

Yilin Hu

List of Publications by Year in descending order

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123
papers

5,968
citations

66343

42
h-index

82547

72
g-index

132
all docs

132
docs citations

132
times ranked

2592
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterization of a Nitrogenase Iron Protein Substituted with a Synthetic [Fe ₄ Se ₄] Cluster. <i>Angewandte Chemie - International Edition</i> , 2022, , .	13.8	4
2	Radical SAM-dependent formation of a nitrogenase cofactor core on NifB. <i>Journal of Inorganic Biochemistry</i> , 2022, 233, 111837.	3.5	3
3	Evidence of substrate binding and product release via belt-sulfur mobilization of the nitrogenase cofactor. <i>Nature Catalysis</i> , 2022, 5, 443-454.	34.4	31
4	Mackinawite-Supported Reduction of C ₁ Substrates into Prebiotically Relevant Precursors. <i>ChemSystemsChem</i> , 2022, 4, .	2.6	4
5	Second and Outer Coordination Sphere Effects in Nitrogenase, Hydrogenase, Formate Dehydrogenase, and CO Dehydrogenase. <i>Chemical Reviews</i> , 2022, 122, 11900-11973.	47.7	70
6	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.	13.8	23
7	Characterization of a Mo-Nitrogenase Variant Containing a Citrate-Substituted Cofactor. <i>ChemBioChem</i> , 2021, 22, 151-155.	2.6	8
8	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.	2.0	2
9	Nitrogenase: Structure, Function and Mechanism. , 2021, , 634-658.		0
10	Response to Comment on "Structural evidence for a dynamic metallocofactor during N ₂ reduction by Mo-nitrogenase". <i>Science</i> , 2021, 371, .	12.6	19
11	An EPR and VTVH MCD spectroscopic investigation of the nitrogenase assembly protein NifB. <i>Journal of Biological Inorganic Chemistry</i> , 2021, 26, 403-410.	2.6	1
12	Tracing the incorporation of the "ninth sulfur" into the nitrogenase cofactor precursor with selenite and tellurite. <i>Nature Chemistry</i> , 2021, 13, 1228-1234.	13.6	12
13	Assembly and Function of Nitrogenase. , 2021, , 155-184.		1
14	Probing the All-Ferrous States of Methanogen Nitrogenase Iron Proteins. <i>Jacs Au</i> , 2021, 1, 119-123.	7.9	8
15	Electrochemical Characterization of Isolated Nitrogenase Cofactors from <i>Azotobacter vinelandii</i> . <i>ChemBioChem</i> , 2020, 21, 1773-1778.	2.6	9
16	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.	2.6	3
17	A V-Nitrogenase Variant Containing a Citrate-Substituted Cofactor. <i>ChemBioChem</i> , 2020, 21, 1742-1748.	2.6	14
18	Special Issue on Nitrogenases and Homologous Systems. <i>ChemBioChem</i> , 2020, 21, 1668-1670.	2.6	4

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19	Structural evidence for a dynamic metallocofactor during N ₂ reduction by Mo-nitrogenase. <i>Science</i> , 2020, 368, 1381-1385.	12.6	120
20	Reactivity, Mechanism, and Assembly of the Alternative Nitrogenases. <i>Chemical Reviews</i> , 2020, 120, 5107-5157.	47.7	128
21	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. <i>Angewandte Chemie</i> , 2020, 132, 6954-6960.	2.0	0
22	Heterologous Expression and Engineering of the Nitrogenase Cofactor Biosynthesis Scaffold NifEN. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 6887-6893.	13.8	10
23	Identity and function of an essential nitrogen ligand of the nitrogenase cofactor biosynthesis protein NifB. <i>Nature Communications</i> , 2020, 11, 1757.	12.8	16
24	Current Understanding of the Biosynthetic and Catalytic Mechanisms of Mo-Nitrogenase. , 2020, , 332-348.		0
25	Spectroscopic Characterization of an Eight-iron Nitrogenase Cofactor Precursor that Lacks the μ^9 -Sulfur. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 14703-14707.	13.8	24
26	Structural and Mechanistic Insights into CO ₂ Activation by Nitrogenase Iron Protein. <i>Chemistry - A European Journal</i> , 2019, 25, 13078-13082.	3.3	8
27	Structural Analysis of a Nitrogenase Iron Protein from <i>Methanosarcina acetivorans</i> : Implications for CO ₂ Capture by a Surface-Exposed [Fe ₄ S ₄] Cluster. <i>MBio</i> , 2019, 10, .	4.1	10
28	Spectroscopic Characterization of an Eight-iron Nitrogenase Cofactor Precursor that Lacks the μ^9 th Sulfur. <i>Angewandte Chemie</i> , 2019, 131, 14845-14849.	2.0	6
29	Reactivity of [Fe ₄ S ₄] Clusters toward C1 Substrates: Mechanism, Implications, and Potential Applications. <i>Accounts of Chemical Research</i> , 2019, 52, 1168-1176.	15.6	15
30	Strategies Towards Capturing Nitrogenase Substrates and Intermediates via Controlled Alteration of Electron Fluxes. <i>Chemistry - A European Journal</i> , 2019, 25, 2389-2395.	3.3	11
31	Hydrogenases. <i>Methods in Molecular Biology</i> , 2019, 1876, 65-88.	0.9	7
32	Purification of Nitrogenase Proteins. <i>Methods in Molecular Biology</i> , 2019, 1876, 111-124.	0.9	6
33	Nitrogenases. <i>Methods in Molecular Biology</i> , 2019, 1876, 3-24.	0.9	19
34	Electron Paramagnetic Resonance Spectroscopy of Metalloproteins. <i>Methods in Molecular Biology</i> , 2019, 1876, 197-211.	0.9	5
35	Computational Methods for Modeling Metalloproteins. <i>Methods in Molecular Biology</i> , 2019, 1876, 245-266.	0.9	5
36	Tracing the μ^9 sulfur of the nitrogenase cofactor via a semi-synthetic approach. <i>Nature Chemistry</i> , 2018, 10, 568-572.	13.6	54

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37	A VTVH MCD and EPR Spectroscopic Study of the Maturation of the α -Second-Nitrogenase P-Cluster. <i>Inorganic Chemistry</i> , 2018, 57, 4719-4725.	4.0	12
38	Evaluation of the Catalytic Relevance of the CO-Bound States of V-Nitrogenase. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 3411-3414.	13.8	24
39	Evaluation of the Catalytic Relevance of the CO-Bound States of V-Nitrogenase. <i>Angewandte Chemie</i> , 2018, 130, 3469-3472.	2.0	10
40	A Comparative Analysis of the CO-Reducing Activities of MoFe Proteins Containing Mo- and V-Nitrogenase Cofactors. <i>ChemBioChem</i> , 2018, 19, 649-653.	2.6	27
41	Characterization of an M-Cluster-Substituted Nitrogenase VFe Protein. <i>MBio</i> , 2018, 9, .	4.1	24
42	Current Understanding of the Biosynthesis of the Unique Nitrogenase Cofactor Core. <i>Structure and Bonding</i> , 2018, , 15-31.	1.0	2
43	Reduction and Condensation of Aldehydes by the Isolated Cofactor of Nitrogenase. <i>ACS Central Science</i> , 2018, 4, 1430-1435.	11.3	15
44	Ambient conversion of CO ₂ to hydrocarbons by biogenic and synthetic [Fe ₄ S ₄] clusters. <i>Nature Catalysis</i> , 2018, 1, 444-451.	34.4	51
45	Radical S-Adenosyl-L-Methionine (SAM) Enzyme Involved in the Maturation of the Nitrogenase Cluster. <i>Methods in Enzymology</i> , 2018, 606, 341-361.	1.0	3
46	The Fe Protein: An Unsung Hero of Nitrogenase. <i>Inorganics</i> , 2018, 6, 25.	2.7	26
47	Probing the coordination and function of Fe ₄ S ₄ modules in nitrogenase assembly protein NifB. <i>Nature Communications</i> , 2018, 9, 2824.	12.8	40
48	Activation of CO ₂ by Vanadium Nitrogenase. <i>Chemistry - an Asian Journal</i> , 2017, 12, 1985-1996.	3.3	24
49	Reduction of C ₁ 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.	13.7	33
50	Nitrogenase Assembly: Strategies and Procedures. <i>Methods in Enzymology</i> , 2017, 595, 261-302.	1.0	9
51	Nitrogenase Cofactor Assembly: An Elemental Inventory. <i>Accounts of Chemical Research</i> , 2017, 50, 2834-2841.	15.6	31
52	Synthetic Analogues of Nitrogenase Metallocofactors: Challenges and Developments. <i>Chemistry - A European Journal</i> , 2017, 23, 12425-12432.	3.3	36
53	Frontispiece: Tuning Electron Flux through Nitrogenase with Methanogen Iron Protein Homologues. <i>Chemistry - A European Journal</i> , 2017, 23, .	3.3	0
54	Activation and reduction of carbon dioxide by nitrogenase iron proteins. <i>Nature Chemical Biology</i> , 2017, 13, 147-149.	8.0	52

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55	Cluster assembly in nitrogenase. <i>Essays in Biochemistry</i> , 2017, 61, 271-279.	4.7	22
56	Tuning Electron Flux through Nitrogenase with Methanogen Iron Protein Homologues. <i>Chemistry - A European Journal</i> , 2017, 23, 16152-16156.	3.3	24
57	Nitrogenase "eine Geschichte von Kohlenstoffatomen. <i>Angewandte Chemie</i> , 2016, 128, 8356-8367.	2.0	11
58	Nitrogenases "A Tale of Carbon Atom(s). <i>Angewandte Chemie - International Edition</i> , 2016, 55, 8216-8226.	13.8	54
59	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. <i>Angewandte Chemie</i> , 2016, 128, 15862-15865.	2.0	13
60	The in vivo hydrocarbon formation by vanadium nitrogenase follows a secondary metabolic pathway. <i>Nature Communications</i> , 2016, 7, 13641.	12.8	33
61	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, 9504-9508.	7.1	26
62	Structure and Reactivity of an Asymmetric Synthetic Mimic of Nitrogenase Cofactor. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 15633-15636.	13.8	44
63	YedY: A Mononuclear Molybdenum Enzyme with a Redox-Active Ligand?. <i>ChemBioChem</i> , 2016, 17, 453-455.	2.6	9
64	Maturation of nitrogenase cofactor " the role of a class E radical SAM methyltransferase NifB. <i>Current Opinion in Chemical Biology</i> , 2016, 31, 188-194.	6.1	32
65	Biosynthesis of the Metalloclusters of Nitrogenases. <i>Annual Review of Biochemistry</i> , 2016, 85, 455-483.	11.1	104
66	Cofactor specificity motifs and the induced fit mechanism in class I ketol-acid reductoisomerases. <i>Biochemical Journal</i> , 2015, 468, 475-484.	3.7	21
67	Catalytic Reduction of CN ⁺ , CO, and CO ₂ by Nitrogenase Cofactors in Lanthanide-Driven Reactions. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 1219-1222.	13.8	55
68	Widening the Product Profile of Carbon Dioxide Reduction by Vanadium Nitrogenase. <i>ChemBioChem</i> , 2015, 16, 1993-1996.	2.6	25
69	Combining a Nitrogenase Scaffold and a Synthetic Compound into an Artificial Enzyme. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14022-14025.	13.8	35
70	Insights into Hydrocarbon Formation by Nitrogenase Cofactor Homologs. <i>MBio</i> , 2015, 6, .	4.1	20
71	Nitrogenase and homologs. <i>Journal of Biological Inorganic Chemistry</i> , 2015, 20, 435-445.	2.6	98
72	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, 13845-13849.	7.1	40

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73	Refining the pathway of carbide insertion into the nitrogenase M-cluster. <i>Nature Communications</i> , 2015, 6, 8034.	12.8	66
74	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, 14829-14833.	7.1	58
75	Differential Reduction of CO ₂ by Molybdenum and Vanadium Nitrogenases. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 11543-11546.	13.8	71
76	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, 1108-1116.	2.5	16
77	A journey into the active center of nitrogenase. <i>Journal of Biological Inorganic Chemistry</i> , 2014, 19, 731-736.	2.6	27
78	Biosynthesis of Nitrogenase Metalloclusters. <i>Chemical Reviews</i> , 2014, 114, 4063-4080.	47.7	122
79	X-ray Spectroscopic Observation of an Interstitial Carbide in NifEN-Bound FeMoco Precursor. <i>Journal of the American Chemical Society</i> , 2013, 135, 610-612.	13.7	98
80	Nitrogenase assembly. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2013, 1827, 1112-1122.	1.0	65
81	Biosynthesis of the Iron-Molybdenum Cofactor of Nitrogenase. <i>Journal of Biological Chemistry</i> , 2013, 288, 13173-13177.	3.4	53
82	Radical SAM-Dependent Carbon Insertion into the Nitrogenase M-Cluster. <i>Science</i> , 2012, 337, 1672-1675.	12.6	244
83	Vanadium nitrogenase: A two-hit wonder?. <i>Dalton Transactions</i> , 2012, 41, 1118-1127.	3.3	110
84	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, 13749-13754.	13.7	24
85	ATP-Independent Formation of Hydrocarbons Catalyzed by Isolated Nitrogenase Cofactors. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 1947-1949.	13.8	64
86	[4Fe4S] ²⁺ Clusters Exhibit Ground-State Paramagnetism. <i>Journal of the American Chemical Society</i> , 2011, 133, 6871-6873.	13.7	16
87	Structural Models of the [Fe ₄ S ₄] Clusters of Homologous Nitrogenase Fe Proteins. <i>Inorganic Chemistry</i> , 2011, 50, 7123-7128.	4.0	33
88	Protocols for Cofactor Isolation of Nitrogenase. <i>Methods in Molecular Biology</i> , 2011, 766, 239-248.	0.9	18
89	Historic Overview of Nitrogenase Research. <i>Methods in Molecular Biology</i> , 2011, 766, 3-7.	0.9	22
90	Biosynthesis of the Metalloclusters of Molybdenum Nitrogenase. <i>Microbiology and Molecular Biology Reviews</i> , 2011, 75, 664-677.	6.6	49

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91	Structure of Precursor-Bound NifEN: A Nitrogenase FeMo Cofactor Maturase/Insertase. <i>Science</i> , 2011, 331, 91-94.	12.6	115
92	X-ray Emission Spectroscopy Evidences a Central Carbon in the Nitrogenase Iron-Molybdenum Cofactor. <i>Science</i> , 2011, 334, 974-977.	12.6	774
93	Tracing the Hydrogen Source of Hydrocarbons Formed by Vanadium Nitrogenase. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 5545-5547.	13.8	52
94	Spectroscopic Characterization of the Isolated Iron-Molybdenum Cofactor (FeMoco) Precursor from the Protein NifEN. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 7787-7790.	13.8	57
95	Biosynthesis of nitrogenase FeMoco. <i>Coordination Chemistry Reviews</i> , 2011, 255, 1218-1224.	18.8	68
96	Extending the Carbon Chain: Hydrocarbon Formation Catalyzed by Vanadium/Molybdenum Nitrogenases. <i>Science</i> , 2011, 333, 753-755.	12.6	232
97	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, 8623-8627.	7.1	73
98	Insertion of heterometals into the NifEN-associated iron-molybdenum cofactor precursor. <i>Journal of Biological Inorganic Chemistry</i> , 2010, 15, 421-428.	2.6	4
99	Vanadium Nitrogenase Reduces CO. <i>Science</i> , 2010, 329, 642-642.	12.6	259
100	Decoding the Nitrogenase Mechanism: The Homologue Approach. <i>Accounts of Chemical Research</i> , 2010, 43, 475-484.	15.6	41
101	Characterization of Isolated Nitrogenase FeVco. <i>Journal of the American Chemical Society</i> , 2010, 132, 12612-12618.	13.7	92
102	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.	3.3	27
103	Dual functions of NifEN: insights into the evolution and mechanism of nitrogenase. <i>Dalton Transactions</i> , 2010, 39, 2964.	3.3	10
104	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, 18474-18478.	7.1	53
105	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, 16962-16966.	7.1	28
106	VTVH-MCD Study of the $\hat{\Gamma}^n$ <i>nifB</i> / $\hat{\Gamma}^n$ <i>nifZ</i> MoFe Protein from <i>Azotobacter vinelandii</i> . <i>Journal of the American Chemical Society</i> , 2009, 131, 4558-4559.	13.7	27
107	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, 9209-9214.	7.1	108
108	Optimization of FeMoco Maturation on NifEN. <i>Journal of the American Chemical Society</i> , 2009, 131, 9321-9325.	13.7	53

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109	Assembly of Nitrogenase MoFe Protein. <i>Biochemistry</i> , 2008, 47, 3973-3981.	2.5	95
110	P-cluster maturation on nitrogenase MoFe protein. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 10424-10429.	7.1	81
111	Conformational Differences between <i>Azotobacter vinelandii</i> Nitrogenase MoFe Proteins As Studied by Small-Angle X-ray Scattering. <i>Biochemistry</i> , 2007, 46, 8066-8074.	2.5	23
112	Molecular insights into nitrogenase FeMo cofactor insertion: the role of His ³⁶² of the MoFe protein $\hat{\alpha}$ subunit in FeMo cofactor incorporation. <i>Journal of Biological Inorganic Chemistry</i> , 2007, 12, 449-460.	2.6	25
113	Variable-Temperature, Variable-Field Magnetic Circular Dichroism Spectroscopic Study of the Metal Clusters in the $\hat{\alpha}$ nifB and $\hat{\alpha}$ nifH MoFe Proteins of Nitrogenase from <i>Azotobacter vinelandii</i> . <i>Biochemistry</i> , 2006, 45, 15039-15048.	2.5	35
114	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, 1238-1243.	7.1	104
115	FeMo cofactor maturation on NifEN. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 17119-17124.	7.1	104
116	Molecular Insights into Nitrogenase FeMoco Insertion. <i>Journal of Biological Chemistry</i> , 2006, 281, 30534-30541.	3.4	32
117	Nitrogenase Fe protein: A molybdate/homocitrate insertase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 17125-17130.	7.1	82
118	Nitrogenase reactivity with P-cluster variants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 13825-13830.	7.1	52
119	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, 3236-3241.	7.1	119
120	Comparison of Iron-Molybdenum Cofactor-deficient Nitrogenase MoFe Proteins by X-ray Absorption Spectroscopy. <i>Journal of Biological Chemistry</i> , 2004, 279, 28276-28282.	3.4	60
121	Characterization of <i>Azotobacter vinelandii</i> nifZ Deletion Strains. <i>Journal of Biological Chemistry</i> , 2004, 279, 54963-54971.	3.4	53
122	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, 23469-23476.	3.4	71
123	Characterization of a Nitrogenase Iron Protein Substituted with a Synthetic [Fe ₄ Se ₄] Cluster. <i>Angewandte Chemie</i> , 0, , .	2.0	0