Frank Sargent

List of Publications by Year
in descending order

98 papers	6,949 citations	43973 48 h-index	60497 81 g-index
118 all docs	118 docs citations	118 times ranked	3737 citing authors

#	Article	IF	Citations
1	The Tat protein export pathway. Molecular Microbiology, 2000, 35, 260-274.	1.2	525
2	An Essential Component of a Novel Bacterial Protein Export System with Homologues in Plastids and Mitochondria. Journal of Biological Chemistry, 1998, 273, 18003-18006.	1.6	346
3	Sec-independent Protein Translocation in Escherichia coli. Journal of Biological Chemistry, 1999, 274, 36073-36082.	1.6	266
4	TatD Is a Cytoplasmic Protein with DNase Activity. Journal of Biological Chemistry, 2000, 275, 16717-16722.	1.6	244
5	The Tat protein translocation pathway and its role in microbial physiology. Advances in Microbial Physiology, 2003, 47, 187-254.	1.0	227
6	Bacterial formate hydrogenlyase complex. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3948-56.	3.3	209
7	How Escherichia coli Is Equipped to Oxidize Hydrogen under Different Redox Conditions. Journal of Biological Chemistry, 2010, 285, 3928-3938.	1.6	204
8	Protein targeting by the bacterial twin-arginine translocation (Tat) pathway. Current Opinion in Microbiology, 2005, 8, 174-181.	2.3	199
9	Involvement of hydrogenases in the formation of highly catalytic Pd(0) nanoparticles by bioreduction of Pd(II) using Escherichia coli mutant strains. Microbiology (United Kingdom), 2010, 156, 2630-2640.	0.7	197
10	Export of complex cofactor-containing proteins by the bacterial Tat pathway. Trends in Microbiology, 2005, 13, 175-180.	3.5	188
11	Coordinating assembly and export of complex bacterial proteins. EMBO Journal, 2004, 23, 3962-3972.	3.5	186
12	Purified components of the Escherichia coli Tat protein transport system form a double-layered ring structure. FEBS Journal, 2001, 268, 3361-3367.	0.2	143
13	Constitutive Expression of Escherichia coli tat Genes Indicates an Important Role for the Twin-Arginine Translocase during Aerobic and Anaerobic Growth. Journal of Bacteriology, 2001, 183, 1801-1804.	1.0	130
14	Oxygen-Tolerant [NiFe]-Hydrogenases: The Individual and Collective Importance of Supernumerary Cysteines at the Proximal Fe-S Cluster. Journal of the American Chemical Society, 2011, 133, 16881-16892.	6.6	118
15	A subset of bacterial inner membrane proteins integrated by the twin-arginine translocase. Molecular Microbiology, 2003, 49, 1377-1390.	1.2	117
16	Dissecting the roles of<i>Escherichia coli</i>hydrogenases in biohydrogen production. FEMS Microbiology Letters, 2008, 278, 48-55.	0.7	114
17	Look on the positive side! The orientation, identification and bioenergetics of Ã¢Â€Â˜ArchaealÃ¢Â€Â™ membrane-bound nitrate reductases. FEMS Microbiology Letters, 2007, 276, 129-139.	0.7	107
18	Mechanism of hydrogen activation by [NiFe] hydrogenases. Nature Chemical Biology, 2016, 12, 46-50.	3.9	102

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19	Oligomeric Properties and Signal Peptide Binding by Escherichia coli Tat Protein Transport Complexes. Journal of Molecular Biology, 2002, 322, 1135-1146.	2.0	101
20	Transcriptional regulation in response to oxygen and nitrate of the operons encoding the [NiFe] hydrogenases 1 and 2 of Escherichia coli. Microbiology (United Kingdom), 1999, 145, 2903-2912.	0.7	99
21	Behaviour of topological marker proteins targeted to the Tat protein transport pathway. Molecular Microbiology, 2002, 43, 1005-1021.	1.2	98
22	The Model [NiFe]-Hydrogenases of Escherichia coli. Advances in Microbial Physiology, 2016, 68, 433-507.	1.0	97
23	Sequence analysis of bacterial redox enzyme maturation proteins (REMPs). Canadian Journal of Microbiology, 2004, 50, 225-238.	0.8	95
24	Regulation of the Hydrogenase-4 Operon of Escherichia coli by the Ïƒ 54 -Dependent Transcriptional Activators FhlA and HyfR. Journal of Bacteriology, 2002, 184, 6642-6653.	1.0	94
25	Crystal Structure of the O 2 -Tolerant Membrane-Bound Hydrogenase 1 from Escherichia coli in Complex with Its Cognate Cytochrome b. Structure, 2013, 21, 184-190.	1.6	93
26	Functional complexity of the twin-arginine translocase TatC component revealed by site-directed mutagenesis. Molecular Microbiology, 2002, 43, 1457-1470.	1.2	92
27	Principles of Sustained Enzymatic Hydrogen Oxidation in the Presence of Oxygen â€" The Crucial Influence of High Potential Feâ€"S Clusters in the Electron Relay of [NiFe]-Hydrogenases. Journal of the American Chemical Society, 2013, 135, 2694-2707.	6.6	91
28	How bacteria get energy from hydrogen: a genetic analysis of periplasmic hydrogen oxidation in Escherichia coli. International Journal of Hydrogen Energy, 2002, 27, 1413-1420.	3.8	88
29	Signal peptide-chaperone interactions on the twin-arginine protein transport pathway. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 8460-8465.	3.3	84
30	Pathfinders and trailblazers: a prokaryotic targeting system for transport of folded proteins. FEMS Microbiology Letters, 2006, 254, 198-207.	0.7	82
31	Assembly of membrane-bound respiratory complexes by the Tat protein-transport system. Archives of Microbiology, 2002, 178, 77-84.	1.0	80
32	Assembly of Tat-dependent [NiFe] hydrogenases: identification of precursor-binding accessory proteins. FEBS Letters, 2003, 549, 141-146.	1.3	76
33	How oxygen reacts with oxygen-tolerant respiratory [NiFe]-hydrogenases. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6606-6611.	3.3	75
34	Membrane interactions and self-association of the TatA and TatB components of the twin-arginine translocation pathway. FEBS Letters, 2001, 506, 143-148.	1.3	74
35	Structural diversity in twin-arginine signal peptide-binding proteins. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 15641-15646.	3.3	71
36	Constructing the wonders of the bacterial world: biosynthesis of complex enzymes. Microbiology (United Kingdom), 2007, 153, 633-651.	0.7	68

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37	Reassignment of the gene encoding the Escherichia coli hydrogenase 2 small subunit . Identification of a soluble precursor of the small subunit in a hypB mutant. FEBS Journal, 1998, 255, 746-754.	0.2	67
38	The hows and whys of aerobic H2 metabolism. Current Opinion in Chemical Biology, 2012, 16, 26-34.	2.8	63
39	Transforming an oxygen-tolerant [NiFe] uptake hydrogenase into a proficient, reversible hydrogen producer. Energy and Environmental Science, 2014, 7, 1426-1433.	15.6	61
40	Proteolytic processing of Escherichia coli twin-arginine signal peptides by LepB. Archives of Microbiology, 2009, 191, 919-925.	1.0	60
41	Physiology and Bioenergetics of [NiFe]-Hydrogenase 2-Catalyzed H₂-Consuming and H₂-Producing Reactions in Escherichia coli. Journal of Bacteriology, 2015, 197, 296-306.	1.0	60
42	Exploring the directionality of <i>Escherichia coli</i> formate hydrogenlyase: a membraneâ€bound enzyme capable of fixing carbon dioxide to organic acid. MicrobiologyOpen, 2016, 5, 721-737.	1.2	60
43	Efficient Hydrogen-Dependent Carbon Dioxide Reduction by Escherichia coli. Current Biology, 2018, 28, 140-145.e2.	1.8	59
44	A holin/peptidoglycan hydrolaseâ€dependent protein secretion system. Molecular Microbiology, 2021, 115, 345-355.	1.2	58
45	A genetic analysis of in vivo selenate reduction by Salmonella enterica serovar Typhimurium LT2 and Escherichia coli K12. Archives of Microbiology, 2009, 191, 519-528.	1.0	55
46	Waterâ^'Gas Shift Reaction Catalyzed by Redox Enzymes on Conducting Graphite Platelets. Journal of the American Chemical Society, 2009, 131, 14154-14155.	6.6	55
47	The Escherichia coli Cell Division Protein and Model Tat Substrate SufI (FtsP) Localizes to the Septal Ring and Has a Multicopper Oxidase-Like Structure. Journal of Molecular Biology, 2009, 386, 504-519.	2.0	54
48	Efficient electron transfer from hydrogen to benzyl viologen by the [NiFe]-hydrogenases of Escherichia coli is dependent on the coexpression of the ironâ€"sulfur cluster-containing small subunit. Archives of Microbiology, 2011, 193, 893-903.	1.0	51
49	A genetic screen for suppressors of Escherichia coli Tat signal peptide mutations establishes a critical role for the second arginine within the twin-arginine motif. Archives of Microbiology, 2001, 177, 107-112.	1.0	50
50	TatBC, TatB, and TatC form structurally autonomous units within the twin arginine protein transport system of <i>Escherichia coli</i>. FEBS Letters, 2007, 581, 4091-4097.	1.3	50
51	Subunit composition and inâ€ƒvivo substrate-binding characteristics of Escherichiaâ€ƒcoli Tat protein complexes expressed at native levels. FEBS Journal, 2006, 273, 5656-5668.	2.2	48
52	A holin and an endopeptidase are essential for chitinolytic protein secretion in <i>Serratia marcescens</i>. Journal of Cell Biology, 2014, 207, 615-626.	2.3	47
53	The structure of hydrogenase-2 from <i>Escherichia coli</i>: implications for H2-driven proton pumping. Biochemical Journal, 2018, 475, 1353-1370.	1.7	46
54	Inactivation of theEscherichia coliK-12 twin-arginine translocation system promotes increased hydrogen production. FEMS Microbiology Letters, 2006, 262, 135-137.	0.7	42

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55	A novel protein transport system involved in the biogenesis of bacterial electron transfer chains. Biochimica Et Biophysica Acta - Bioenergetics, 2000, 1459, 325-330.	0.5	41
56	Crystal Structure of the Molybdenum Cofactor Biosynthesis Protein MobA from Escherichia coli at Near-Atomic Resolution. Structure, 2000, 8, 1115-1125.	1.6	40
57	Zymographic differentiation of [NiFe]-Hydrogenases 1, 2 and 3 of Escherichia coli K-12. BMC Microbiology, 2012, 12, 134.	1.3	40
58	Remnant signal peptides on non-exported enzymes: implications for the evolution of prokaryotic respiratory chains. Microbiology (United Kingdom), 2009, 155, 3992-4004.	0.7	36
59	How <i>Salmonella</i> oxidises H₂ under aerobic conditions. FEBS Letters, 2012, 586, 536-544.	1.3	34
60	How the structure of the large subunit controls function in an oxygen-tolerant [NiFe]-hydrogenase. Biochemical Journal, 2014, 458, 449-458.	1.7	34
61	Features of a twinâ€arginine signal peptide required for recognition by a Tat proofreading chaperone. FEBS Letters, 2008, 582, 3979-3984.	1.3	31
62	Biosynthesis of the respiratory formate dehydrogenases from EscherichiaÂcoli: characterization of the FdhE protein. Archives of Microbiology, 2008, 190, 685-696.	1.0	30
63	Signal peptide etiquette during assembly of a complex respiratory enzyme. Molecular Microbiology, 2013, 90, 400-414.	1.2	27
64	The Tat Protein Export Pathway. EcoSal Plus, 2010, 4, .	2.1	26
65	A synthetic system for expression of components of a bacterial microcompartment. Microbiology (United Kingdom), 2013, 159, 2427-2436.	0.7	26
66	How the oxygen tolerance of a [NiFe]-hydrogenase depends on quaternary structure. Journal of Biological Inorganic Chemistry, 2016, 21, 121-134.	1.1	26
67	Conserved Signal Peptide Recognition Systems across the Prokaryotic Domains. Biochemistry, 2012, 51, 1678-1686.	1.2	25
68	Dissection and engineering of the<i>Escherichia coli</i> formate hydrogenlyase complex. FEBS Letters, 2015, 589, 3141-3147.	1.3	24
69	A Novel Aerobic Mechanism for Reductive Palladium Biomineralization and Recovery by<i>Escherichia coli</i>. Geomicrobiology Journal, 2016, 33, 230-236.	1.0	23
70	Formate hydrogenlyase. Advances in Microbial Physiology, 2019, 74, 465-486.	1.0	21
71	Design and characterisation of synthetic operons for biohydrogen technology. Archives of Microbiology, 2017, 199, 495-503.	1.0	20
72	Intrinsic GTPase activity of a bacterial twinâ€arginine translocation proofreading chaperone induced by domain swapping. FEBS Journal, 2010, 277, 511-525.	2.2	19

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73	Characterisation of the membrane-extrinsic domain of the TatB component of the twin arginine protein translocase. FEBS Letters, 2011, 585, 478-484.	1.3	19
74	Analysis of Tat Targeting Function and Twin-Arginine Signal Peptide Activity in Escherichia coli. Methods in Molecular Biology, 2010, 619, 191-216.	0.4	19
75	Analysis of hydrogenase 1 levels reveals an intimate link between carbon and hydrogen metabolism in Escherichia coli K-12. Microbiology (United Kingdom), 2012, 158, 856-868.	0.7	18
76	Hydrogen activation by [NiFe]-hydrogenases. Biochemical Society Transactions, 2016, 44, 863-868.	1.6	18
77	SlyD-dependent nickel delivery limits maturation of [NiFe]-hydrogenases in late-stationary phase Escherichia coli cells. Metallomics, 2015, 7, 683-690.	1.0	17
78	Overlapping transport and chaperoneâ€binding functions within a bacterial twinâ€arginine signal peptide. Molecular Microbiology, 2012, 83, 1254-1267.	1.2	16
79	Characterization of a pre-export enzymeâ€"chaperone complex on the twin-arginine transport pathway. Biochemical Journal, 2013, 452, 57-66.	1.7	16
80	Structure and activity of ChiX: a peptidoglycan hydrolase required for chitinase secretion by <i>Serratia marcescens</i>. Biochemical Journal, 2018, 475, 415-428.	1.7	15
81	Harnessing Escherichia coli for Bio-Based Production of Formate under Pressurized H ₂ and CO ₂ Gases. Applied and Environmental Microbiology, 2021, 87, e0029921.	1.4	12
82	Expanding the substrates for a bacterial hydrogenlyase reaction. Microbiology (United Kingdom), 2017, 163, 649-653.	0.7	12
83	Characterization of a periplasmic nitrate reductase in complex with its biosynthetic chaperone. FEBS Journal, 2014, 281, 246-260.	2.2	11
84	Escherichia coli tat mutant strains are able to transport maltose in the absence of an active malE gene. Archives of Microbiology, 2008, 189, 597-604.	1.0	9
85	Biosynthesis of selenate reductase in Salmonella enterica: critical roles for the signal peptide and DmsD. Microbiology (United Kingdom), 2016, 162, 2136-2146.	0.7	9
86	Hydrogen production in the presence of oxygen by Escherichia coli K-12. Microbiology (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 22	0.7	9
87	Integration of an [FeFe]-hydrogenase into the anaerobic metabolism of Escherichia coli. Biotechnology Reports (Amsterdam, Netherlands), 2015, 8, 94-104.	2.1	8
88	The dual-function chaperone HycH improves assembly of the formate hydrogenlyase complex. Biochemical Journal, 2017, 474, 2937-2950.	1.7	8
89	The plant pathogen <i>Pectobacterium atrosepticum</i> contains a functional formate hydrogenlyaseâ€2 complex. Molecular Microbiology, 2019, 112, 1440-1452.	1.2	8
90	Controlling and co-ordinating chitinase secretion in a Serratia marcescens population. Microbiology (United Kingdom), 2019, 165, 1233-1244.	0.7	8

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91	Light traffic: photo-crosslinking a novel transport system. Trends in Biochemical Sciences, 2004, 29, 55-57.	3.7	7
92	Identification of a stable complex between a [NiFe]â€hydrogenase catalytic subunit and its maturation protease. FEBS Letters, 2017, 591, 338-347.	1.3	5
93	A regulatory domain controls the transport activity of a twinâ€arginine signal peptide. FEBS Letters, 2013, 587, 3365-3370.	1.3	4
94	Biosynthesis of Salmonella enterica [NiFe]-hydrogenase-5: probing the roles of system-specific accessory proteins. Journal of Biological Inorganic Chemistry, 2016, 21, 865-873.	1.1	4
95	Activation of a [NiFe]-hydrogenase-4 isoenzyme by maturation proteases. Microbiology (United) Tj ETQq1 1 0.784314 rgBT /Overlock 1	0.7	3
96	A paean to the ineffable Marjory Stephenson. Microbiology (United Kingdom), 2022, 168, .	0.7	3
97	Featuringâ€¦ Frank Sargent. FEBS Letters, 2009, 583, 1654-1655.	1.3	0
98	Sec-independent protein translocation in chloroplasts and bacteria. , 1998, , 3111-3114.		0