

Antonio Alcaraz

List of Publications by Year in descending order

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88
papers

2,251
citations

257450

24
h-index

223800

46
g-index

88
all docs

88
docs citations

88
times ranked

2671
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynorphin A induces membrane permeabilization by formation of proteolipidic pores. Insights from electrophysiology and computational simulations. <i>Computational and Structural Biotechnology Journal</i> , 2022, 20, 230-240.	4.1	4
2	Single-molecule conformational dynamics of viroporin ion channels regulated by lipid-protein interactions. <i>Bioelectrochemistry</i> , 2021, 137, 107641.	4.6	9
3	Specific adsorption of trivalent cations in biological nanopores determines conductance dynamics and reverses ionic selectivity. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1352-1362.	2.8	4
4	Assessing the Role of Electrostatic Interactions in the Mechanism of Beta-Barrel Channel Gating. <i>Biophysical Journal</i> , 2021, 120, 156a.	0.5	0
5	Dynorphin a Induces Membrane Permeabilization by Formation of Proteolipidic Pores. <i>Biophysical Journal</i> , 2021, 120, 142a.	0.5	0
6	Transport mechanisms of SARS-CoV-E viroporin in calcium solutions: Lipid-dependent Anomalous Mole Fraction Effect and regulation of pore conductance. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2021, 1863, 183590.	2.6	13
7	Gating of Bacterial Beta-Barrel Channels is Regulated by Salt Concentration and Lipid Composition. <i>Biophysical Journal</i> , 2020, 118, 416a.	0.5	0
8	Lipid Headgroup Charge and Acyl Chain Composition Modulate Closure of Bacterial β -Barrel Channels. <i>International Journal of Molecular Sciences</i> , 2019, 20, 674.	4.1	11
9	Structural biology workflow for the expression and characterization of functional human sodium glucose transporter type 1 in <i>Pichia pastoris</i> . <i>Scientific Reports</i> , 2019, 9, 1203.	3.3	8
10	Mutation-induced changes of transmembrane pore size revealed by combined ion-channel conductance and single vesicle permeabilization analyses. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2018, 1860, 1015-1021.	2.6	7
11	Effect of the Endosomal Acidification on Small Ion Transport Through the Anthrax Toxin PA63 Channel. <i>Biophysical Journal</i> , 2018, 114, 559a.	0.5	0
12	Interfacial Effects Dominate Ion Permeation through Membrane Channels in Low Ionic Strength Solutions. <i>Biophysical Journal</i> , 2018, 114, 260a.	0.5	0
13	Scaling Behavior of Ionic Transport in Membrane Nanochannels. <i>Nano Letters</i> , 2018, 18, 6604-6610.	9.1	20
14	Scaling Laws for Ionic Transport in Nanochannels: Bulk, Surface and Interfacial Effects. <i>Biophysical Journal</i> , 2018, 114, 609a.	0.5	0
15	Fluctuation-Driven Transport in Bacterial Channels under Acidic Stress. <i>Biophysical Journal</i> , 2017, 112, 545a.	0.5	0
16	Effect of endosomal acidification on small ion transport through the anthrax toxin PA_{63} channel. <i>FEBS Letters</i> , 2017, 591, 3481-3492.	2.8	5
17	Ion Transport in Confined Geometries below the Nanoscale: Access Resistance Dominates Protein Channel Conductance in Diluted Solutions. <i>ACS Nano</i> , 2017, 11, 10392-10400.	14.6	30
18	Fluctuation-Driven Transport in Biological Nanopores. A 3D Poisson-Nernst-Planck Study. <i>Entropy</i> , 2017, 19, 116.	2.2	7

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19	Bioelectrical Signals and Ion Channels in the Modeling of Multicellular Patterns and Cancer Biophysics. <i>Scientific Reports</i> , 2016, 6, 20403.	3.3	55
20	Buried Charges and their Effect on Ion Channel Selectivity. Analytical Solutions, Numerical Calculations and MD Simulations. <i>Biophysical Journal</i> , 2016, 110, 245a.	0.5	0
21	CSFV p7 Viroporin ION Channel Activity in Lipid Bilayers Mimicking the ER Membrane. <i>Biophysical Journal</i> , 2016, 110, 115a.	0.5	1
22	On the different sources of cooperativity in pH titrating sites of a membrane protein channel. <i>European Physical Journal E</i> , 2016, 39, 29.	1.6	2
23	Effects of extreme pH on ionic transport through protein nanopores: the role of ion diffusion and charge exclusion. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 21668-21675.	2.8	10
24	Stochastic pumping of ions based on colored noise in bacterial channels under acidic stress. <i>Nanoscale</i> , 2016, 8, 13422-13428.	5.6	12
25	Ion channel activity of the CSFV p7 viroporin in surrogates of the ER lipid bilayer. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2016, 1858, 30-37.	2.6	14
26	Excess white noise to probe transport mechanisms in a membrane channel. <i>Physical Review E</i> , 2015, 91, 062704.	2.1	4
27	Relevance of SARS-CoV E Protein Ion Channel Activity in Virus Pathogenesis. <i>Biophysical Journal</i> , 2015, 108, 582a.	0.5	0
28	Selectivity of Protein Ion Channels and the Role of Buried Charges. Analytical Solutions, Numerical Calculations, and MD Simulations. <i>Journal of Physical Chemistry B</i> , 2015, 119, 8475-8479.	2.6	8
29	Current Fluctuation Analysis in a Protein Nanopore. <i>Biophysical Journal</i> , 2015, 108, 634a.	0.5	0
30	Bacterial Porins. <i>Springer Series in Biophysics</i> , 2015, , 101-121.	0.4	0
31	Severe Acute Respiratory Syndrome Coronavirus Envelope Protein Ion Channel Activity Promotes Virus Fitness and Pathogenesis. <i>PLoS Pathogens</i> , 2014, 10, e1004077.	4.7	440
32	Lipid charge regulation of non-specific biological ion channels. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 3881-3893.	2.8	21
33	Entropy-enthalpy compensation at the single protein level: pH sensing in the bacterial channel OmpF. <i>Nanoscale</i> , 2014, 6, 15210-15215.	5.6	7
34	Membrane Potential Bistability in Nonexcitable Cells as Described by Inward and Outward Voltage-Gated Ion Channels. <i>Journal of Physical Chemistry B</i> , 2014, 118, 12444-12450.	2.6	32
35	Amphiphilic COSAN and I2-COSAN crossing synthetic lipid membranes: planar bilayers and liposomes. <i>Chemical Communications</i> , 2014, 50, 6700.	4.1	68
36	Experimental demonstration of charge inversion in a protein channel in the presence of monovalent cations. <i>Electrochemistry Communications</i> , 2014, 48, 32-34.	4.7	8

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37	Experimental Observation of Surface Charge Inversion in a Biological Nanopore in Presence of Monovalent and Multivalent Cations. <i>Biophysical Journal</i> , 2014, 106, 210a.	0.5	0
38	Electrical Pumping of Potassium Ions Against an External Concentration Gradient in a Biological Ion Channel. <i>Biophysical Journal</i> , 2014, 106, 416a.	0.5	0
39	Cobaltabisdicarbollide Macroanion is able to Diffuse across the Lipid Membrane; Study of Kinetics and Transport. <i>Biophysical Journal</i> , 2014, 106, 210a.	0.5	0
40	Current Fluctuation Analysis to Study Mg ²⁺ -Binding in the Bacterial Porin OmpF. <i>Biophysical Journal</i> , 2013, 104, 630a.	0.5	0
41	Analysis of SARS-CoV E protein ion channel activity by tuning the protein and lipid charge. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2013, 1828, 2026-2031.	2.6	82
42	Electrical pumping of potassium ions against an external concentration gradient in a biological ion channel. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	36
43	Ion Channels Formed by SARS Coronavirus Envelope Protein: Lipid Regulation of Conductance and Selectivity. <i>Biophysical Journal</i> , 2013, 104, 632a.	0.5	1
44	Electrostatic Interactions Drive the Nonsteric Directional Block of OmpF Channel by La ³⁺ . <i>Langmuir</i> , 2013, 29, 15320-15327.	3.5	10
45	La ³⁺ -Induced Asymmetric Current Inhibition in OmpF Channel. <i>Biophysical Journal</i> , 2013, 104, 630a.	0.5	0
46	Hydrophobic Pulmonary Surfactant Proteins SP-B and SP-C Induce Pore Formation in Planar Lipid Membranes: Evidence for Proteolipid Pores. <i>Biophysical Journal</i> , 2013, 104, 146-155.	0.5	45
47	Divalent Metal Ion Transport across Large Biological Ion Channels and Their Effect on Conductance and Selectivity. <i>Biochemistry Research International</i> , 2012, 2012, 1-12.	3.3	6
48	Modulation of Conductance and Ion Selectivity of OmpF Porin by La ³⁺ Ions. <i>Biophysical Journal</i> , 2012, 102, 335a.	0.5	0
49	On Channel Activity of Synthetic Peptides Derived from Severe and Acute Respiratory Syndrome Coronavirus (SARS-CoV) E Protein. <i>Biophysical Journal</i> , 2012, 102, 656a-657a.	0.5	2
50	Protein Ion Channels as Molecular Ratchets. Switchable Current Modulation in Outer Membrane Protein F Porin Induced by Millimolar La ³⁺ Ions. <i>Journal of Physical Chemistry C</i> , 2012, 116, 6537-6542.	3.1	28
51	Coronavirus E protein forms ion channels with functionally and structurally-involved membrane lipids. <i>Virology</i> , 2012, 432, 485-494.	2.4	189
52	Increased salt concentration promotes competitive block of OmpF channel by protons. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2012, 1818, 2777-2782.	2.6	16
53	Entropic Modulation of Ion Transport through OmpF Channel. Molecular Basis of pH Sensing Derived from Cooperative Interactions. <i>Biophysical Journal</i> , 2012, 102, 269a-270a.	0.5	1
54	Divalent cations reduce the pH sensitivity of OmpF channel inducing the pK _a shift of key acidic residues. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 563-569.	2.8	18

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55	Insights on the permeability of wide protein channels: measurement and interpretation of ion selectivity. <i>Integrative Biology (United Kingdom)</i> , 2011, 3, 159-172.	1.3	49
56	Divalent Cations Reduce the pH Sensitivity of OmpF Channel Inducing the PKA Shift of Key Acidic Residues. <i>Biophysical Journal</i> , 2011, 100, 331a.	0.5	0
57	Measurement and Interpretation of Ion Selectivity in Wide Channels: Merging Information from Different Approaches. <i>Biophysical Journal</i> , 2011, 100, 577a.	0.5	0
58	Effect of Hydrophobic Surfactant Proteins SP-B and SP-C on the Permeability of Phospholipid Membranes. <i>Biophysical Journal</i> , 2011, 100, 337a.	0.5	0
59	Effects of Divalent Cations on the Single-Channel Conductance of the OmpF Channel: Linearity, Saturation and Blocking. <i>Biophysical Journal</i> , 2011, 100, 577a.	0.5	0
60	Linearity, saturation and blocking in a large multiionic channel: Divalent cation modulation of the OmpF porin conductance. <i>Biochemical and Biophysical Research Communications</i> , 2011, 404, 330-334.	2.1	15
61	Overcharging below the nanoscale: Multivalent cations reverse the ion selectivity of a biological channel. <i>Physical Review E</i> , 2010, 81, 021912.	2.1	40
62	Overcharging Below the Nanoscale: Multivalent Cations Reverse the Ion Selectivity of a Biological Channel. <i>Biophysical Journal</i> , 2010, 98, 17a.	0.5	0
63	Increased Salt Concentration Promotes Negative Cooperativity in OmpF Channel. <i>Biophysical Journal</i> , 2010, 98, 333a.	0.5	0
64	A fluid approach to simple circuits. <i>Nature Nanotechnology</i> , 2009, 4, 403-404.	31.5	16
65	Directional ion selectivity in a biological nanopore with bipolar structure. <i>Journal of Membrane Science</i> , 2009, 331, 137-142.	8.2	38
66	Diffusion, Exclusion, and Specific Binding in a Large Channel: A Study of OmpF Selectivity Inversion. <i>Biophysical Journal</i> , 2009, 96, 56-66.	0.5	77
67	Dielectric saturation of water in a membrane protein channel. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 358-365.	2.8	58
68	Dielectric Saturation of Water in a Protein Channel. <i>Biophysical Journal</i> , 2009, 96, 603a.	0.5	0
69	Ion Selectivity of a Biological Channel at High Concentration Ratio: Insights on Small Ion Diffusion and Binding. <i>Journal of Physical Chemistry B</i> , 2009, 113, 8745-8751.	2.6	27
70	Negative Cooperativity in a Protein Ion Channel Revealed by Current Noise, Conductance and Selectivity Experiments. <i>Biophysical Journal</i> , 2009, 96, 603a.	0.5	0
71	Directional Ion Selectivity In An Ion Channel With Bipolar Charge Distribution. <i>Biophysical Journal</i> , 2009, 96, 662a.	0.5	0
72	Electrostatic properties and macroscopic electrodiffusion in OmpF porin and mutants. <i>Bioelectrochemistry</i> , 2007, 70, 320-327.	4.6	40

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73	A pH-Tunable Nanofluidic Diode: Electrochemical Rectification in a Reconstituted Single Ion Channel. <i>Journal of Physical Chemistry B</i> , 2006, 110, 21205-21209.	2.6	117
74	Salting Out the Ionic Selectivity of a Wide Channel: The Asymmetry of OmpF. <i>Biophysical Journal</i> , 2004, 87, 943-957.	0.5	155
75	Modeling of pH-Switchable Ion Transport and Selectivity in Nanopore Membranes with Fixed Charges. <i>Journal of Physical Chemistry B</i> , 2003, 107, 13178-13187.	2.6	64
76	Heat loss and hypothermia in free diving: Estimation of survival time under water. <i>American Journal of Physics</i> , 2003, 71, 333-337.	0.7	7
77	Simple molecular model for the binding of antibiotic molecules to bacterial ion channels. <i>Journal of Chemical Physics</i> , 2003, 119, 8097-8102.	3.0	10
78	Comment on "Role of the centrifugal force in vehicle roll," by Rod Cross [<i>Am. J. Phys.</i> 67 (5), 447-448 (1998)]. <i>American Journal of Physics</i> , 2002, 70, 556-557.	0.7	0
79	Donnan Equilibrium of Ionic Drugs in pH-Dependent Fixed Charge Membranes: Theoretical Modeling. <i>Journal of Colloid and Interface Science</i> , 2002, 253, 171-179.	9.4	25
80	Conductive and Capacitive Properties of the Bipolar Membrane Junction Studied by AC Impedance Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2001, 105, 11669-11677.	2.6	32
81	Modeling of Amino Acid Electrodifusion through Fixed Charge Membranes. <i>Journal of Colloid and Interface Science</i> , 2001, 242, 164-173.	9.4	9
82	The role of the salt electrolyte on the electrical conductive properties of a polymeric bipolar membrane. <i>Journal of Electroanalytical Chemistry</i> , 2001, 513, 36-44.	3.8	9
83	Effects of water dielectric saturation on the space charge junction of a fixed-charge bipolar membrane. <i>Chemical Physics Letters</i> , 2000, 326, 87-92.	2.6	24
84	pH and supporting electrolyte concentration effects on the passive transport of cationic and anionic drugs through fixed charge membranes. <i>Journal of Membrane Science</i> , 1999, 161, 143-155.	8.2	22
85	Electric field-assisted proton transfer and water dissociation at the junction of a fixed-charge bipolar membrane. <i>Chemical Physics Letters</i> , 1998, 294, 406-412.	2.6	112
86	AC impedance spectra of bipolar membranes: an experimental study. <i>Journal of Membrane Science</i> , 1998, 150, 43-56.	8.2	27
87	Model calculations of ion transport against its concentration gradient when the driving force is a pH difference across a charged membrane. <i>Journal of Membrane Science</i> , 1997, 135, 135-144.	8.2	20
88	Effects of pH on ion transport in weak amphoteric membranes. <i>Journal of Electroanalytical Chemistry</i> , 1997, 436, 119-125.	3.8	24