

# Stephen Muench

## List of Publications by Year in descending order

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107  
papers

5,007  
citations

126907

33  
h-index

106344

65  
g-index

122  
all docs

122  
docs citations

122  
times ranked

7026  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polymer-Based Organic Batteries. <i>Chemical Reviews</i> , 2016, 116, 9438-9484.	47.7	919
2	A method for detergent-free isolation of membrane proteins in their local lipid environment. <i>Nature Protocols</i> , 2016, 11, 1149-1162.	12.0	305
3	Cryo-EM structures of complex I from mouse heart mitochondria in two biochemically defined states. <i>Nature Structural and Molecular Biology</i> , 2018, 25, 548-556.	8.2	202
4	Triclosan inhibits the growth of <i>Plasmodium falciparum</i> and <i>Toxoplasma gondii</i> by inhibition of Apicomplexan Fab I. <i>International Journal for Parasitology</i> , 2001, 31, 109-113.	3.1	190
5	An introduction to sample preparation and imaging by cryo-electron microscopy for structural biology. <i>Methods</i> , 2016, 100, 3-15.	3.8	178
6	The use of SMALPs as a novel membrane protein scaffold for structure study by negative stain electron microscopy. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2015, 1848, 496-501.	2.6	139
7	Replace, reuse, recycle: improving the sustainable use of phosphorus by plants. <i>Journal of Experimental Botany</i> , 2015, 66, 3523-3540.	4.8	135
8	Structural divergence of the rotary ATPases. <i>Quarterly Reviews of Biophysics</i> , 2011, 44, 311-356.	5.7	119
9	Structural Insight into Eukaryotic Sterol Transport through Niemann-Pick Type C Proteins. <i>Cell</i> , 2019, 179, 485-497.e18.	28.9	110
10	Approaches to altering particle distributions in cryo-electron microscopy sample preparation. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018, 74, 560-571.	2.3	108
11	Cryo-electron Microscopy of the Vacuolar ATPase Motor Reveals its Mechanical and Regulatory Complexity. <i>Journal of Molecular Biology</i> , 2009, 386, 989-999.	4.2	95
12	Maternal Inheritance and Stage-Specific Variation of the Apicoplast in <i>Toxoplasma gondii</i> during Development in the Intermediate and Definitive Host. <i>Eukaryotic Cell</i> , 2005, 4, 814-826.	3.4	90
13	Using a SMALP platform to determine a sub-nm single particle cryo-EM membrane protein structure. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2018, 1860, 378-383.	2.6	88
14	A cryo-EM grid preparation device for time-resolved structural studies. <i>IUCr</i> , 2019, 6, 1024-1031.	2.2	77
15	Delivery of antimicrobials into parasites. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2003, 100, 14281-14286.	7.1	72
16	Durable proteo-hybrid vesicles for the extended functional lifetime of membrane proteins in bionanotechnology. <i>Chemical Communications</i> , 2016, 52, 11020-11023.	4.1	67
17	Identification of <i>T. gondii</i> epitopes, adjuvants, and host genetic factors that influence protection of mice and humans. <i>Vaccine</i> , 2010, 28, 3977-3989.	3.8	66
18	Need for Speed: Examining Protein Behavior during CryoEM Grid Preparation at Different Timescales. <i>Structure</i> , 2020, 28, 1238-1248.e4.	3.3	61

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19	TRPA1â€™FGFR2 binding event is a regulatory oncogenic driver modulated by miRNA-142-3p. <i>Nature Communications</i> , 2017, 8, 947.	12.8	56
20	Durable vesicles for reconstitution of membrane proteins in biotechnology. <i>Biochemical Society Transactions</i> , 2017, 45, 15-26.	3.4	53
21	Novel Triazine JPC-2067-B Inhibits <i>Toxoplasma gondii</i> In Vitro and In Vivo. <i>PLoS Neglected Tropical Diseases</i> , 2008, 2, e190.	3.0	50
22	Identification and Development of Novel Inhibitors of <i>Toxoplasma gondii</i> Enoyl Reductase. <i>Journal of Medicinal Chemistry</i> , 2010, 53, 6287-6300.	6.4	46
23	Non-Synonymous Single Nucleotide Polymorphisms in the P2X Receptor Genes: Association with Diseases, Impact on Receptor Functions and Potential Use as Diagnosis Biomarkers. <i>International Journal of Molecular Sciences</i> , 2014, 15, 13344-13371.	4.1	45
24	Archazolid A Binds to the Equatorial Region of the c-Ring of the Vacuolar H <sup>+</sup> -ATPase*. <i>Journal of Biological Chemistry</i> , 2010, 285, 38304-38314.	3.4	44
25	Structural Basis for Vascular Endothelial Growth Factor Receptor Activation and Implications for Disease Therapy. <i>Biomolecules</i> , 2020, 10, 1673.	4.0	43
26	Studies of <i>Toxoplasma gondii</i> and <i>Plasmodium falciparum</i> enoyl acyl carrier protein reductase and implications for the development of antiparasitic agents. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2007, 63, 328-338.	2.5	40
27	New paradigms for understanding and step changes in treating active and chronic, persistent apicomplexan infections. <i>Scientific Reports</i> , 2016, 6, 29179.	3.3	40
28	The changing landscape of membrane protein structural biology through developments in electron microscopy. <i>Molecular Membrane Biology</i> , 2016, 33, 12-22.	2.0	40
29	Enzymes of type II fatty acid synthesis and apicoplast differentiation and division in <i>Eimeria tenella</i> . <i>International Journal for Parasitology</i> , 2007, 37, 33-51.	3.1	39
30	The varied functions of aluminium-activated malate transportersâ€™ much more than aluminium resistance. <i>Biochemical Society Transactions</i> , 2016, 44, 856-862.	3.4	39
31	Extracellular and Luminal pH Regulation by Vacuolar H <sup>+</sup> -ATPase Isoform Expression and Targeting to the Plasma Membrane and Endosomes. <i>Journal of Biological Chemistry</i> , 2016, 291, 8500-8515.	3.4	37
32	AtSPX1 affects the AtPHR1â€™DNA-binding equilibrium by binding monomeric AtPHR1 in solution. <i>Biochemical Journal</i> , 2017, 474, 3675-3687.	3.7	36
33	Human TRPC5 structures reveal interaction of a xanthine-based TRPC1/4/5 inhibitor with a conserved lipid binding site. <i>Communications Biology</i> , 2020, 3, 704.	4.4	36
34	The expanding toolkit for structural biology: synchrotrons, X-ray lasers and cryoEM. <i>IUCrJ</i> , 2019, 6, 167-177.	2.2	36
35	The essential GTPase YphC displays a major domain rearrangement associated with nucleotide binding. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 12359-12364.	7.1	35
36	Structure of the Vacuolar H <sup>+</sup> -ATPase Rotary Motor Reveals New Mechanistic Insights. <i>Structure</i> , 2015, 23, 461-471.	3.3	34

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37	Molecular Basis for Resistance of <i>Acanthamoeba</i> Tubulins to All Major Classes of Antitubulin Compounds. <i>Antimicrobial Agents and Chemotherapy</i> , 2008, 52, 1133-1135.	3.2	32
38	Novel <i>N</i> -Benzoyl-2-Hydroxybenzamide Disrupts Unique Parasite Secretory Pathway. <i>Antimicrobial Agents and Chemotherapy</i> , 2012, 56, 2666-2682.	3.2	32
39	A reconstitution method for integral membrane proteins in hybrid lipid-polymer vesicles for enhanced functional durability. <i>Methods</i> , 2018, 147, 142-149.	3.8	30
40	Structure-Based Identification and Characterization of Inhibitors of the Epilepsy-Associated KNa1.1 (KCNT1) Potassium Channel. <i>IScience</i> , 2020, 23, 101100.	4.1	29
41	<i>T. gondii</i> RP Promoters & Knockdown Reveal Molecular Pathways Associated with Proliferation and Cell-Cycle Arrest. <i>PLoS ONE</i> , 2010, 5, e14057.	2.5	28
42	PA1b Inhibitor Binding to Subunits c and e of the Vacuolar ATPase Reveals Its Insecticidal Mechanism. <i>Journal of Biological Chemistry</i> , 2014, 289, 16399-16408.	3.4	28
43	<i>ALOX12</i> in Human Toxoplasmosis. <i>Infection and Immunity</i> , 2014, 82, 2670-2679.	2.2	28
44	Styrene maleic-acid lipid particles (SMALPs) into detergent or amphipols: An exchange protocol for membrane protein characterisation. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2020, 1862, 183192.	2.6	27
45	Artificial membranes for membrane protein purification, functionality and structure studies. <i>Biochemical Society Transactions</i> , 2016, 44, 877-882.	3.4	26
46	Expression, purification and crystallization of the <i>Plasmodium falciparum</i> enoyl reductase. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2003, 59, 1246-1248.	2.5	25
47	Spiroindolone That Inhibits PfATPase4 Is a Potent, Cidal Inhibitor of <i>Toxoplasma gondii</i> Tachyzoites <i>In Vitro</i> and <i>In Vivo</i> . <i>Antimicrobial Agents and Chemotherapy</i> , 2014, 58, 1789-1792.	3.2	25
48	Methods to account for movement and flexibility in cryo-EM data processing. <i>Methods</i> , 2016, 100, 35-41.	3.8	25
49	Cryo-EM Structure and Molecular Dynamics Analysis of the Fluoroquinolone Resistant Mutant of the AcrB Transporter from <i>Salmonella</i> . <i>Microorganisms</i> , 2020, 8, 943.	3.6	25
50	Subunit Positioning and Stator Filament Stiffness in Regulation and Power Transmission in the V1 Motor of the <i>Manduca sexta</i> V-ATPase. <i>Journal of Molecular Biology</i> , 2014, 426, 286-300.	4.2	24
51	Docking of competitive inhibitors to the P2X7 receptor family reveals key differences responsible for changes in response between rat and human. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2015, 25, 3164-3167.	2.2	24
52	Structure-based identification and characterisation of structurally novel human P2X7 receptor antagonists. <i>Biochemical Pharmacology</i> , 2016, 116, 130-139.	4.4	24
53	Elucidating the structural basis for differing enzyme inhibitor potency by cryo-EM. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 1795-1800.	7.1	24
54	Type I and type II fatty acid biosynthesis in <i>Eimeria tenella</i> : enoyl reductase activity and structure. <i>Parasitology</i> , 2007, 134, 1949-1962.	1.5	23

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55	X-ray and cryo-EM structures of inhibitor-bound cytochrome <i>b<sub>c</sub>1</i> complexes for structure-based drug discovery. <i>IUCr</i> , 2018, 5, 200-210.	2.2	23
56	Sample deposition onto cryo-EM grids: from sprays to jets and back. <i>Acta Crystallographica Section D: Structural Biology</i> , 2020, 76, 340-349.	2.3	23
57	SMA-PAGE: A new method to examine complexes of membrane proteins using SMALP nano-encapsulation and native gel electrophoresis. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2019, 1861, 1437-1445.	2.6	22
58	Design, synthesis, and biological activity of diaryl ether inhibitors of <i>Toxoplasma gondii</i> enoyl reductase. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2013, 23, 2035-2043.	2.2	21
59	The Vacuolar ATPase – A Nano-scale Motor That Drives Cell Biology. <i>Sub-Cellular Biochemistry</i> , 2018, 87, 409-459.	2.4	21
60	Potent Tetrahydroquinolone Eliminates Apicomplexan Parasites. <i>Frontiers in Cellular and Infection Microbiology</i> , 2020, 10, 203.	3.9	21
61	Modification of Triclosan Scaffold in Search of Improved Inhibitors for Enoyl-ACP Carrier Protein (ACP) Reductase in <i>Toxoplasma gondii</i> . <i>ChemMedChem</i> , 2013, 8, 1138-1160.	3.2	20
62	Mechanism of inhibition of mouse <i>S<sub>3</sub></i> ( <i>K<sub>Ca</sub>5.1</i> ) potassium channels by quinine, quinidine and barium. <i>British Journal of Pharmacology</i> , 2015, 172, 4355-4363.	5.4	20
63	Pi sensing and signalling: from prokaryotic to eukaryotic cells. <i>Biochemical Society Transactions</i> , 2016, 44, 766-773.	3.4	20
64	The Acanthamoeba Shikimate Pathway has a Unique Molecular Arrangement and is Essential for Aromatic Amino Acid Biosynthesis. <i>Protist</i> , 2015, 166, 93-105.	1.5	19
65	In situ formation of magnetopolymersomes via electroporation for MRI. <i>Scientific Reports</i> , 2015, 5, 14311.	3.3	18
66	The conservation of phosphate-binding residues among PHT1 transporters suggests that distinct transport affinities are unlikely to result from differences in the phosphate-binding site. <i>Biochemical Society Transactions</i> , 2016, 44, 1541-1548.	3.4	18
67	Unprecedented Properties of Phenothiazines Unraveled by a NDH-2 Bioelectrochemical Assay Platform. <i>Journal of the American Chemical Society</i> , 2020, 142, 1311-1320.	13.7	18
68	Targeting KNa1.1 channels in KCNT1-associated epilepsy. <i>Trends in Pharmacological Sciences</i> , 2021, 42, 700-713.	8.7	18
69	Flexibility within the Rotor and Stators of the Vacuolar H <sup>+</sup> -ATPase. <i>PLoS ONE</i> , 2013, 8, e82207.	2.5	16
70	Substrate polyspecificity and conformational relevance in ABC transporters: new insights from structural studies. <i>Biochemical Society Transactions</i> , 2018, 46, 1475-1484.	3.4	16
71	Cryo-EM structure of human mitochondrial HSPD1. <i>IScience</i> , 2021, 24, 102022.	4.1	16
72	LAT1 (SLC7A5) and CD98hc (SLC3A2) complex dynamics revealed by single-particle cryo-EM. <i>Acta Crystallographica Section D: Structural Biology</i> , 2019, 75, 660-669.	2.3	16

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73	Structure of the protective nematode protease complex H-gal-GP and its conservation across roundworm parasites. <i>PLoS Pathogens</i> , 2020, 16, e1008465.	4.7	15
74	Understanding the apparent stator-rotor connections in the rotary ATPase family using coarse-grained computer modeling. <i>Proteins: Structure, Function and Bioinformatics</i> , 2014, 82, 3298-3311.	2.6	14
75	CSGID Solves Structures and Identifies Phenotypes for Five Enzymes in <i>Toxoplasma gondii</i> . <i>Frontiers in Cellular and Infection Microbiology</i> , 2018, 8, 352.	3.9	14
76	Dimeric structures of quinol-dependent nitric oxide reductases (qNORs) revealed by cryo-electron microscopy. <i>Science Advances</i> , 2019, 5, eaax1803.	10.3	14
77	On-grid and in-flow mixing for time-resolved cryo-EM. <i>Acta Crystallographica Section D: Structural Biology</i> , 2021, 77, 1233-1240.	2.3	14
78	Structure of the endocytic adaptor complex reveals the basis for efficient membrane anchoring during clathrin-mediated endocytosis. <i>Nature Communications</i> , 2021, 12, 2889.	12.8	13
79	Cycloalkane-modified amphiphilic polymers provide direct extraction of membrane proteins for CryoEM analysis. <i>Communications Biology</i> , 2021, 4, 1337.	4.4	13
80	Development of a triclosan scaffold which allows for adaptations on both the A- and B-ring for transport peptides. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2013, 23, 3551-3555.	2.2	12
81	Recent developments in the structural characterisation of the IR and IGF1R: implications for the design of IR-IGF1R hybrid receptor modulators. <i>RSC Medicinal Chemistry</i> , 2022, 13, 360-374.	3.9	12
82	The active form of quinol-dependent nitric oxide reductase from <i>Neisseria meningitidis</i> is a dimer. <i>IUCr</i> , 2020, 7, 404-415.	2.2	10
83	Expression, purification and preliminary crystallographic analysis of the <i>Toxoplasma gondii</i> enoyl reductase. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 604-606.	0.7	9
84	Xanthine-based photoaffinity probes allow assessment of ligand engagement by TRPC5 channels. <i>RSC Chemical Biology</i> , 2020, 1, 436-448.	4.1	9
85	Discrimination of Potent Inhibitors of <i>Toxoplasma gondii</i> Enoyl-Acyl Carrier Protein Reductase by a Thermal Shift Assay. <i>Biochemistry</i> , 2013, 52, 9155-9166.	2.5	8
86	Rotating with the brakes on and other unresolved features of the vacuolar ATPase. <i>Biochemical Society Transactions</i> , 2016, 44, 851-855.	3.4	8
87	The potential use of single-particle electron microscopy as a tool for structure-based inhibitor design. <i>Acta Crystallographica Section D: Structural Biology</i> , 2017, 73, 534-540.	2.3	8
88	Conformational changes during human P2X7 receptor activation examined by structural modelling and cysteine-based cross-linking studies. <i>Purinergic Signalling</i> , 2017, 13, 135-141.	2.2	7
89	Spherical-supported membranes as platforms for screening against membrane protein targets. <i>Analytical Biochemistry</i> , 2018, 549, 58-65.	2.4	6
90	The benzimidazole based drugs show good activity against <i>T. gondii</i> but poor activity against its proposed enoyl reductase enzyme target. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2014, 24, 911-916.	2.2	4

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91	Contribution of Val/Ile87 residue in the extracellular domain in agonist-induced current responses of the human and rat P2X7 receptors. <i>Purinergic Signalling</i> , 2020, 16, 485-490.	2.2	4
92	Detergent-Free Functionalization of Hybrid Vesicles with Membrane Proteins Using SMALPs. <i>Macromolecules</i> , 2022, 55, 3415-3422.	4.8	4
93	Cloning, purification and preliminary crystallographic analysis of the <i>Bacillus subtilis</i> GTPase YphCâ€ˆGDP complex. <i>Acta Crystallographica Section F: Structural Biology Communications</i> , 2006, 62, 435-437.	0.7	3
94	Emerging Role of Electron Microscopy in Drug Discovery. <i>Trends in Biochemical Sciences</i> , 2019, 44, 897-898.	7.5	3
95	Styrene maleic acid recovers proteins from mammalian cells and tissues while avoiding significant cell death. <i>Scientific Reports</i> , 2019, 9, 16408.	3.3	3
96	Crystallization and preliminary X-ray crystallographic studies on the class II cholesterol oxidase from <i>Burkholderia cepacia</i> containing bound flavin. <i>Acta Crystallographica Section D: Biological Crystallography</i> , 2002, 58, 2182-2183.	2.5	2
97	Characterization of the flexibility of the peripheral stalk of prokaryotic rotary A-ATPases by atomistic simulations. <i>Proteins: Structure, Function and Bioinformatics</i> , 2016, 84, 1203-1212.	2.6	2
98	The Growing Role of Electron Microscopy in Anti-parasitic Drug Discovery. <i>Current Medicinal Chemistry</i> , 2019, 25, 5279-5290.	2.4	2
99	No Longer Hidden Secrets of Proton Pumping: The Resolution Revolution Enlightens V-ATPases. <i>Molecular Cell</i> , 2018, 69, 921-922.	9.7	1
100	Moving in the mesoscale: Understanding the mechanics of cytoskeletal molecular motors by combining mesoscale simulations with imaging. <i>Wiley Interdisciplinary Reviews: Computational Molecular Science</i> , 2022, 12, e1570.	14.6	1
101	Need for Speed: Examining Protein Behaviour During CryoEM Grid Preparation at Different Timescales. <i>SSRN Electronic Journal</i> , 0, , .	0.4	1
102	A Tribute to Stephen Allan Baldwin. <i>Molecular Membrane Biology</i> , 2015, 32, 33-34.	2.0	0
103	Editorial. <i>Methods</i> , 2016, 100, 1-2.	3.8	0
104	Tyrosine 288 in the extracellular domain of the human P2X7 receptor is critical for receptor function revealed by structural modeling and site-directed mutagenesis. <i>Proteins: Structure, Function and Bioinformatics</i> , 2022, 90, 619-624.	2.6	0
105	Everyone needs good neighbours â€ˆ the intricate relationship between the acetylcholine-receptor channel and its membrane environment. <i>IUCr</i> , 2017, 4, 306-307.	2.2	0
106	EM studies of cytochrome bc 1 to elucidate inhibitor binding. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2018, 74, a121-a121.	0.1	0
107	Fast Grid Preparation for Time-Resolved Cryo-Electron Microscopy. <i>Journal of Visualized Experiments</i> , 2021, , .	0.3	0