Olaf S Andersen

List of Publications by Year
in descending order

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111 papers	7,589 citations	66343 42 h-index	54911 84 g-index
120 all docs	120 docs citations	120 times ranked	6740 citing authors

#	Article	IF	Citations
1	Bilayer Thickness and Membrane Protein Function: An Energetic Perspective. Annual Review of Biophysics and Biomolecular Structure, 2007, 36, 107-130.	18.3	738
2	Energetics of ion conduction through the gramicidin channel. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 117-122.	7.1	371
3	Energetics of Inclusion-Induced Bilayer Deformations. Biophysical Journal, 1998, 74, 1966-1983.	0.5	318
4	Bilayer-dependent inhibition of mechanosensitive channels by neuroactive peptide enantiomers. Nature, 2004, 430, 235-240.	27.8	271
5	Lipid bilayer regulation of membrane protein function: gramicidin channels as molecular force probes. Journal of the Royal Society Interface, 2010, 7, 373-395.	3.4	265
6	Phytochemicals Perturb Membranes and Promiscuously Alter Protein Function. ACS Chemical Biology, 2014, 9, 1788-1798.	3.4	241
7	Regulation of Sodium Channel Function by Bilayer Elasticity. Journal of General Physiology, 2004, 123, 599-621.	1.9	239
8	The Inhibitory Effect of (â˜)-Epigallocatechin Gallate on Activation of the Epidermal Growth Factor Receptor Is Associated with Altered Lipid Order in HT29 Colon Cancer Cells. Cancer Research, 2007, 67, 6493-6501.	0.9	189
9	Molecular dynamics â€" potential of mean force calculations as a tool for understanding ion permeation and selectivity in narrow channels. Biophysical Chemistry, 2006, 124, 251-267.	2.8	181
10	Spring Constants for Channel-Induced Lipid Bilayer Deformations Estimates Using Gramicidin Channels. Biophysical Journal, 1999, 76, 889-895.	0.5	177
11	Amino acid sequence modulation of gramicidin channel function: effects of tryptophan-to-phenylalanine substitutions on the single-channel conductance and duration. Biochemistry, 1991, 30, 8830-8839.	2.5	161
12	Are MDâ€"PhD Programs Meeting Their Goals? An Analysis of Career Choices Made by Graduates of 24 MDâ€"PhD Programs. Academic Medicine, 2010, 85, 1.	1.6	148
13	Inclusion-Induced Bilayer Deformations: Effects of Monolayer Equilibrium Curvature. Biophysical Journal, 2000, 79, 2583-2604.	0.5	146
14	Lipid Bilayer Electrostatic Energy, Curvature Stress, and Assembly of Gramicidin Channelsâ€. Biochemistry, 1997, 36, 5695-5701.	2.5	144
15	Genistein Can Modulate Channel Function by a Phosphorylation-Independent Mechanism:â€‰ Importance of Hydrophobic Mismatch and Bilayer Mechanics. Biochemistry, 2003, 42, 13646-13658.	2.5	138
16	Ion Permeation through a Narrow Channel: Using Gramicidin to Ascertain All-Atom Molecular Dynamics Potential of Mean Force Methodology and Biomolecular Force Fields. Biophysical Journal, 2006, 90, 3447-3468.	0.5	133
17	Alcohol's Effects on Lipid Bilayer Properties. Biophysical Journal, 2011, 101, 847-855.	0.5	133
18	Curcumin is a Modulator of Bilayer Material Properties. Biochemistry, 2007, 46, 10384-10391.	2.5	132

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19	Docosahexaenoic acid alters bilayer elastic properties. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9638-9643.	7.1	131
20	Structure of Gramicidin A in a Lipid Bilayer Environment Determined Using Molecular Dynamics Simulations and Solid-State NMR Data. Journal of the American Chemical Society, 2003, 125, 9868-9877.	13.7	123
21	The conformational preference of gramicidin channels is a function of lipid bilayer thickness 1. FEBS Letters, 1997, 412, 15-20.	2.8	120
22	Gramicidin Channels. IEEE Transactions on Nanobioscience, 2005, 4, 10-20.	3.3	115
23	Amphiphile regulation of ion channel function by changes in the bilayer spring constant. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 15427-15430.	7.1	111
24	History and Outcomes of 50 Years of Physicianâ€“Scientist Training in Medical Scientist Training Programs. Academic Medicine, 2017, 92, 1390-1398.	1.6	98
25	Induction of conductance heterogeneity in gramicidin channels. Biochemistry, 1989, 28, 6571-6583.	2.5	94
26	The Preference of Tryptophan for Membrane Interfaces. Journal of Biological Chemistry, 2008, 283, 22233-22243.	3.4	93
27	Ion-Induced Defect Permeation of Lipid Membranes. Biophysical Journal, 2014, 106, 586-597.	0.5	93
28	Influence of Hydrophobic Mismatch on Structures and Dynamics of Gramicidin A and Lipid Bilayers. Biophysical Journal, 2012, 102, 1551-1560.	0.5	92
29	Structural basis of Ca2+-dependent activation and lipid transport by a TMEM16 scramblase. ELife, 2019, 8, .	6.0	87
30	Electrogenic proton transport in epithelial membranes. Journal of Membrane Biology, 1982, 65, 155-174.	2.1	86
31	Hydrophobic Coupling of Lipid Bilayer Energetics to Channel Function. Journal of General Physiology, 2003, 121, 477-493.	1.9	85
32	Quantitative Modeling of Membrane Deformations by Multihelical Membrane Proteins: Application to G-Protein Coupled Receptors. Biophysical Journal, 2011, 101, 2092-2101.	0.5	85
33	Energetics of gramicidin hybrid channel formation as a test for structural equivalence. Journal of Molecular Biology, 1990, 211, 221-234.	4.2	81
34	Platelet-activating factor is a general membrane perturbant. Biochimica Et Biophysica Acta - Biomembranes, 1989, 987, 129-132.	2.6	75
35	[28] Design and characterization of gramicidin channels. Methods in Enzymology, 1999, 294, 525-550.	1.0	66
36	On the helix sense of gramicidin A single channels. Proteins: Structure, Function and Bioinformatics, 1992, 12, 49-62.	2.6	64

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37	Energetics of Heterodimer Formation among Gramicidin Analogues with an NH2-terminal Addition or Deletion. Journal of Molecular Biology, 1993, 231, 1102-1121.	4.2	63
38	Screening for Small Molecules' Bilayer-Modifying Potential Using a Gramicidin-Based Fluorescence Assay. Assay and Drug Development Technologies, 2010, 8, 427-436.	1.2	60
39	Whole Cell Screen for Inhibitors of pH Homeostasis in Mycobacterium tuberculosis. PLoS ONE, 2013, 8, e68942.	2.5	60
40	HCN1 Channels as Targets for Anesthetic and Nonanesthetic Propofol Analogs in the Amelioration of Mechanical and Thermal Hyperalgesia in a Mouse Model of Neuropathic Pain. Journal of Pharmacology and Experimental Therapeutics, 2013, 345, 363-373.	2.5	59
41	Thiazolidinedione insulin sensitizers alter lipid bilayer properties and voltage-dependent sodium channel function: implications for drug discovery. Journal of General Physiology, 2011, 138, 249-270.	1.9	48
42	Gramicidin A Channel Formation Induces Local Lipid Redistribution I: Experiment and Simulation. Biophysical Journal, 2017, 112, 1185-1197.	0.5	48
43	Antidepressants are modifiers of lipid bilayer properties. Journal of General Physiology, 2019, 151, 342-356.	1.9	48
44	Distinction between dipolar and inductive effects in modulating the conductance of gramicidin channels. Biochemistry, 1990, 29, 512-520.	2.5	45
45	Clinical concentrations of chemically diverse general anesthetics minimally affect lipid bilayer properties. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 3109-3114.	7.1	45
46	Gramicidin Increases Lipid Flip-Flop in Symmetric and Asymmetric Lipid Vesicles. Biophysical Journal, 2019, 116, 860-873.	0.5	44
47	Perspectives on: Ion selectivity. Journal of General Physiology, 2011, 137, 393-395.	1.9	41
48	Small-Molecule Photostabilizing Agents are Modifiers of Lipid Bilayer Properties. Biophysical Journal, 2013, 104, 2410-2418.	0.5	41
49	The Heterogeneous Collision Velocity for Hydrated Ions in Aqueous Solutions Is â^¼104cm/s. The Journal of Physical Chemistry, 1996, 100, 4622-4629.	2.9	39
50	Cannabidiol inhibits the skeletal muscle Nav1.4 by blocking its pore and by altering membrane elasticity. Journal of General Physiology, 2021, 153, .	1.9	38
51	Stabilizing Effect of D-Alanine2 in Gramicidin Channels. Biochemistry, 1995, 34, 6827-6837.	2.5	36
52	Interactions of drugs and amphiphiles with membranes: modulation of lipid bilayer elastic properties by changes in acyl chain unsaturation and protonation. Faraday Discussions, 2013, 161, 461-480.	3.2	36
53	A Combined Experimental and Theoretical Study of Ion Solvation in Liquid N-Methylacetamide. Journal of the American Chemical Society, 2010, 132, 10847-10856.	13.7	35
54	Calcium ions open a selectivity filter gate during activation of the MthK potassium channel. Nature Communications, 2015, 6, 8342.	12.8	35

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55	A general mechanism for drug promiscuity: Studies with amiodarone and other antiarrhythmics. Journal of General Physiology, 2015, 146, 463-475.	1.9	35
56	Single-Molecule Methods for Monitoring Changes in Bilayer Elastic Properties. Methods in Molecular Biology, 2007, 400, 543-570.	0.9	35
57	Regulation of Ion Channel Function by the Host Lipid Bilayer Examined by a Stopped-Flow Spectrofluorometric Assay. Biophysical Journal, 2014, 106, 1070-1078.	0.5	33
58	Free Energy Simulations:â€‰ Thermodynamic Reversibility and Variability. Journal of Physical Chemistry B, 2000, 104, 5179-5190.	2.6	32
59	Effect of Statins on the Nanomechanical Properties of Supported Lipid Bilayers. Biophysical Journal, 2016, 111, 363-372.	0.5	32
60	Cholesterol Modulates the Membrane Effects and Spatial Organization of Membrane-Penetrating Ligands for G-Protein Coupled Receptors. Journal of Physical Chemistry B, 2010, 114, 12046-12057.	2.6	31
61	Gramicidin A Backbone and Side Chain Dynamics Evaluated by Molecular Dynamics Simulations and Nuclear Magnetic Resonance Experiments. I: Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2011, 115, 7417-7426.	2.6	31
62	Gramicidin-based Fluorescence Assay; for Determining Small Molecules Potential for Modifying Lipid Bilayer Properties. Journal of Visualized Experiments, 2010, , .	0.3	30
63	Divergent effects of anesthetics on lipid bilayer properties and sodium channel function. European Biophysics Journal, 2017, 46, 617-626.	2.2	30
64	2,3-Butanedione Monoxime Affects Cystic Fibrosis Transmembrane Conductance Regulator Channel Function through Phosphorylation-Dependent and Phosphorylation-Independent Mechanisms: The Role of Bilayer Material Properties. Molecular Pharmacology, 2006, 70, 2015-2026.	2.3	29
65	Linear rate-equilibrium relations arising from ion channel-bilayer energetic coupling. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 12717-12722.	7.1	28
66	Timing and Reset Mechanism of GTP Hydrolysis-Driven Conformational Changes of Atlastin. Structure, 2017, 25, 997-1010.e4.	3.3	27
67	Introduction to Biophysics Week: What is Biophysics?. Biophysical Journal, 2016, 110, E01-E03.	0.5	26
68	A Designed Inhibitor of a CLC Antiporter Blocks Function through a Unique Binding Mode. Chemistry and Biology, 2012, 19, 1460-1470.	6.0	25
69	Volatile anesthetics inhibit sodium channels without altering bulk lipid bilayer properties. Journal of General Physiology, 2014, 144, 545-560.	1.9	25
70	The Two-Membrane Model of Epithelial Transport: Koefoed-Johnsen and Ussing (1958). Journal of General Physiology, 2008, 132, 607-612.	1.9	24
71	Phosphoinositides alter lipid bilayer properties. Journal of General Physiology, 2013, 141, 673-690.	1.9	23
72	Gateways to the Laboratory. Academic Medicine, 2017, 92, 628-634.	1.6	23

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73	Fluorinated Alcoholsâ€™ Effects on Lipid Bilayer Properties. Biophysical Journal, 2018, 115, 679-689.	0.5	23
74	Effects of green tea catechins on gramicidin channel function and inferred changes in bilayer properties. FEBS Letters, 2011, 585, 3101-3105.	2.8	22
75	Gramicidin A Channel Formation Induces LocalÂLipid Redistribution II: A 3D Continuum Elastic Model. Biophysical Journal, 2017, 112, 1198-1213.	0.5	22
76	Modulation of Gramicidin Channel Structure and Function by the Aliphatic â€œSpacerâ€•Residues 10, 12, and 14 between the Tryptophans. Biochemistry, 1999, 38, 1030-1039.	2.5	20
77	Assessing smectic liquid-crystal continuum models for elastic bilayer deformations. Chemistry and Physics of Lipids, 2013, 169, 19-26.	3.2	20
78	First-generation physician-scientists are under-represented and need better support. Nature Medicine, 2021, 27, 752-755.	30.7	20
79	A Brief History of The Journal of General Physiology. Journal of General Physiology, 2005, 125, 3-12.	1.9	19
80	Exchange of Gramicidin between Lipid Bilayers: Implications for the Mechanism of Channel Formation. Biophysical Journal, 2017, 113, 1757-1767.	0.5	18
81	Synthetic Analogues of the Snail Toxin 6-Bromo-2-mercaptotryptamine Dimer (BrMT) Reveal That Lipid Bilayer Perturbation Does Not Underlie Its Modulation of Voltage-Gated Potassium Channels. Biochemistry, 2018, 57, 2733-2743.	2.5	18
82	The Membrane Interface Dictates Different Anchor Roles for â€œInner Pairâ€•and â€œOuter Pairâ€•Tryptophan Indole Rings in Gramicidin A Channels. Biochemistry, 2011, 50, 4855-4866.	2.5	17
83	Conformational control through translocational regulation: a new view of secretory and membrane protein folding. BioEssays, 2002, 24, 741-748.	2.5	16
84	Stopped-Flow Fluorometric Ion Flux Assay for Ligand-Gated Ion Channel Studies. Methods in Molecular Biology, 2018, 1684, 223-235.	0.9	16
85	Energetics of Double-Ion Occupancy in the Gramicidin A Channel. Journal of Physical Chemistry B, 2010, 114, 13881-13888.	2.6	15
86	Molecular Mechanism for Gramicidin Dimerization and Dissociation in Bilayers of Different Thickness. Biophysical Journal, 2019, 117, 1831-1844.	0.5	15
87	Characterizing Residue-Bilayer Interactions Using Gramicidin A as a Scaffold and Tryptophan Substitutions as Probes. Journal of Chemical Theory and Computation, 2017, 13, 5054-5064.	5.3	14
88	Gramicidin Channels: Versatile Tools. , 2007, , 33-80.		14
89	A KcsA/MloK1 Chimeric Ion Channel Has Lipid-dependent Ligand-binding Energetics. Journal of Biological Chemistry, 2014, 289, 9535-9546.	3.4	12
90	Atomistic Characterization of Gramicidin Channel Formation. Journal of Chemical Theory and Computation, 2021, 17, 7-12.	5.3	12

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91	Mechanisms underlying drug-mediated regulation of membrane protein function. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
92	How perceptions of a successful physician-scientist varies with gender and academic rank: toward defining physician-scientist's success. BMC Medical Education, 2020, 20, 50.	2.4	11
93	Surface Charges near the Guanidinium Neurotoxin Binding Site. Annals of the New York Academy of Sciences, 1986, 479, 306-312.	3.8	10
94	Assessing the Perturbing Effects of Drugs on Lipid Bilayers Using Gramicidin Channel-Based In Silico and In Vitro Assays. Journal of Medicinal Chemistry, 2020, 63, 11809-11818.	6.4	10
95	Models and Mechanistic Insight. Journal of General Physiology, 2008, 131, 515-519.	1.9	7
96	Quantitative Characterization of Proteinâ€“Lipid Interactions by Free Energy Simulation between Binary Bilayers. Journal of Chemical Theory and Computation, 2019, 15, 6491-6503.	5.3	7
97	Bilayer Effects of Antimalarial Compounds. PLoS ONE, 2015, 10, e0142401.	2.5	7
98	Polar Groups in Membrane Channels: Consequences of Replacing Alanines with Serines in Membrane-Spanning Gramicidin Channels. Biochemistry, 2010, 49, 6856-6865.	2.5	6
99	Gramicidin A Backbone and Side Chain Dynamics Evaluated by Molecular Dynamics Simulations and Nuclear Magnetic Resonance Experiments. II: Nuclear Magnetic Resonance Experiments. Journal of Physical Chemistry B, 2011, 115, 7427-7432.	2.6	5
100	Through thick and thin. Nature Chemical Biology, 2013, 9, 667-668.	8.0	5
101	Perspectives on: The response to osmotic challenges. Journal of General Physiology, 2015, 145, 371-372.	1.9	4
102	Regulation of Gramicidin Channel Function Solely by Changes in Lipid Intrinsic Curvature. Frontiers in Physiology, 2022, 13, 836789.	2.8	4
103	Carbodiimide modification reduces the conductance and increases the tetrodotoxin sensitivity in batrachotoxin-modified sodium channels. Pflugers Archiv European Journal of Physiology, 1992, 421, 262-269.	2.8	3
104	Capsaicin as an amphipathic modulator of Na_V1.5 mechanosensitivity. Channels, 2022, 16, 9-26.	2.8	3
105	Medical Scientist Training Programs: Federal Funding Offers Support and Drives Innovation. Academic Medicine, 2010, 85, 1559.	1.6	2
106	Gramicidin Channels as Cation Nanotubes. , 2011, , 11-30.		2
107	Design and Characterization of Gramicidin Channels with Side Chain or Backbone Mutations. Novartis Foundation Symposium, 1999, 225, 44-61.	1.1	2
108	50-Year Anniversary of Sliding Filament. Journal of General Physiology, 2004, 123, 629-629.	1.9	1

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109	A One-Dimensional Continuum Elastic Model for Membrane-Embedded Gramicidin Dimer Dissociation. PLoS ONE, 2011, 6, e15563.	2.5	1
110	Regulation of Protein Function by Membrane Elastic Properties. Biological and Medical Physics Series, 2011, , 187-203.	0.4	0
111	Perspectives on: Conformational coupling in ion channels. Journal of General Physiology, 2012, 140, 595-597.	1.9	0