Matti A Javanainen

List of Publications by Year
in descending order

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59	3,315	218381	189595
papers	citations	26 h-index	50 g-index

71	71	71	3744
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Martini 3: a general purpose force field for coarse-grained molecular dynamics. Nature Methods, 2021, 18, 382-388.	9.0	557
2	Anomalous Diffusion of Phospholipids and Cholesterols in a Lipid Bilayer and its Origins. Physical Review Letters, 2012, 109, 188103.	2.9	257
3	Multiscale Simulations of Biological Membranes: The Challenge To Understand Biological Phenomena in a Living Substance. Chemical Reviews, 2019, 119, 5607-5774.	23.0	209
4	Anomalous and normal diffusion of proteins and lipids in crowded lipid membranes. Faraday Discussions, 2013, 161, 397-417.	1.6	170
5	Arginine-rich cell-penetrating peptides induce membrane multilamellarity and subsequently enter via formation of a fusion pore. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 11923-11928.	3.3	168
6	Protein Crowding in Lipid Bilayers Gives Rise to Non-Gaussian Anomalous Lateral Diffusion of Phospholipids and Proteins. Physical Review X, 2016, 6, .	2.8	152
7	Excessive aggregation of membrane proteins in the Martini model. PLoS ONE, 2017, 12, e0187936.	1.1	147
8	Mechanism of allosteric regulation of Î²2-adrenergic receptor by cholesterol. ELife, 2016, 5, .	2.8	115
9	Toward Atomistic Resolution Structure of Phosphatidylcholine Headgroup and Glycerol Backbone at Different Ambient Conditions. Journal of Physical Chemistry B, 2015, 119, 15075-15088.	1.2	109
10	Membrane omega-3 fatty acids modulate the oligomerisation kinetics of adenosine A2A and dopamine D2 receptors. Scientific Reports, 2016, 6, 19839.	1.6	89
11	Nanoscale Membrane Domain Formation Driven by Cholesterol. Scientific Reports, 2017, 7, 1143.	1.6	83
12	Molecular electrometer and binding of cations to phospholipid bilayers. Physical Chemistry Chemical Physics, 2016, 18, 32560-32569.	1.3	78
13	Mechanism for translocation of fluoroquinolones across lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 2563-2571.	1.4	76
14	Cationic Au Nanoparticle Binding with Plasma Membrane-like Lipid Bilayers: Potential Mechanism for Spontaneous Permeation to Cells Revealed by Atomistic Simulations. Journal of Physical Chemistry C, 2014, 118, 11131-11141.	1.5	69
15	Diffusion of Integral Membrane Proteins in Protein-Rich Membranes. Journal of Physical Chemistry Letters, 2017, 8, 4308-4313.	2.1	65
16	A practical guide to biologically relevant molecular simulations with charge scaling for electronic polarization. Journal of Chemical Physics, 2020, 153, 050901.	1.2	63
17	Atomistic Model for Nearly Quantitative Simulations of Langmuir Monolayers. Langmuir, 2018, 34, 2565-2572.	1.6	53
18	Enzymatic Oxidation of Cholesterol: Properties and Functional Effects of Cholestenone in Cell Membranes. PLoS ONE, 2014, 9, e103743.	1.1	50

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19	Do Lipids Retard the Evaporation of the Tear Fluid?. , 2012, 53, 6442.		49
20	Experimental determination and computational interpretation of biophysical properties of lipid bilayers enriched by cholesteryl hemisuccinate. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 422-432.	1.4	45
21	How well does cholesteryl hemisuccinate mimic cholesterol in saturated phospholipid bilayers?. Journal of Molecular Modeling, 2014, 20, 2121.	0.8	44
22	Two cations, two mechanisms: interactions of sodium and calcium with zwitterionic lipid membranes. Chemical Communications, 2017, 53, 5380-5383.	2.2	44
23	Headgroup Structure and Cation Binding in Phosphatidylserine Lipid Bilayers. Journal of Physical Chemistry B, 2019, 123, 9066-9079.	1.2	43
24	Free Volume Theory Applied to Lateral Diffusion in Langmuir Monolayers: Atomistic Simulations for a Protein-Free Model of Lung Surfactant. Langmuir, 2010, 26, 15436-15444.	1.6	42
25	Universal Method for Embedding Proteins into Complex Lipid Bilayers for Molecular Dynamics Simulations. Journal of Chemical Theory and Computation, 2014, 10, 2577-2582.	2.3	41
26	The role of hydrophobic matching on transmembrane helix packing in cells. Cell Stress, 2017, 1, 90-106.	1.4	37
27	Efficient preparation and analysis of membrane and membrane protein systems. Biochimica Et Biophysica Acta - Biomembranes, 2016, 1858, 2468-2482.	1.4	33
28	How to minimize dye-induced perturbations while studying biomembrane structure and dynamics: PEG linkers as a rational alternative. Biochimica Et Biophysica Acta - Biomembranes, 2018, 1860, 2436-2445.	1.4	31
29	Pulmonary Surfactant Lipid Reorganization Induced by the Adsorption of the Oligomeric Surfactant Protein B Complex. Journal of Molecular Biology, 2020, 432, 3251-3268.	2.0	29
30	Nonconverged Constraints Cause Artificial Temperature Gradients in Lipid Bilayer Simulations. Journal of Physical Chemistry B, 2021, 125, 9537-9546.	1.2	28
31	Dynamics and energetics of the mammalian phosphatidylinositol transfer protein phospholipid exchange cycle. Journal of Biological Chemistry, 2017, 292, 14438-14455.	1.6	25
32	Reduced level of docosahexaenoic acid shifts GPCR neuroreceptors to less ordered membrane regions. PLoS Computational Biology, 2019, 15, e1007033.	1.5	25
33	Rapid diffusion of cholesterol along polyunsaturated membranes via deep dives. Physical Chemistry Chemical Physics, 2019, 21, 11660-11669.	1.3	21
34	Apolipoprotein A-I mimetic peptide 4F blocks sphingomyelinase-induced LDL aggregation. Journal of Lipid Research, 2015, 56, 1206-1221.	2.0	20
35	Long-chain GM1 gangliosides alter transmembrane domain registration through interdigitation. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 870-878.	1.4	20
36	On Atomistic Models for Molecular Oxygen. Journal of Physical Chemistry B, 2017, 121, 518-528.	1.2	19

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37	Mcl-1 and Bok transmembrane domains: Unexpected players in the modulation of apoptosis. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27980-27988.	3.3	19
38	Accurate Simulations of Lipid Monolayers Require a Water Model with Correct Surface Tension. Journal of Chemical Theory and Computation, 2022, 18, 1862-1869.	2.3	19
39	Quantitative Assessment of Methods Used To Obtain Rate Constants from Molecular Dynamics Simulationsâ€"Translocation of Cholesterol across Lipid Bilayers. Journal of Chemical Theory and Computation, 2018, 14, 3840-3848.	2.3	18
40	Understanding the Functional Properties of Lipid Heterogeneity in Pulmonary Surfactant Monolayers at the Atomistic Level. Frontiers in Cell and Developmental Biology, 2020, 8, 581016.	1.8	18
41	How Anacetrapib Inhibits the Activity of the Cholesteryl Ester Transfer Protein? Perspective through Atomistic Simulations. PLoS Computational Biology, 2014, 10, e1003987.	1.5	17
42	Crystalline Wax Esters Regulate the Evaporation Resistance of Tear Film Lipid Layers Associated with Dry Eye Syndrome. Journal of Physical Chemistry Letters, 2019, 10, 3893-3898.	2.1	17
43	How To Minimize Artifacts in Atomistic Simulations of Membrane Proteins, Whose Crystal Structure Is Heavily Engineered: Î²₂-Adrenergic Receptor in the Spotlight. Journal of Chemical Theory and Computation, 2015, 11, 3432-3445.	2.3	16
44	Inverse Conformational Selection in Lipidâ€"Protein Binding. Journal of the American Chemical Society, 2021, 143, 13701-13709.	6.6	16
45	The Two Faces of the Liquid Ordered Phase. Journal of Physical Chemistry Letters, 2022, 13, 1307-1313.	2.1	14
46	The Devil Is in the Details: What Do We Really Track in Single-Particle Tracking Experiments of Diffusion in Biological Membranes?. Journal of Physical Chemistry Letters, 2019, 10, 1005-1011.	2.1	13
47	Rotational Diffusion of Membrane Proteins in Crowded Membranes. Journal of Physical Chemistry B, 2020, 124, 2994-3001.	1.2	13
48	Structural Effects of Cation Binding to DPPC Monolayers. Langmuir, 2020, 36, 15258-15269.	1.6	8
49	Anisotropic diffusion of membrane proteins at experimental timescales. Journal of Chemical Physics, 2021, 155, 015102.	1.2	4
50	Flip-Flops of Lipids in the Absence of Atp: Role of Membrane Proteins. Biophysical Journal, 2014, 106, 705a.	0.2	1
51	What Happens for Sterol Dynamics When Cholesterol is Enzymatically Oxidized?. Biophysical Journal, 2014, 106, 704a.	0.2	0
52	Characterisation of Coexisting Liquid Phases in Mixtures of Dipalmitoylphosphatidylcholine and Cholesterol. Biophysical Journal, 2014, 106, 709a-710a.	0.2	0
53	Cell Membrane Composition Affects GPCR Aggregation. Biophysical Journal, 2014, 106, 517a-518a.	0.2	0
54	Open Collaboration that uses NMR Data to Judge the Correctness of Phospholipid Glycerol and Head Group Structures in Molecular Dynamics Simulations. Biophysical Journal, 2015, 108, 411a.	0.2	0

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55	Protocol to Avoid Possible Artifacts in Atomistic Simulation of GPCR Proteins whose Crystal Structure is Heavily Engineered. Biophysical Journal, 2016, 110, 59a.	0.2	0
56	The Effect of Membrane Polyunsaturated Fatty Acids on Receptor Partitioning to Ordered Domains. Biophysical Journal, 2017, 112, 230a-231a.	0.2	0
57	The Role of Hydrophobic Mismatch on Transmembrane Helix Dimerization in Living Cells. Biophysical Journal, 2019, 116, 90a.	0.2	0
58	Distinct Interactions of Sodium and Calcium Cations and Neutral Phospholipid Membranes and How to Simulate Them. Biophysical Journal, 2019, 116, 90a-91a.	0.2	0
59	Benefits of the Electronic Continuum Correction in Bio-Force Fields. Biophysical Journal, 2020, 118, 558a.	0.2	0