

# Nicholas J Watmough

## List of Publications by Year in descending order

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82  
papers

4,096  
citations

101384

36  
h-index

114278

63  
g-index

84  
all docs

84  
docs citations

84  
times ranked

4391  
citing authors

#	ARTICLE	IF	CITATIONS
1	Mitigating release of the potent greenhouse gas N <sub>2</sub> O from the nitrogen cycle “ could enzymic regulation hold the key?. Trends in Biotechnology, 2009, 27, 388-397.	4.9	438
2	Structure of a bacterial cell surface decaheme electron conduit. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 9384-9389.	3.3	301
3	The bacterial cytochrome cbb3 oxidases. Biochimica Et Biophysica Acta - Bioenergetics, 2004, 1655, 388-399.	0.5	260
4	Inorganic nitrogen metabolism in bacteria. Current Opinion in Chemical Biology, 1999, 3, 207-219.	2.8	239
5	The electron transfer flavoprotein: Ubiquinone oxidoreductases. Biochimica Et Biophysica Acta - Bioenergetics, 2010, 1797, 1910-1916.	0.5	197
6	Mechanistic Insight into the Nitrosylation of the [4Fe-4S] Cluster of WhiB-like Proteins. Journal of the American Chemical Society, 2011, 133, 1112-1121.	6.6	124
7	Nitric oxide in bacteria: synthesis and consumption. Biochimica Et Biophysica Acta - Bioenergetics, 1999, 1411, 456-474.	0.5	117
8	Molecular dissection of bacterial acrylate catabolism “ unexpected links with dimethylsulfoniopropionate catabolism and dimethyl sulfide production. Environmental Microbiology, 2010, 12, 327-343.	1.8	116
9	Fatal Lactic Acidosis in Infancy with a Defect of Complex III of the Respiratory Chain. Pediatric Research, 1989, 25, 553-559.	1.1	114
10	Two Conserved Glutamates in the Bacterial Nitric Oxide Reductase Are Essential for Activity but Not Assembly of the Enzyme. Journal of Bacteriology, 2001, 183, 189-199.	1.0	107
11	Purification and Magneto-optical Spectroscopic Characterization of Cytoplasmic Membrane and Outer Membrane Multiheme c-Type Cytochromes from <i>Shewanella frigidimarina</i> NCIMB400. Journal of Biological Chemistry, 2000, 275, 8515-8522.	1.6	105
12	A Low-Redox Potential Heme in the Dinuclear Center of Bacterial Nitric Oxide Reductase: Implications for the Evolution of Energy-Conserving Heme-Copper Oxidases. Biochemistry, 1999, 38, 13780-13786.	1.2	102
13	Electron Transfer between Cytochrome c and the Isolated CuA Domain: Identification of Substrate-Binding Residues in Cytochrome c Oxidase. Biochemistry, 1995, 34, 5824-5830.	1.2	86
14	Enzymology and ecology of the nitrogen cycle. Biochemical Society Transactions, 2011, 39, 175-178.	1.6	73
15	Cytochrome cbb3 oxidase and bacterial microaerobic metabolism. Biochemical Society Transactions, 2002, 30, 653-658.	1.6	66
16	Impaired mitochondrial beta-oxidation in a patient with an abnormality of the respiratory chain. Studies in skeletal muscle mitochondria.. Journal of Clinical Investigation, 1990, 85, 177-184.	3.9	65
17	Nature of the Displaceable Heme-Axial Residue in the EcDos Protein, a Heme-Based Sensor from <i>Escherichia coli</i> . Biochemistry, 2002, 41, 8414-8421.	1.2	64
18	The bacterial respiratory nitric oxide reductase. Biochemical Society Transactions, 2009, 37, 392-399.	1.6	62

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19	A new assay for nitric oxide reductase reveals two conserved glutamate residues form the entrance to a proton-conducting channel in the bacterial enzyme. <i>Biochemical Journal</i> , 2007, 401, 111-119.	1.7	60
20	Reaction of variant sperm-whale myoglobins with hydrogen peroxide: the effects of mutating a histidine residue in the haem distal pocket. <i>Biochemical Journal</i> , 1997, 326, 109-115.	1.7	54
21	Cytochrome cd1, Reductive Activation and Kinetic Analysis of a Multifunctional Respiratory Enzyme. <i>Journal of Biological Chemistry</i> , 2002, 277, 3093-3100.	1.6	51
22	Electron/Proton Coupling in Bacterial Nitric Oxide Reductase during Reduction of Oxygen. <i>Biochemistry</i> , 2005, 44, 10711-10719.	1.2	51
23	The Nature of the Exchange Coupling between High-Spin Fe(III) Hemeo3 and CuB(II) in Escherichia coli Quinol Oxidase, Cytochrome bo3: A MCD and EPR Studies. <i>Journal of the American Chemical Society</i> , 2004, 126, 4157-4166.	6.6	49
24	Defining the Proton Entry Point in the Bacterial Respiratory Nitric-oxide Reductase. <i>Journal of Biological Chemistry</i> , 2008, 283, 3839-3845.	1.6	48
25	Tuning the modular <i>Paracoccus denitrificans</i> respirome to adapt from aerobic respiration to anaerobic denitrification. <i>Environmental Microbiology</i> , 2017, 19, 4953-4964.	1.8	47
26	The dinuclear center of cytochrome bo3 from Escherichia coli. <i>Journal of Bioenergetics and Biomembranes</i> , 1998, 30, 55-62.	1.0	46
27	Lipogenesis and Redox Balance in Nitrogen-Fixing Pea Bacteroids. <i>Journal of Bacteriology</i> , 2016, 198, 2864-2875.	1.0	43
28	Magnetic-circular-dichroism studies of Escherichia coli cytochrome bo. Identification of high-spin ferric, low-spin ferric and ferryl [Fe(IV)] forms of heme o. <i>FEBS Journal</i> , 1994, 219, 595-602.	0.2	42
29	Formation of a cytochrome c nitrous oxide reductase complex is obligatory for N2O reduction by <i>Paracoccus pantotrophus</i> . <i>Dalton Transactions</i> , 2005, , 3501.	1.6	41
30	Distinct forms of the haemo-Cu binuclear site of oxidised cytochrome bo from Escherichia coli. <i>FEBS Letters</i> , 1993, 319, 151-154.	1.3	40
31	A switch in heme axial ligation prepares <i>Paracoccus pantotrophus</i> cytochrome cd1 for catalysis. <i>Nature Structural Biology</i> , 2000, 7, 885-888.	9.7	38
32	Spectral Properties of Bacterial Nitric-oxide Reductase. <i>Journal of Biological Chemistry</i> , 2002, 277, 20146-20150.	1.6	38
33	Oxidase Reaction of Cytochrome cd1 from <i>Paracoccus pantotrophus</i> . <i>Biochemistry</i> , 2000, 39, 4028-4036.	1.2	37
34	Reaction of Carbon Monoxide with the Reduced Active Site of Bacterial Nitric Oxide Reductase. <i>Biochemistry</i> , 2001, 40, 13361-13369.	1.2	37
35	The reaction of Escherichia coli cytochrome bo with H2O2: Evidence for the formation of an oxyferryl species by two distinct routes. <i>FEBS Letters</i> , 1996, 399, 21-25.	1.3	36
36	Structure and enzymology of two bacterial diheme enzymes: Cytochrome cd1 nitrite reductase and cytochrome c peroxidase. <i>Advances in Inorganic Chemistry</i> , 2000, 51, 163-204.	0.4	36

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37	Exploring the terminal region of the proton pathway in the bacterial nitric oxide reductase. <i>Journal of Inorganic Biochemistry</i> , 2009, 103, 845-850.	1.5	36
38	Impact of Mutations on the Midpoint Potential of the [4Fe-4S] <sup>+1,+2</sup> Cluster and on Catalytic Activity in Electron Transfer Flavoprotein-ubiquinone Oxidoreductase (ETF-QO). <i>Biochemistry</i> , 2008, 47, 92-100.	1.2	35
39	Nature of the Coupling between the High-Spin Fe(III) Heme and CuB(II) in the Active Site of Terminal Oxidases: A Dual-Mode EPR Spectra of Fluoride Cytochromebo3. <i>Journal of the American Chemical Society</i> , 1998, 120, 4232-4233.	6.6	32
40	A Conserved Glutamic Acid in Helix VI of Cytochrome bo3 Influences a Key Step in Oxygen Reduction. <i>Biochemistry</i> , 1997, 36, 13736-13742.	1.2	31
41	Molecular and Spectroscopic Analysis of the Cytochromecbb3 Oxidase from <i>Pseudomonas stutzeri</i> . <i>Journal of Biological Chemistry</i> , 2002, 277, 31474-31483.	1.6	30
42	Redox-Linked Structural Changes Associated with the Formation of a Catalytically Competent Form of the Diheme Cytochrome <i>c</i> Peroxidase from <i>Pseudomonas aeruginosa</i> . <i>Biochemistry</i> , 2008, 47, 1947-1956.	1.2	30
43	Ultrafast Light-Driven Electron Transfer in a Ru(II)tris(bipyridine)-Labeled Multiheme Cytochrome. <i>Journal of the American Chemical Society</i> , 2019, 141, 15190-15200.	6.6	28
44	A new simple screening method for the diagnosis of medium chain acyl-CoA dehydrogenase deficiency. <i>Clinica Chimica Acta</i> , 1987, 165, 39-44.	0.5	27
45	Cytochrome bo from <i>Escherichia coli</i> : Binding of Azide to CuB. <i>Biochemistry</i> , 1996, 35, 13780-13787.	1.2	23
46	The Respiratory Nitric Oxide Reductase (NorBC) from <i>Paracoccus denitrificans</i> . <i>Methods in Enzymology</i> , 2008, 437, 79-101.	0.4	23
47	Tryptophan fluorescence in electron-transfer flavoprotein:ubiquinone oxidoreductase: fluorescence quenching by a brominated pseudosubstrate. <i>Biochemistry</i> , 1991, 30, 1317-1323.	1.2	22
48	Redox-dependent Open and Closed Forms of the Active Site of the Bacterial Respiratory Nitric-oxide Reductase Revealed by Cyanide Binding Studies. <i>Journal of Biological Chemistry</i> , 2004, 279, 17120-17125.	1.6	22
49	Electrochemical Evidence for Multiple Peroxidatic Heme States of the Diheme Cytochrome <i>c</i> Peroxidase of <i>Pseudomonas aeruginosa</i> . <i>Biochemistry</i> , 2009, 48, 87-95.	1.2	20
50	Intramolecular Electron Transfer from c Heme to d1 Heme in Bacterial Cytochrome cd1 Nitrite Reductase Occurs over the Same Distances at Very Different Rates Depending on the Source of the Enzyme. <i>Biochemistry</i> , 2001, 40, 8542-8547.	1.2	19
51	Analysis of multiple haloarchaeal genomes suggests that the quinone-dependent respiratory nitric oxide reductase is an important source of nitrous oxide in hypersaline environments. <i>Environmental Microbiology Reports</i> , 2017, 9, 788-796.	1.0	19
52	Structural and redox relationships between <i>Paracoccus denitrificans</i> , porcine and human electron-transferring flavoproteins. <i>FEBS Journal</i> , 1992, 205, 1089-1097.	0.2	18
53	Histidine and not tyrosine is required for the Peroxide-induced formation of haem to protein cross-linked myoglobin. <i>IUBMB Life</i> , 2007, 59, 477-489.	1.5	18
54	Tissue specific defect of complex I of the mitochondrial respiratory chain. <i>Biochemical and Biophysical Research Communications</i> , 1989, 160, 623-627.	1.0	17

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55	Electron spin relaxation enhancement measurements of interspin distances in human, porcine, and Rhodobacter electron transfer flavoprotein-ubiquinone oxidoreductase (ETF- <i>QO</i> ). <i>Journal of Magnetic Resonance</i> , 2008, 190, 222-232.	1.2	17
56	Ultrafast ligand binding dynamics in the active site of native bacterial nitric oxide reductase. <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2008, 1777, 919-924.	0.5	17
57	A two-state analysis of co-operative oxygen binding in the three human embryonic haemoglobins. <i>Biochemical Journal</i> , 1997, 326, 299-303.	1.7	15
58	Complex Interactions of Carbon Monoxide with Reduced Cytochrome <i>bb3</i> Oxidase from <i>Pseudomonas stutzeri</i> . <i>Biochemistry</i> , 2003, 42, 11263-11271.	1.2	15
59	Electron transfer to the active site of the bacterial nitric oxide reductase is controlled by ligand binding to heme <i>b3</i> . <i>Biochimica Et Biophysica Acta - Bioenergetics</i> , 2011, 1807, 451-457.	0.5	15
60	A novel, kinetically stable, catalytically active, all-ferric, nitrite-bound complex of <i>Paracoccus pantotrophus</i> cytochrome <i>cd1</i> . <i>Biochemical Journal</i> , 2002, 366, 883-888.	1.7	14
61	Activation of the cytochrome <i>c</i> peroxidase of <i>Pseudomonas aeruginosa</i> . The role of a heme-linked protein loop: A mutagenesis studies. <i>Journal of Inorganic Biochemistry</i> , 2007, 101, 1133-1139.	1.5	14
62	Regulation and Characterization of Mutants of <i>ABCX</i> in <i>Rhizobium leguminosarum</i> . <i>Molecular Plant-Microbe Interactions</i> , 2021, 34, 1167-1180.	1.4	14
63	A Novel Conformer of Oxidized <i>Paracoccus pantotrophus</i> Cytochrome <i>cd1</i> Observed by Freeze-Quench NIR-MCD Spectroscopy. <i>Biochemical and Biophysical Research Communications</i> , 2000, 279, 674-677.	1.0	13
64	The reaction of halides with pulsed cytochrome <i>bo</i> from <i>Escherichia coli</i> . <i>Biochemical Journal</i> , 1998, 331, 459-464.	1.7	12
65	Electron transfer and half-reactivity in nitrogenase. <i>Biochemical Society Transactions</i> , 2011, 39, 201-206.	1.6	10
66	Photosensitised Multiheme Cytochromes as Light-Driven Molecular Wires and Resistors. <i>ChemBioChem</i> , 2018, 19, 2206-2215.	1.3	10
67	The Role of $\hat{I}^2$ Chains in the Control of the Hemoglobin Oxygen Binding Function: Chimeric Human/Mouse Proteins, Structure, and Function. <i>Biochemistry</i> , 2001, 40, 15669-15675.	1.2	7
68	Functional interactions between nitrite reductase and nitric oxide reductase from <i>Paracoccus denitrificans</i> . <i>Scientific Reports</i> , 2019, 9, 17234.	1.6	7
69	Unexpected weak magnetic exchange coupling between haem and non-haem iron in the catalytic site of nitric oxide reductase (NorBC) from <i>Paracoccus denitrificans</i> . <i>Biochemical Journal</i> , 2013, 451, 389-394.	1.7	6
70	Influence of the heme distal pocket on nitrite binding orientation and reactivity in Sperm Whale myoglobin. <i>Biochemical Journal</i> , 2021, 478, 927-942.	1.7	6
71	Effects of tenotomy on muscle histology and energy metabolism in normal and dystrophic mice. <i>Journal of the Neurological Sciences</i> , 1989, 92, 307-316.	0.3	4
72	The role of amino acid $\hat{I}^{\pm 38}$ in the control of oxygen binding to human adult and embryonic haemoglobin Portland. <i>Biochemical Journal</i> , 1999, 343, 681-685.	1.7	4

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73	Site-directed Mutagenesis of Five Conserved Residues of Subunit I of the Cytochrome cbb3 Oxidase in <i>Rhodobacter capsulatus</i> . <i>BMB Reports</i> , 2007, 40, 697-707.	1.1	4
74	Measurement of phosphate concentration in the presence of very labile phosphate esters. <i>Analytical Biochemistry</i> , 1984, 140, 424-427.	1.1	3
75	Studies of [U-14C]palmitate metabolism by rat skeletal muscle mitochondria: identification of the products by radio-high-performance liquid chromatography. <i>Biochemical Society Transactions</i> , 1987, 15, 633-634.	1.6	3
76	Evidence for a membrane-associated form of the major aminopeptidase of human skeletal muscle. <i>Biochemical Society Transactions</i> , 1985, 13, 162-163.	1.6	1
77	Creatine kinase activity in human skeletal-muscle membranes. <i>Biochemical Society Transactions</i> , 1986, 14, 126-127.	1.6	1
78	Fast Cytochrome bo from <i>Escherichia coli</i> reacts with azide and nitric oxide to form a complex analogous to that formed by cytochrome c oxidase. <i>Biochemical Society Transactions</i> , 1997, 25, 392S-392S.	1.6	1
79	Electron Transfer Kinetics of caa3 Oxidase from <i>Bacillusstearothermophilus</i> : A Hypothesis for Thermophilicity. <i>Biophysical Journal</i> , 1999, 76, 438-442.	0.2	1
80	The role of amino acid Î±38 in the control of oxygen binding to human adult and embryonic haemoglobin Portland. <i>Biochemical Journal</i> , 1999, 343, 681.	1.7	1
81	Mutagenesis of tyrosine residues within helix VII in subunit I of the cytochrome cbb 3 oxidase from <i>Rhodobacter capsulatus</i> . <i>Molecular Biology Reports</i> , 2011, 38, 3319-3326.	1.0	1
82	Spectral properties of bacterial nitric oxide reductase. <i>Biochemical Society Transactions</i> , 2002, 30, A76-A76.	1.6	0