Michael Niederweis

List of Publications by Year
in descending order

133 papers	9,086 citations	36691 53 h-index	51423 90 g-index
141 all docs	141 docs citations	141 times ranked	9192 citing authors

#	Article	IF	Citations
1	Control of subunit stoichiometry in single-chain MspA nanopores. Biophysical Journal, 2022, 121, 742-754.	0.2	7
2	A periplasmic cinched protein is required for siderophore secretion and virulence of Mycobacterium tuberculosis. Nature Communications, 2022, 13, 2255.	5.8	8
3	Transporters Involved in the Biogenesis and Functionalization of the Mycobacterial Cell Envelope. Chemical Reviews, 2021, 121, 5124-5157.	23.0	37
4	Pore-forming Esx proteins mediate toxin secretion by Mycobacterium tuberculosis. Nature Communications, 2021, 12, 394.	5.8	21
5	Stable polymer bilayers for protein channel recordings at high guanidinium chloride concentrations. Biophysical Journal, 2021, 120, 1537-1541.	0.2	13
6	Cryo-EM structure of the periplasmic tunnel of T7 DNA-ejectosome at 2.7ÂÅ… resolution. Molecular Cell, 2021, 81, 3145-3159.e7.	4.5	17
7	Toxin secretion and trafficking by Mycobacterium tuberculosis. Nature Communications, 2021, 12, 6592.	5.8	24
8	Expression and purification of phage T7 ejection proteins for cryo-EM analysis. STAR Protocols, 2021, 2, 100960.	0.5	4
9	A type VII secretion system in Group B Streptococcus mediates cytotoxicity and virulence. PLoS Pathogens, 2021, 17, e1010121.	2.1	18
10	NAD hydrolysis by the tuberculosis necrotizing toxin induces lethal oxidative stress in macrophages. Cellular Microbiology, 2020, 22, e13115.	1.1	23
11	Recognition of an Î±-helical hairpin in P22 large terminase by a synthetic antibody fragment. Acta Crystallographica Section D: Structural Biology, 2020, 76, 876-888.	1.1	5
12	Plasma membrane damage causes NLRP3 activation and pyroptosis during Mycobacterium tuberculosis infection. Nature Communications, 2020, 11, 2270.	5.8	156
13	Cryo-EM Structures and Regulation of Arabinofuranosyltransferase AftD from Mycobacteria. Molecular Cell, 2020, 78, 683-699.e11.	4.5	27
14	Cryo-EM structure of arabinosyltransferase EmbB from Mycobacterium smegmatis. Nature Communications, 2020, 11, 3396.	5.8	14
15	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis. PLoS Pathogens, 2020, 16, e1008337.	2.1	58
16	Photoactivatable Glycolipid Probes for Identifying Mycolateâ€"Protein Interactions in Live Mycobacteria. Journal of the American Chemical Society, 2020, 142, 7725-7731.	6.6	45
17	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis. , 2020, 16, e1008337.		0
18	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis. , 2020, 16, e1008337.		0

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19	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis. , 2020, 16, e1008337.		0
20	Comprehensive analysis of iron utilization by Mycobacterium tuberculosis. , 2020, 16, e1008337.		0
21	Heme and hemoglobin utilization by Mycobacterium tuberculosis. Nature Communications, 2019, 10, 4260.	5.8	55
22	A Humanized Yeast Phenomic Model of Deoxycytidine Kinase to Predict Genetic Buffering of Nucleoside Analog Cytotoxicity. Genes, 2019, 10, 770.	1.0	3
23	The tuberculosis necrotizing toxin is an NAD+ and NADP+ glycohydrolase with distinct enzymatic properties. Journal of Biological Chemistry, 2019, 294, 3024-3036.	1.6	32
24	A Protein Complex from Human Milk Enhances the Activity of Antibiotics and Drugs against Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2019, 63, .	1.4	14
25	NAD+ Depletion Triggers Macrophage Necroptosis, a Cell Death Pathway Exploited by Mycobacterium tuberculosis. Cell Reports, 2018, 24, 429-440.	2.9	137
26	PPE Surface Proteins Are Required for Heme Utilization by <i>Mycobacterium tuberculosis</i>. MBio, 2017, 8, .	1.8	69
27	Hetero-oligomeric MspA pores in<i>Mycobacterium smegmatis</i>. FEMS Microbiology Letters, 2016, 363, fnw046.	0.7	9
28	A Macrophage Infection Model to Predict Drug Efficacy Against<i>Mycobacterium Tuberculosis</i>. Assay and Drug Development Technologies, 2016, 14, 345-354.	0.6	20
29	Separable roles for <i>Mycobacterium tuberculosis</i> ESX-3 effectors in iron acquisition and virulence. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E348-57.	3.3	166
30	Protein Phosphatase, Mg2+/Mn2+-dependent 1A controls the innate antiviral and antibacterial response of macrophages during HIV-1 and <i>Mycobacterium tuberculosis</i> infection. Oncotarget, 2016, 7, 15394-15409.	0.8	24
31	Surface hydrolysis of sphingomyelin by the outer membrane protein <scp>R</scp>v0888 supports replication of <scp><i>M</i></scp><i>ycobacterium tuberculosis</i> in macrophages. Molecular Microbiology, 2015, 97, 881-897.	1.2	63
32	Disulfiram and Copper Ions Kill Mycobacterium tuberculosis in a Synergistic Manner. Antimicrobial Agents and Chemotherapy, 2015, 59, 4835-4844.	1.4	72
33	The Mycobacterium tuberculosis Outer Membrane Channel Protein CpnT Confers Susceptibility to Toxic Molecules. Antimicrobial Agents and Chemotherapy, 2015, 59, 2328-2336.	1.4	37
34	Mycobacteria, metals, and the macrophage. Immunological Reviews, 2015, 264, 249-263.	2.8	178
35	The tuberculosis necrotizing toxin kills macrophages by hydrolyzing NAD. Nature Structural and Molecular Biology, 2015, 22, 672-678.	3.6	114
36	Self-poisoning of <i>Mycobacterium tuberculosis</i> by interrupting siderophore recycling. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 1945-1950.	3.3	94

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37	The Progression of Cell Death Affects the Rejection of Allogeneic Tumors in Immune-Competent Mice Ã¢â,¬â€œ Implications for Cancer Therapy. Frontiers in Immunology, 2014, 5, 560.	2.2	20
38	An outer membrane channel protein of <i>Mycobacterium tuberculosis</i> with exotoxin activity. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6750-6755.	3.3	102
39	Role of the Mce1 transporter in the lipid homeostasis of Mycobacterium tuberculosis. Tuberculosis, 2014, 94, 170-177.	0.8	104
40	Organ Pathology in the Absence of Bacteria?. Journal of Infectious Diseases, 2014, 209, 971-971.	1.9	2
41	Mycobacterium tuberculosis is resistant to streptolydigin. Tuberculosis, 2013, 93, 401-404.	0.8	3
42	Updating and curating metabolic pathways of TB. Tuberculosis, 2013, 93, 47-59.	0.8	23
43	Discovery of a Siderophore Export System Essential for Virulence of Mycobacterium tuberculosis. PLoS Pathogens, 2013, 9, e1003120.	2.1	188
44	Copper-Boosting Compounds: a Novel Concept for Antimycobacterial Drug Discovery. Antimicrobial Agents and Chemotherapy, 2013, 57, 1089-1091.	1.4	56
45	Porins Increase Copper Susceptibility of Mycobacterium tuberculosis. Journal of Bacteriology, 2013, 195, 5133-5140.	1.0	38
46	A Multicopper Oxidase Is Required for Copper Resistance in Mycobacterium tuberculosis. Journal of Bacteriology, 2013, 195, 3724-3733.	1.0	77
47	Ectoine Biosynthesis in Mycobacterium smegmatis. Applied and Environmental Microbiology, 2012, 78, 7483-7486.	1.4	39
48	Uptake of Sulfate but Not Phosphate by Mycobacterium tuberculosis Is Slower than That for Mycobacterium smegmatis. Journal of Bacteriology, 2012, 194, 956-964.	1.0	28
49	Elucidation and Chemical Modulation of Sulfolipid-1 Biosynthesis in Mycobacterium tuberculosis. Journal of Biological Chemistry, 2012, 287, 7990-8000.	1.6	75
50	Biological Nanopore MspA for DNA Sequencing. Biophysical Journal, 2012, 102, 203a.	0.2	0
51	Cathepsin G and Neutrophil Elastase Contribute to Lung-Protective Immunity against Mycobacterial Infections in Mice. Journal of Immunology, 2012, 188, 4476-4487.	0.4	51
52	Molecular Structure and Peptidoglycan Recognition of Mycobacterium tuberculosis ArfA (Rv0899). Journal of Molecular Biology, 2012, 416, 208-220.	2.0	17
53	MspA Nanopores from Subunit Dimers. PLoS ONE, 2012, 7, e38726.	1.1	14
54	Reading DNA at single-nucleotide resolution with a mutant MspA nanopore and phi29 DNA polymerase. Nature Biotechnology, 2012, 30, 349-353.	9.4	744

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55	Molecular Dynamics Study of MspA Arginine Mutants Predicts Slow DNA Translocations and Ion Current Blockades Indicative of DNA Sequence. ACS Nano, 2012, 6, 6960-6968.	7.3	72
56	Resistance mechanisms of Mycobacterium tuberculosis against phagosomal copper overload. Tuberculosis, 2012, 92, 202-210.	0.8	105
57	Structure and Interactions of the M. tuberculosis Membrane Protein Virulence Factor Rv0899. Biophysical Journal, 2011, 100, 8a.	0.2	0
58	Expression of the <i>ompATb</i> operon accelerates ammonia secretion and adaptation of <i>Mycobacterium tuberculosis</i> to acidic environments. Molecular Microbiology, 2011, 80, 900-918.	1.2	50
59	Importance of Porins for Biocide Efficacy against Mycobacterium smegmatis. Applied and Environmental Microbiology, 2011, 77, 3068-3073.	1.4	23
60	<i>Mycobacterium tuberculosis</i> Can Utilize Heme as an Iron Source. Journal of Bacteriology, 2011, 193, 1767-1770.	1.0	86
61	Copper resistance is essential for virulence of <i>Mycobacterium tuberculosis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1621-1626.	3.3	286
62	Nucleotide Discrimination with DNA Immobilized in the MspA Nanopore. PLoS ONE, 2011, 6, e25723.	1.1	141
63	Antimycobacterial activity in vitro of pigments isolated from Antarctic bacteria. Antonie Van Leeuwenhoek, 2010, 98, 531-540.	0.7	58
64	Rapid Evaluation of the Mycobactericidal Efficacy of Disinfectants in the Quantitative Carrier Test EN 14563 by Using Fluorescent Mycobacterium terrae. Applied and Environmental Microbiology, 2010, 76, 546-554.	1.4	29
65	Role of Porins in Iron Uptake by<i>Mycobacterium smegmatis</i>. Journal of Bacteriology, 2010, 192, 6411-6417.	1.0	62
66	Hit-and-Run Stimulation: a Novel Concept To Reactivate Latent HIV-1 Infection without Cytokine Gene Induction. Journal of Virology, 2010, 84, 8712-8720.	1.5	23
67	Single Nucleotide Discrimination in Single Stranded DNA Immobilized within Biological Nanopore MspA. Biophysical Journal, 2010, 98, 600a.	0.2	0
68	<i>Mycobacterium tuberculosis</i> Rv0899 Adopts a Mixed Î±/Î²-Structure and Does Not Form a Transmembrane Î²-Barrel. Biochemistry, 2010, 49, 2768-2777.	1.2	26
69	Taking phage integration to the next level as a genetic tool for mycobacteria. Gene, 2010, 468, 8-19.	1.0	61
70	Mycobacterial outer membranes: in search of proteins. Trends in Microbiology, 2010, 18, 109-116.	3.5	188
71	Structure of the Mycobacterium Tuberculosis Virulence Factor Rv0899 (ompATb). Biophysical Journal, 2010, 98, 624a-625a.	0.2	0
72	Nanopore DNA sequencing with MspA. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 16060-16065.	3.3	472

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73	Role of Porins in the Susceptibility of <i>Mycobacterium smegmatis</i> and <i>Mycobacterium chelonae</i> to Aldehyde-Based Disinfectants and Drugs. Antimicrobial Agents and Chemotherapy, 2009, 53, 4015-4018.	1.4	58
74	Functions of the Periplasmic Loop of the Porin MspA from Mycobacterium smegmatis. Journal of Biological Chemistry, 2009, 284, 10223-10231.	1.6	9
75	Decreased outer membrane permeability protects mycobacteria from killing by ubiquitinâ€derived peptides. Molecular Microbiology, 2009, 73, 844-857.	1.2	69
76	Porins facilitate nitric oxide-mediated killing of mycobacteria. Microbes and Infection, 2009, 11, 868-875.	1.0	21
77	Direct Observation of Gold Nanoparticle Assemblies with the Porin MspA on Mica. ACS Nano, 2009, 3, 462-466.	7.3	11
78	Poly-<i>N</i>-Isopropyl-acrylamide/Acrylic Acid Copolymers for the Generation of Nanostructures on Mica Surfaces and as Hydrophobic Host Systems for the Porin MspA from <i>Mycobacterium smegmatis</i>. Journal of Physical Chemistry C, 2009, 113, 16485-16494.	1.5	4
79	Nanopore Sequencing with MspA. Biophysical Journal, 2009, 96, 316a.	0.2	1
80	Physiology of Mycobacteria. Advances in Microbial Physiology, 2009, 55, 81-319.	1.0	135
81	Construction of Unmarked Deletion Mutants in Mycobacteria. Methods in Molecular Biology, 2009, 465, 279-295.	0.4	12
82	Identification of outer membrane proteins of Mycobacterium tuberculosis. Tuberculosis, 2008, 88, 526-544.	0.8	143
83	Role of Porins for Uptake of Antibiotics by <i>Mycobacterium smegmatis</i>. Antimicrobial Agents and Chemotherapy, 2008, 52, 3127-3134.	1.4	112
84	Single-molecule DNA detection with an engineered MspA protein nanopore. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20647-20652.	3.3	411
85	Disclosure of the mycobacterial outer membrane: Cryo-electron tomography and vitreous sections reveal the lipid bilayer structure. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 3963-3967.	3.3	511
86	Nutrient acquisition by mycobacteria. Microbiology (United Kingdom), 2008, 154, 679-692.	0.7	123
87	Identification of a Novel Multidrug Efflux Pump of <i>Mycobacterium tuberculosis</i>. Antimicrobial Agents and Chemotherapy, 2008, 52, 2503-2511.	1.4	136
88	Rv1698 of Mycobacterium tuberculosis Represents a New Class of Channel-forming Outer Membrane Proteins. Journal of Biological Chemistry, 2008, 283, 17827-17837.	1.6	64
89	Characterization of the Outer Membrane of <i>M. Tuberculosis</i> with Atomic Force Microcopy Methods. ACS Symposium Series, 2008, , 199-215.	0.5	1
90	Experimental Strategies Toward the Use of the Porin MspA as a Nanotemplate and for Biosensors. , 2008, , 19-39.		0

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91	Identification of Two Mycobacterium smegmatis Lipoproteins Exported by a SecA2-Dependent Pathway. Journal of Bacteriology, 2007, 189, 5090-5100.	1.0	60
92	Porins Are Required for Uptake of Phosphates by Mycobacterium smegmatis. Journal of Bacteriology, 2007, 189, 2435-2442.	1.0	40
93	A Genomic View of Sugar Transport in Mycobacterium smegmatis and Mycobacterium tuberculosis. Journal of Bacteriology, 2007, 189, 5903-5915.	1.0	82
94	Expression of the Major Porin Gene mspA Is Regulated in Mycobacterium smegmatis. Journal of Bacteriology, 2007, 189, 958-967.	1.0	18
95	Functional expression of the Flp recombinase in Mycobacterium bovis BCG. Gene, 2007, 399, 112-119.	1.0	27
96	Characterization of Nanostructured Surfaces Generated by Reconstitution of the Porin MspA fromMycobacterium smegmatis. Small, 2007, 3, 1084-1097.	5.2	19
97	Nanoarray-Surfaces by Reconstitution of the Porin MspA into Stabilized Long-Chain-Lipid-Monolayers at a Gold-Surface. Electroanalysis, 2006, 18, 1859-1870.	1.5	8
98	Topology of the Porin MspA in the Outer Membrane of Mycobacterium smegmatis. Journal of Biological Chemistry, 2006, 281, 5908-5915.	1.6	44
99	MspA provides the main hydrophilic pathway through the cell wall ofMycobacterium smegmatis. Molecular Microbiology, 2005, 57, 1509-1509.	1.2	3
100	The growth rate ofMycobacterium smegmatisdepends on sufficient porin-mediated influx of nutrients. Molecular Microbiology, 2005, 58, 714-730.	1.2	97
101	Porins limit the intracellular persistence of Mycobacterium smegmatis. Microbiology (United) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	0.7	33
102	The MspA porin promotes growth and increases antibiotic susceptibility of both Mycobacterium bovis BCG and Mycobacterium tuberculosis. Microbiology (United Kingdom), 2004, 150, 853-864.	0.7	97
103	Multidrug Resistance of a Porin Deletion Mutant of Mycobacterium smegmatis. Antimicrobial Agents and Chemotherapy, 2004, 48, 4163-4170.	1.4	105
104	A recombinant bispecific single-chain Fv antibody against HLA class II and FcÎ³RIII (CD16) triggers effective lysis of lymphoma cells. British Journal of Haematology, 2004, 125, 167-179.	1.2	47
105	Efficient eukaryotic expression of fluorescent scFv fusion proteins directed against CD antigens for FACS applications. Journal of Immunological Methods, 2004, 285, 265-280.	0.6	39
106	DNA-free RNA preparations from mycobacteria. BMC Microbiology, 2004, 4, 45.	1.3	3
107	Reconstitution of a Porin from Mycobacterium smegmatis at HOPG covered with hydrophobic host layers. Surface and Interface Analysis, 2004, 36, 127-134.	0.8	9
108	The Structure of a Mycobacterial Outer-Membrane Channel. Science, 2004, 303, 1189-1192.	6.0	333

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109	Consecutive gene deletions in Mycobacterium smegmatis using the yeast FLP recombinase. Gene, 2004, 343, 181-190.	1.0	38
110	Identification and semi-quantitative analysis of Mycobacterium tuberculosis H37Rv ftsZ gene-specific promoter activity-containing regions. Research in Microbiology, 2004, 155, 817-826.	1.0	16
111	Mycobacterial porins - new channel proteins in unique outer membranes. Molecular Microbiology, 2003, 49, 1167-1177.	1.2	170
112	High-level expression of the mycobacterial porin MspA in Escherichia coli and purification of the recombinant protein. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2003, 790, 337-348.	1.2	16
113	The Core of the Tetrameric Mycobacterial Porin MspA Is an Extremely Stable Î²-Sheet Domain. Journal of Biological Chemistry, 2003, 278, 8678-8685.	1.6	54
114	The Phosphotransferase System of Streptomyces coelicolor Is Biased for N -Acetylglucosamine Metabolism. Journal of Bacteriology, 2003, 185, 7019-7023.	1.0	75
115	Purification of Porins from Mycobacterium smegmatis. , 2003, 228, 139-150.		14
116	A Tetrameric Porin Limits the Cell Wall Permeability ofMycobacterium smegmatis. Journal of Biological Chemistry, 2002, 277, 37567-37572.	1.6	67
117	Nanostructuring by Deposition of Protein Channels Formed on Carbon Surfaces. Nano Letters, 2002, 2, 1263-1268.	4.5	9
118	Energy transfer between fluorescent proteins using a co-expression system in Mycobacterium smegmatis. Gene, 2001, 278, 115-124.	1.0	58
119	Nanostructuring of Carbon Surfaces by Deposition of a Channel-Forming Protein and Subsequent Polymerization of Methyl Methacrylate Prepolymers. Nano Letters, 2001, 1, 169-174.	4.5	14
120	MspA provides the main hydrophilic pathway through the cell wall of Mycobacterium smegmatis. Molecular Microbiology, 2001, 40, 451-464.	1.2	141
121	Characterization of four members of a multigene family encoding outer membrane proteins of Helicobacter pylori and their potential for vaccination. Microbes and Infection, 2001, 3, 171-179.	1.0	18
122	Selective Extraction and Purification of a Mycobacterial Outer Membrane Protein. Analytical Biochemistry, 2000, 285, 113-120.	1.1	53
123	Permeation of tetracyclines through membranes of liposomes and Escherichiaâ€ƒcoli. FEBS Journal, 2000, 267, 527-534.	0.2	47
124	Quantitative analysis of gene expression with an improved green fluorescent protein. FEBS Journal, 2000, 267, 1565-1570.	0.2	180
125	The FtsH Protein Accumulates at the Septum ofBacillus subtilis during Cell Division and Sporulation. Journal of Bacteriology, 2000, 182, 3870-3873.	1.0	73
126	Cloning of the mspA gene encoding a porin from Mycobacterium smegmatis. Molecular Microbiology, 1999, 33, 933-945.	1.2	143

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127	Porins in the Cell Wall of <i>Mycobacterium tuberculosis</i>. Journal of Bacteriology, 1999, 181, 6543-6546.	1.0	67
128	Biochemical and Biophysical Characterization of the Cell Wall Porin of Corynebacterium glutamicum:â€‰ The Channel Is Formed by a Low Molecular Mass Polypeptide. Biochemistry, 1998, 37, 15024-15032.	1.2	72
129	Oligo[d(C) Â· (G)] runs exhibit a helical repeat of 11.1 bp in solution and cause slight DNA curvature when properly phased. Nucleic Acids Research, 1994, 22, 1562-1566.	6.5	14
130	Electrophoretic analysis of protein-induced DNA bending and twist changes. Electrophoresis, 1993, 14, 693-698.	1.3	7
131	Synthesis of 8-Bromo- and 8-Azido-2â€²-deoxyadenosine-5â€²-O-(1-thiotriphosphate). Nucleosides & Nucleotides, 1993, 12, 757-771.	0.5	6
132	An accurate method for determining the helical repeat of DNA in solution reveals differences to the crystal structures of two B-DNA decamers. Journal of Molecular Biology, 1992, 228, 322-326.	2.0	10
133	Mycobacterial Porins. , 0, , 153-165.		4