into the evolution and mechanism of nitrogenase. <i>Dalton Transactions</i> , 2010 , 39, 2964-71	4.3	6
24	Evaluation of the Catalytic Relevance of the CO-Bound States of V-Nitrogenase. <i>Angewandte Chemie</i> , 2018 , 130, 3469-3472	3.6	5
23	Structural Analysis of a Nitrogenase Iron Protein from <i>Methanosarcina acetivorans</i> : Implications for CO Capture by a Surface-Exposed [FeS] Cluster. <i>MBio</i> , 2019 , 10,	7.8	5
22	A V-Nitrogenase Variant Containing a Citrate-Substituted Cofactor. <i>ChemBioChem</i> , 2020 , 21, 1742-1748	3.8	5
21	Electrochemical Characterization of Isolated Nitrogenase Cofactors from <i>Azotobacter vinelandii</i> . <i>ChemBioChem</i> , 2020 , 21, 1773-1778	3.8	5
20	Structures and Functions of the Active Sites of Nitrogenases 2014 , 199-224		4
19	Insertion of heterometals into the NifEN-associated iron-molybdenum cofactor precursor. <i>Journal of Biological Inorganic Chemistry</i> , 2010 , 15, 421-8	3.7	4
18	Electron Paramagnetic Resonance Spectroscopy of Metalloproteins. <i>Methods in Molecular Biology</i> , 2019 , 1876, 197-211	1.4	4
17	Computational Methods for Modeling Metalloproteins. <i>Methods in Molecular Biology</i> , 2019 , 1876, 245-266	1.4	4
16	Hydrogenases. <i>Methods in Molecular Biology</i> , 2019 , 1876, 65-88	1.4	3
15	Purification of Nitrogenase Proteins. <i>Methods in Molecular Biology</i> , 2019 , 1876, 111-124	1.4	3

14	Structural and Mechanistic Insights into CO Activation by Nitrogenase Iron Protein. <i>Chemistry - A European Journal</i> , 2019 , 25, 13078-13082	4.8	2
13	Probing the All-Ferrous States of Methanogen Nitrogenase Iron Proteins. <i>Jacs Au</i> , 2021 , 1, 119-123		2
12	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. <i>ChemBioChem</i> , 2020 , 21, 1767-1772	3.8	2
11	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. <i>Angewandte Chemie</i> , 2021 , 133, 2394-2400	3.6	2
10	Current Understanding of the Biosynthesis of the Unique Nitrogenase Cofactor Core. <i>Structure and Bonding</i> , 2018 , 15-31	0.9	2
9	Assembly and Function of Nitrogenase 2021 , 155-184		1
8	Characterization of a Mo-Nitrogenase Variant Containing a Citrate-Substituted Cofactor. <i>ChemBioChem</i> , 2021 , 22, 151-155	3.8	1
7	Radical S-Adenosyl-L-Methionine (SAM) Enzyme Involved in the Maturation of the Nitrogenase Cluster. <i>Methods in Enzymology</i> , 2018 , 606, 341-361	1.7	1
6	Tracing the incorporation of the "ninth sulfur" into the nitrogenase cofactor precursor with selenite and tellurite. <i>Nature Chemistry</i> , 2021 , 13, 1228-1234	17.6	0
5	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. <i>Angewandte Chemie</i> , 2020 , 132, 6954-6960	3.6	
4	Current Understanding of the Biosynthetic and Catalytic Mechanisms of Mo-Nitrogenase 2020 , 332-348		
3	An EPR and VTVH MCD spectroscopic investigation of the nitrogenase assembly protein NifB. <i>Journal of Biological Inorganic Chemistry</i> , 2021 , 26, 403-410	3.7	
2	Nitrogenase: Structure, Function and Mechanism 2021 , 634-658		
1	Radical SAM-dependent formation of a nitrogenase cofactor core on NifB.. <i>Journal of Inorganic Biochemistry</i> , 2022 , 233, 111837	4.2	