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**Lactate racemase is a nickel-dependent enzyme activated by a widespread maturation system**

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#	Paper	IF	Citations
81	Promiscuous nickel import in human pathogens: structure, thermodynamics, and evolution of extracytoplasmic nickel-binding proteins. <i>Structure</i> , <b>2014</b> , 22, 1421-32	5.2	26
80	Functional genomics of lactic acid bacteria: from food to health. <i>Microbial Cell Factories</i> , <b>2014</b> , 13 Suppl 1, S8	6.4	103
79	The elements of life and medicines. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2015</b> , 373,	3	123
78	ENZYMOLGY. It costs more than a nickel. <i>Science</i> , <b>2015</b> , 349, 35-6	33.3	5
77	METALLOPROTEINS. A tethered niacin-derived pincer complex with a nickel-carbon bond in lactate racemase. <i>Science</i> , <b>2015</b> , 349, 66-9	33.3	74
76	Enantioselective regulation of lactate racemization by LarR in <i>Lactobacillus plantarum</i> . <i>Journal of Bacteriology</i> , <b>2015</b> , 197, 219-30	3.5	13
75	Nickel-responsive transcriptional regulators. <i>Metallomics</i> , <b>2015</b> , 7, 1305-18	4.5	30
74	Biological removal of nickel (II) by <i>Bacillus</i> sp. KL1 in different conditions: optimization by Taguchi statistical approach. <i>Polish Journal of Chemical Technology</i> , <b>2015</b> , 17, 29-32	1	5
73	Methane oxidation in heavy metal contaminated Mollic Gleysol under oxic and hypoxic conditions. <i>Environmental Pollution</i> , <b>2016</b> , 213, 403-411	9.3	10
72	Nickel-pincer cofactor biosynthesis involves LarB-catalyzed pyridinium carboxylation and LarE-dependent sacrificial sulfur insertion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 5598-603	11.5	35
71	A comprehensive and scalable database search system for metaproteomics. <i>BMC Genomics</i> , <b>2016</b> , 17, 642	4.5	34
70	A Novel Nickel Pincer Complex in the Active Site of Lactate Racemase. <i>ChemBioChem</i> , <b>2016</b> , 17, 31-2	3.8	16
69	Production of high optical purity l-lactic acid from waste activated sludge by supplementing carbohydrate: effect of temperature and pretreatment time. <i>Environmental Technology (United Kingdom)</i> , <b>2016</b> , 37, 2457-66	2.6	4
68	Exploration into the nickel microcosmos in prokaryotes. <i>Coordination Chemistry Reviews</i> , <b>2016</b> , 311, 24-37	23.2	13
67	The Nickel-Pincer Complex in Lactate Racemase Is an Electron Relay and Sink that acts through Proton-Coupled Electron Transfer. <i>Angewandte Chemie - International Edition</i> , <b>2017</b> , 56, 10098-10102	16.4	14
66	Microbial nickel: cellular uptake and delivery to enzyme centers. <i>Current Opinion in Chemical Biology</i> , <b>2017</b> , 37, 80-88	9.7	28
65	The Nickel-Pincer Complex in Lactate Racemase Is an Electron Relay and Sink that acts through Proton-Coupled Electron Transfer. <i>Angewandte Chemie</i> , <b>2017</b> , 129, 10232-10236	3.6	7

64	From NAD to Nickel Pincer Complex: A Significant Cofactor Evolution Presented by Lactate Racemase. <i>Chemistry - A European Journal</i> , <b>2017</b> , 23, 7545-7557	4.8	15
63	Lactate Racemase. <b>2017</b> , 1-8		1
62	Isolation and identification of l/d-lactate-conjugated bufadienolides from toad eggs revealing lactate racemization in amphibians. <i>Organic and Biomolecular Chemistry</i> , <b>2017</b> , 15, 5609-5615	3.9	3
61	Structure and mechanism of a group-I cobalt energy coupling factor transporter. <i>Cell Research</i> , <b>2017</b> , 27, 675-687	24.7	23
60	A bio-inspired design and computational prediction of scorpion-like SCS nickel pincer complexes for lactate racemization. <i>Chemical Communications</i> , <b>2017</b> , 53, 11410-11413	5.8	13
59	Transcriptomic profiles of <i>Clostridium ljungdahlii</i> during lithotrophic growth with syngas or H and CO compared to organotrophic growth with fructose. <i>Scientific Reports</i> , <b>2017</b> , 7, 13135	4.9	16
58	Structural insights into the catalytic mechanism of a sacrificial sulfur insertase of the N-type ATP pyrophosphatase family, LarE. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 9074-9079	11.5	24
57	Analytical approaches for the characterization of nickel proteome. <i>Metallomics</i> , <b>2017</b> , 9, 1014-1027	4.5	4
56	Unexpected complexity in the lactate racemization system of lactic acid bacteria. <i>FEMS Microbiology Reviews</i> , <b>2017</b> , 41, S71-S83	15.1	14
55	Enrichment of D-lactic acid from organic wastes catalyzed by zero-valent iron: an approach for sustainable lactate isomerization. <i>Green Chemistry</i> , <b>2017</b> , 19, 928-936	10	18
54	Alternative Mechanistic Strategy for Enzyme Catalysis in a Ni-Dependent Lactate Racemase (LarA): Intermediate Destabilization by the Cofactor. <i>Chemistry - A European Journal</i> , <b>2017</b> , 23, 3623-3630	4.8	19
53	Biological Functions of Cadmium, Nickel, Vanadium, and Tungsten. <b>2018</b> , 219-234		3
52	Lactate Racemase Nickel-Pincer Cofactor Operates by a Proton-Coupled Hydride Transfer Mechanism. <i>Biochemistry</i> , <b>2018</b> , 57, 3244-3251	3.2	23
51	Insights into the dioxygen activation and catalytic mechanism of the nickel-containing quercetinase. <i>Catalysis Science and Technology</i> , <b>2018</b> , 8, 2340-2351	5.5	9
50	Computational Insights into the Reaction Mechanisms of Nickel-Catalyzed Hydrofunctionalizations and Nickel-Dependent Enzymes. <i>Asian Journal of Organic Chemistry</i> , <b>2018</b> , 7, 522-536	3	10
49	Graphene Defects Trap Atomic Ni Species for Hydrogen and Oxygen Evolution Reactions. <i>Chem</i> , <b>2018</b> , 4, 285-297	16.2	436
48	Efficient bioconversion of organic wastes to high optical activity of l-lactic acid stimulated by cathode in mixed microbial consortium. <i>Water Research</i> , <b>2018</b> , 131, 1-10	12.5	21
47	Analysis of the Active Site Cysteine Residue of the Sacrificial Sulfur Insertase LarE from <i>Lactobacillus plantarum</i> . <i>Biochemistry</i> , <b>2018</b> , 57, 5513-5523	3.2	11

46	Nickel-pincer nucleotide cofactor. <i>Current Opinion in Chemical Biology</i> , <b>2018</b> , 47, 18-23	9.7	11
45	Biosynthesis of the nickel-pincer nucleotide cofactor of lactate racemase requires a CTP-dependent cyclometallase. <i>Journal of Biological Chemistry</i> , <b>2018</b> , 293, 12303-12317	5.4	23
44	PBP2b plays a key role in both peripheral growth and septum positioning in <i>Lactococcus lactis</i> . <i>PLoS ONE</i> , <b>2018</b> , 13, e0198014	3.7	9
43	Nickel and Cobalt. <b>2019</b> , 435-457		
42	Theoretical Studies of Nickel-Dependent Enzymes. <i>Inorganics</i> , <b>2019</b> , 7, 95	2.9	9
41	Functional Models of the Nickel Pincer Nucleotide Cofactor of Lactate Racemase. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 16869-16872	16.4	5
40	Functional Models of the Nickel Pincer Nucleotide Cofactor of Lactate Racemase. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 17025-17028	3.6	
39	D-Excess-LaA Production Directly from Biomass by Trivalent Yttrium Species. <i>IScience</i> , <b>2019</b> , 12, 132-1406.1		13
38	Long-Term Transcriptional Activity at Zero Growth of a Cosmopolitan Rare Biosphere Member. <i>MBio</i> , <b>2019</b> , 10,	7.8	22
37	Unravelling lactate-acetate and sugar conversion into butyrate by intestinal <i>Anaerobutyricum</i> and <i>Anaerostipes</i> species by comparative proteogenomics. <i>Environmental Microbiology</i> , <b>2020</b> , 22, 4863-4875 <sup>5.2</sup>		10
36	LarC Cyclometallase. <b>2020</b> , 1-5		
35	Revealing oral microbiota composition and functionality associated with heavy cigarette smoking. <i>Journal of Translational Medicine</i> , <b>2020</b> , 18, 421	8.5	12
34	Uncovering a superfamily of nickel-dependent hydroxyacid racemases and epimerases. <i>Scientific Reports</i> , <b>2020</b> , 10, 18123	4.9	6
33	Crystallographic characterization of a tri-Asp metal-binding site at the three-fold symmetry axis of LarE. <i>Scientific Reports</i> , <b>2020</b> , 10, 5830	4.9	
32	Biological pincer complexes. <i>ChemCatChem</i> , <b>2020</b> , 12, 4242-4254	5.2	8
31	Serum trace element and heavy metal levels in patients with sepsis. <i>Aging Male</i> , <b>2020</b> , 23, 222-226	2.1	2
30	Structure, function, and biosynthesis of nickel-dependent enzymes. <i>Protein Science</i> , <b>2020</b> , 29, 1071-1089 <sup>6.3</sup>		40
29	Metal Ion Homeostasis. <b>2021</b> , 929-953		

28	Bio-Relevant Chemistry of Nickel. <b>2021</b> , 846-877		1
27	nZVI Impacts Substrate Conversion and Microbiome Composition in Chain Elongation From D- and L-Lactate Substrates. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 666582	5.8	1
26	Dynamics of dark fermentation microbial communities in the light of lactate and butyrate production. <i>Microbiome</i> , <b>2021</b> , 9, 158	16.6	8
25	The LarB carboxylase/hydrolase forms a transient cysteinyl-pyridine intermediate during nickel-pincer nucleotide cofactor biosynthesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	5
24	CHAPTER 1:Introduction to the Biological Chemistry of Nickel. <i>2-Oxoglutarate-Dependent Oxygenases</i> , 1-11	1.8	2
23	CHAPTER 11:Lactate Racemase and Its Niacin-Derived, Covalently-Tethered, Nickel Cofactor. <i>2-Oxoglutarate-Dependent Oxygenases</i> , 220-236	1.8	3
22	CHAPTER 14:Nickel Metallochaperones: Structure, Function, and Nickel-Binding Properties. <i>2-Oxoglutarate-Dependent Oxygenases</i> , 284-305	1.8	2
21	Manual curation and reannotation of the genomes of <i>Clostridium difficile</i> 630 <sup>Ø</sup> rm and <i>C. difficile</i> 630. <i>Journal of Medical Microbiology</i> , <b>2017</b> , 66, 286-293	3.2	39
20	Unravelling lactate-acetate conversion to butyrate by intestinal <i>Anaerobutyricum</i> and <i>Anaerostipes</i> species.		0
19	Growth arrest in the active rare biosphere.		2
18	Potential Drug Targets Identification against <i>Clostridioides difficile</i> (CD) and Characterization of Indispensable Proteins by a Subtractive Genomics Approach Followed by Virtual Screening. <i>Letters in Drug Design and Discovery</i> , <b>2021</b> , 18,	0.8	
17	A comprehensive and scalable database search system for metaproteomics.		
16	Practical Considerations Regarding the Choice of the Best High-Throughput Assay. <i>Methods in Molecular Biology</i> , <b>2018</b> , 1685, 189-208	1.4	1
15	Nickel-Pincer Nucleotide Cofactor-Containing Enzymes. <b>2020</b> , 111-130		
14	Organic Synthesis with Isomerases. <b>2022</b> , 221-320		
13	SNS donors as mimic to enzymes, chemosensors, and imaging agents. <i>Inorganic Chemistry Communication</i> , <b>2022</b> , 136, 109140	3.1	
12	Protein-based models offer mechanistic insight into complex nickel metalloenzymes.. <i>Current Opinion in Chemical Biology</i> , <b>2022</b> , 67, 102110	9.7	0
11	Characterization of the nickel-inserting cyclometallase LarC from <i>Moorella thermoacetica</i> and identification of a CMPylated reaction intermediate.. <i>Metallomics</i> , <b>2022</b> ,	4.5	5

10	Structural and mutational characterization of a malate racemase from the LarA superfamily.. <i>BioMetals</i> , <b>2022</b> , 1	3-4	1
9	Microbial Metabolism of Nickel. <i>Advances in Environmental Microbiology</i> , <b>2022</b> , 417-502	1-3	
8	Characterization of a [4Fe-4S]-dependent LarE sulfur insertase that facilitates nickel-pincer nucleotide cofactor biosynthesis in <i>Thermotoga maritima</i> . <i>Journal of Biological Chemistry</i> , <b>2022</b> , 102131	5-4	4
7	Unveiling the mechanisms and biosynthesis of a novel nickel-pincer enzyme.		2
6	Biosynthesis of D/L-lactate from methylglyoxal. <b>2022</b> , 133087		2
5	Irreversible inactivation of lactate racemase by sodium borohydride reveals reactivity of the nickel-pincer nucleotide cofactor.		0
4	Irreversible Inactivation of Lactate Racemase by Sodium Borohydride Reveals Reactivity of the Nickel-Pincer Nucleotide Cofactor. 1441-1448		0
3	Site Specialization of Human Oral <i>Veillonella</i> Species.		0
2	Evidence for a Putative Isoprene Reductase in <i>Acetobacterium wieringae</i> .		0
1	The nickel-pincer coenzyme of lactate racemase: A case study of uncovering cofactor structure and biosynthesis. <b>2023</b> ,		0