

Mary H Cheng

List of Publications by Year in descending order

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67
papers

2,388
citations

236925

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h-index

233421

45
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75
all docs

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docs citations

75
times ranked

3446
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular Basis for Cation Selectivity in Claudin-2-based Paracellular Pores: Identification of an Electrostatic Interaction Site. <i>Journal of General Physiology</i> , 2009, 133, 111-127.	1.9	273
2	Superantigenic character of an insert unique to SARS-CoV-2 spike supported by skewed TCR repertoire in patients with hyperinflammation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 25254-25262.	7.1	252
3	HLA class I-associated expansion of TRBV11-2 T cells in multisystem inflammatory syndrome in children. <i>Journal of Clinical Investigation</i> , 2021, 131, .	8.2	130
4	Exploring the Conformational Transitions of Biomolecular Systems Using a Simple Two-State Anisotropic Network Model. <i>PLoS Computational Biology</i> , 2014, 10, e1003521.	3.2	112
5	COVID-19-associated multisystem inflammatory syndrome in children (MIS-C): A novel disease that mimics toxic shock syndrome—the superantigen hypothesis. <i>Journal of Allergy and Clinical Immunology</i> , 2021, 147, 57-59.	2.9	87
6	Molecular Mechanism of Dopamine Transport by Human Dopamine Transporter. <i>Structure</i> , 2015, 23, 2171-2181.	3.3	81
7	Complete Mapping of Substrate Translocation Highlights the Role of LeuT N-terminal Segment in Regulating Transport Cycle. <i>PLoS Computational Biology</i> , 2014, 10, e1003879.	3.2	71
8	Monoamine transporters: structure, intrinsic dynamics and allosteric regulation. <i>Nature Structural and Molecular Biology</i> , 2019, 26, 545-556.	8.2	68
9	Coupled Global and Local Changes Direct Substrate Translocation by a Neurotransmitter-Sodium Symporter Ortholog LeuT. <i>Biophysical Journal</i> , 2013, 105, 630-639.	0.5	65
10	Insights into the Modulation of Dopamine Transporter Function by Amphetamine, Orphenadrine, and Cocaine Binding. <i>Frontiers in Neurology</i> , 2015, 6, 134.	2.4	64
11	Multisystem Inflammatory Syndrome in Children and Long COVID: The SARS-CoV-2 Viral Superantigen Hypothesis. <i>Frontiers in Immunology</i> , 0, 13, .	4.8	56
12	Structure-Encoded Global Motions and Their Role in Mediating Protein-Substrate Interactions. <i>Biophysical Journal</i> , 2015, 109, 1101-1109.	0.5	55
13	<i>In Silico</i> Models for the Human $\alpha 4\beta 2$ Nicotinic Acetylcholine Receptor. <i>Journal of Physical Chemistry B</i> , 2008, 112, 13981-13990.	2.6	44
14	Molecular Dynamics and Brownian Dynamics Investigation of Ion Permeation and Anesthetic Halothane Effects on a Proton-Gated Ion Channel. <i>Journal of the American Chemical Society</i> , 2010, 132, 16442-16449.	13.7	44
15	Anesthetic Binding in a Pentameric Ligand-Gated Ion Channel: GLIC. <i>Biophysical Journal</i> , 2010, 99, 1801-1809.	0.5	43
16	Asymmetric Ligand Binding Facilitates Conformational Transitions in Pentameric Ligand-Gated Ion Channels. <i>Journal of the American Chemical Society</i> , 2013, 135, 2172-2180.	13.7	43
17	Molecular Dynamics Investigation of Cl ⁻ and Water Transport through a Eukaryotic CLC Transporter. <i>Biophysical Journal</i> , 2012, 102, 1363-1371.	0.5	36
18	An Accurate and Efficient Empirical Approach for Calculating the Dielectric Self-Energy and Ion-Ion Pair Potential in Continuum Models of Biological Ion Channels. <i>Journal of Physical Chemistry B</i> , 2005, 109, 488-498.	2.6	35

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19	Calcium Inhibits Paracellular Sodium Conductance through Claudin-2 by Competitive Binding. <i>Journal of Biological Chemistry</i> , 2010, 285, 37060-37069.	3.4	34
20	Energy landscape of LeuT from molecular simulations. <i>Journal of Chemical Physics</i> , 2015, 143, 243134.	3.0	34
21	PINK1 Interacts with VCP/p97 and Activates PKA to Promote NSFL1C/p47 Phosphorylation and Dendritic Arborization in Neurons. <i>ENeuro</i> , 2018, 5, ENEURO.0466-18.2018.	1.9	34
22	Homology modeling and molecular dynamics simulations of the $\hat{\pm}1$ glycine receptor reveals different states of the channel. <i>Proteins: Structure, Function and Bioinformatics</i> , 2007, 68, 581-593.	2.6	33
23	Impact of new variants on SARS-CoV-2 infectivity and neutralization: A molecular assessment of the alterations in the spike-host protein interactions. <i>IScience</i> , 2022, 25, 103939.	4.1	32
24	Pore dilatation increases the bicarbonate permeability of CFTR, ANO1 and glycine receptor anion channels. <i>Journal of Physiology</i> , 2016, 594, 2929-2955.	2.9	30
25	Molecular Dynamics Simulations of Ternary Membrane Mixture: $\hat{\pm}\%$ Phosphatidylcholine, Phosphatidic Acid, and Cholesterol. <i>Journal of Physical Chemistry B</i> , 2007, 111, 14186-14192.	2.6	29
26	A monoclonal antibody against staphylococcal enterotoxin B superantigen inhibits SARS-CoV-2 entry in $\hat{\pm}$ vitro. <i>Structure</i> , 2021, 29, 951-962.e3.	3.3	28
27	Regulation of CFTR Bicarbonate Channel Activity by WNK1: Implications for Pancreatitis and CFTR-Related Disorders. <i>Cellular and Molecular Gastroenterology and Hepatology</i> , 2020, 9, 79-103.	4.5	27
28	A network of phosphatidylinositol (4,5)-bisphosphate (PIP2) binding sites on the dopamine transporter regulates amphetamine behavior in <i>Drosophila Melanogaster</i> . <i>Molecular Psychiatry</i> , 2021, 26, 4417-4430.	7.9	26
29	Substrate transport and anion permeation proceed through distinct pathways in glutamate transporters. <i>ELife</i> , 2017, 6, .	6.0	26
30	Anionic Lipid and Cholesterol Interactions with $\hat{\pm}4\hat{\pm}2$ nAChR: Insights from MD Simulations. <i>Journal of Physical Chemistry B</i> , 2009, 113, 6964-6970.	2.6	25
31	Quantitative Assessment of the Energetics of Dopamine Translocation by Human Dopamine Transporter. <i>Journal of Physical Chemistry B</i> , 2018, 122, 5336-5346.	2.6	25
32	Theoretical Studies of the M2 Transmembrane Segment of the Glycine Receptor: Models of the Open Pore Structure and Current-Voltage Characteristics. <i>Biophysical Journal</i> , 2005, 89, 1669-1680.	0.5	24
33	Shared dynamics of LeuT superfamily members and allosteric differentiation by structural irregularities and multimerization. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2018, 373, 20170177.	4.0	24
34	Modeling the Fast Gating Mechanism in the ClC-0 Chloride Channel. <i>Journal of Physical Chemistry B</i> , 2007, 111, 5956-5965.	2.6	23
35	Allosteric modulation of human dopamine transporter activity under conditions promoting its dimerization. <i>Journal of Biological Chemistry</i> , 2017, 292, 12471-12482.	3.4	23
36	A systems $\hat{\pm}$ level study reveals host $\hat{\pm}$ targeted repurposable drugs against SARS $\hat{\pm}$ CoV $\hat{\pm}$ 2 infection. <i>Molecular Systems Biology</i> , 2021, 17, e10239.	7.2	22

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37	Molecular dynamics simulations of ethanol binding to the transmembrane domain of the glycine receptor: Implications for the channel potentiation mechanism. <i>Proteins: Structure, Function and Bioinformatics</i> , 2008, 71, 972-981.	2.6	21
38	Energetics and Ion permeation Characteristics in a Glutamate-Gated Chloride (GluCl) Receptor Channel. <i>Journal of Physical Chemistry B</i> , 2012, 116, 13637-13643.	2.6	21
39	Effect of Dimerization on the Dynamics of Neurotransmitter:Sodium Symporters. <i>Journal of Physical Chemistry B</i> , 2017, 121, 3657-3666.	2.6	20
40	Key residues controlling bidirectional ion movements in Na ⁺ /Ca ²⁺ exchanger. <i>Cell Calcium</i> , 2018, 76, 10-22.	2.4	20
41	Targeting of dopamine transporter to filopodia requires an outward-facing conformation of the transporter. <i>Scientific Reports</i> , 2017, 7, 5399.	3.3	16
42	Discrete-State Representation of Ion Permeation Coupled to Fast Gating in a Model of ClC Chloride Channels: Comparison to Multi-ion Continuous Space Brownian Dynamics Simulations. <i>Journal of Physical Chemistry B</i> , 2010, 114, 1424-1433.	2.6	14
43	Psychomotor impairments and therapeutic implications revealed by a mutation associated with infantile Parkinsonism-Dystonia. <i>ELife</i> , 2021, 10, .	6.0	13
44	Modeling reactive compatibilization of a binary blend with interacting particles. <i>Journal of Chemical Physics</i> , 2003, 118, 9044-9052.	3.0	12
45	Reversal of ion-charge selectivity renders the pentameric ligand-gated ion channel GLIC insensitive to anaesthetics. <i>Biochemical Journal</i> , 2013, 449, 61-68.	3.7	12
46	Phase ripening in particulate binary polymer blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 603-612.	2.1	11
47	Heterogeneities in Axonal Structure and Transporter Distribution Lower Dopamine Reuptake Efficiency. <i>ENeuro</i> , 2018, 5, ENEURO.0298-17.2017.	1.9	10
48	Discrete-State Representation of Ion Permeation Coupled to Fast Gating in a Model of ClC-Chloride Channels: Analytic Estimation of the State-to-State Rate Constants. <i>Journal of Physical Chemistry A</i> , 2011, 115, 9633-9642.	2.5	9
49	Trimerization of dopamine transporter triggered by AIM-100 binding: Molecular mechanism and effect of mutations. <i>Neuropharmacology</i> , 2019, 161, 107676.	4.1	9
50	Direct coupling of oligomerization and oligomerization-driven endocytosis of the dopamine transporter to its conformational mechanics and activity. <i>Journal of Biological Chemistry</i> , 2021, 296, 100430.	3.4	9
51	Functional Characterization of the Dopaminergic Psychostimulant Sydnocarb as an Allosteric Modulator of the Human Dopamine Transporter. <i>Biomedicines</i> , 2021, 9, 634.	3.2	9
52	Bicarbonate permeation through anion channels: its role in health and disease. <i>Pflugers Archiv European Journal of Physiology</i> , 2020, 472, 1003-1018.	2.8	8
53	Bile Acids Gate Dopamine Transporter Mediated Currents. <i>Frontiers in Chemistry</i> , 2021, 9, 753990.	3.6	6
54	Non-linear diffusion with concentration-driven flows in miscible systems. <i>Polymer</i> , 2003, 44, 6707-6712.	3.8	5

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55	Allosteric Modulator KM822 Attenuates Behavioral Actions of Amphetamine in <i>Caenorhabditis elegans</i> through Interactions with the Dopamine Transporter DAT-1. <i>Molecular Pharmacology</i> , 2022, 101, 123-131.	2.3	4
56	Impact of New Variants on SAR-CoV-2 Infectivity and Neutralization: A Molecular Assessment of the Alterations in the Spike-Host Protein Interactions. <i>SSRN Electronic Journal</i> , 0, , .	0.4	3
57	Computational prediction of ion permeation characteristics in the glycine receptor modified by photo-sensitive compounds. <i>Journal of Computer-Aided Molecular Design</i> , 2008, 22, 563-570.	2.9	2
58	Multisite Binding of Anesthetics to GLIC, a Pentameric Ligand-Gated Ion Channel. <i>Biophysical Journal</i> , 2010, 98, 702a-703a.	0.5	1
59	Interactions between POPA and $\alpha 4\beta 2$ nAChR: Insight from MD Simulations. <i>Biophysical Journal</i> , 2009, 96, 610a.	0.5	0
60	Molecular Dynamics Investigation of Anesthetic Halothane Interactions with the Proton-Gated Ion Channel GLIC. <i>Biophysical Journal</i> , 2010, 98, 703a.	0.5	0
61	Does Symmetry of Ligand Occupancy Matter to Conformational Transitions of Pentameric Ligand Gated Ion Channels?. <i>Biophysical Journal</i> , 2013, 104, 380a.	0.5	0
62	Complete Mapping of Substrate Translocation Implicates the Secondary Binding Site and Highlights the Significance of LeuT N-Terminal Segment in Regulating Transport Cycle. <i>Biophysical Journal</i> , 2014, 106, 364a.	0.5	0
63	Visualization of Molecular Events from Dopamine-Binding to -Release by Human Dopamine Transporter. <i>Biophysical Journal</i> , 2015, 108, 462a.	0.5	0
64	Importance of Dimerization in Facilitating the Functional Dynamics of Neurotransmitter: Sodium Symporters. <i>Biophysical Journal</i> , 2017, 112, 506a.	0.5	0
65	Effect of Spatial Complexity on Dopaminergic Signaling Revealed from Multiscale Simulations. <i>Biophysical Journal</i> , 2017, 112, 135a.	0.5	0
66	Molecular Basis for Cation Selectivity in Claudin-2-based Paracellular Pores: Identification of an Electrostatic Interaction Site. <i>Journal of Cell Biology</i> , 2009, 184, i3-i3.	5.2	0
67	Dynamic Regulation of Bicarbonate Permeability through CFTR Channel by WNK1. <i>Biophysical Journal</i> , 2020, 118, 416a.	0.5	0