Sergey A Akimov

List of Publications by Year in Descending Order

65 papers	1,484 citations	19 h-index	38 g-index
108 ext. papers	1,869 ext. citations	3 avg, IF	4.54 L-index

#	Paper	IF	Citations
65	The Membrane-Water Partition Coefficients of Antifungal, but Not Antibacterial, Membrane-Active Compounds Are Similar. *Frontiers in Microbiology*, **2021**, 12, 756408	5.7	
64	Peptide-induced membrane elastic deformations decelerate gramicidin dimer-monomer equilibration. *Biophysical Journal*, **2021**, 120, 5309-5321	2.9	0
63	Characteristic lengths of transmembrane peptides controlling their tilt and lateral distribution between membrane domains. *Physical Review E*, **2021**, 104, 044411	2.4	0
62	Interaction of Peptides Containing CRAC Motifs with Lipids in Membranes of Various Composition. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2021**, 15, 120-129	0.7	
61	Interaction of Ordered Lipid Domains in the Presence of Amphipatic Peptides. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2021**, 15, 219-229	0.7	0
60	Photoswitching of model ion channels in lipid bilayers. *Journal of Photochemistry and Photobiology B: Biology*, **2021**, 224, 112320	6.7	2
59	Continuum Models of Membrane Fusion: Evolution of the Theory. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	12
58	Lateral Interactions Influence the Kinetics of Metastable Pores in Lipid Membranes. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2020**, 14, 117-125	0.7	
57	Elastic deformations mediate interaction of the raft boundary with membrane inclusions leading to their effective lateral sorting. *Scientific Reports*, **2020**, 10, 4087	4.9	7
56	Ordered Lipid Domains Assemble via Concerted Recruitment of Constituents from Both Membrane Leaflets. *Physical Review Letters*, **2020**, 124, 108102	7.4	13
55	Interaction of Ordered Lipid Domain Boundaries and Amphipathic Peptides Regulates Probability of Pore Formation in Membranes. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2020**, 14, 319-330	0.7	0
54	Monolayerwise application of linear elasticity theory well describes strongly deformed lipid membranes and the effect of solvent. *Soft Matter*, **2020**, 16, 1179-1189	3.6	4
53	Additional contributions to elastic energy of lipid membranes: Tilt-curvature coupling and curvature gradient. *Physical Review E*, **2020**, 102, 042406	2.4	2
52	Ectodomain Pulling Combines with Fusion Peptide Inserting to Provide Cooperative Fusion for Influenza Virus and HIV. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	4
51	Membrane-Mediated Lateral Interactions Regulate the Lifetime of Gramicidin Channels. *Membranes*, **2020**, 10,	3.8	2
50	Physicochemical and Electrochemical Aspects of the Functioning of Biological Membranes. *Russian Journal of Physical Chemistry A*, **2020**, 94, 471-476	0.7	
49	Membrane-mediated interaction of amphipathic peptides can be described by a one-dimensional approach. *Physical Review E*, **2019**, 99, 022401	2.4	10

48	Normal Fluctuations of Biological Membrane Shape as a Coupling Factor for Ordered Monolayer Domains. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2019**, 13, 205-211	0.7	0
47	Effects of Sterols on the Interaction of SDS, Benzalkonium Chloride, and A Novel Compound, Kor105, with Membranes. *Biomolecules*, **2019**, 9,	5.9	3
46	The Effect of Transmembrane Protein Shape on Surrounding Lipid Domain Formation by Wetting. *Biomolecules*, **2019**, 9,	5.9	4
45	Membrane Elastic Deformations Modulate Gramicidin A Transbilayer Dimerization and Lateral Clustering. *Biophysical Journal*, **2018**, 115, 478-493	2.9	12
44	Phosphatidylcholine Membrane Fusion Is pH-Dependent. *International Journal of Molecular Sciences* , **2018**, 19,	6.3	5
43	Lateral Membrane Heterogeneity Regulates Viral-Induced Membrane Fusion during HIV Entry. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	12
42	Residence time of singlet oxygen in membranes. *Scientific Reports*, **2018**, 8, 14000	4.9	11
41	Undulations Drive Domain Registration from the Two Membrane Leaflets. *Biophysical Journal*, **2017** , 112, 339-345	2.9	26
40	Line Activity of Ganglioside GM1 Regulates the Raft Size Distribution in a Cholesterol-Dependent Manner. *Langmuir*, **2017**, 33, 3517-3524	4	27
39	Pore formation in lipid membrane II: Energy landscape under external stress. *Scientific Reports*, **2017**, 7, 12509	4.9	55
38	Mechanism of pore formation in stearoyl-oleoyl-phosphatidylcholine membranes subjected to lateral tension. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2017**, 11, 193-205	0.7	2
37	Pore formation in lipid membrane I: Continuous reversible trajectory from intact bilayer through hydrophobic defect to transversal pore. *Scientific Reports*, **2017**, 7, 12152	4.9	67
36	Origin of proton affinity to membrane/water interfaces. *Scientific Reports*, **2017**, 7, 4553	4.9	36
35	Detection of DNA molecules in a lipid nanotube channel in the low ion strength conditions. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2017**, 11, 217-224	0.7	2
34	Helix-helix interactions in membrane domains of bitopic proteins: Specificity and role of lipid environment. *Biochimica Et Biophysica Acta - Biomembranes*, **2017**, 1859, 561-576	3.8	49
33	Interaction of amphipathic peptides mediated by elastic membrane deformations. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2017**, 11, 206-216	0.7	6
32	Switching between Successful and Dead-End Intermediates in Membrane Fusion. *International Journal of Molecular Sciences*, **2017**, 18,	6.3	10
31	[illegible] [illegible] [illegible]. *Biologicheskie Membrany*, **2017**, 162-173	0.1	

30	[illegible]. *Biologicheskie Membrany*, **2017**, 261-269	0.1	
29	[illegible]. *Biologicheskie Membrany*, **2017**, 270-283	0.1	
28	Galimzyanov et al. Reply. *Physical Review Letters*, **2016**, 116, 079802	7.4	8
27	Elastic deformations of bolalipid membranes. *Soft Matter*, **2016**, 12, 2357-64	3.6	10
26	Metabolic Precursor of Cholesterol Causes Formation of Chained Aggregates of Liquid-Ordered Domains. *Langmuir*, **2016**, 32, 1591-600	4	20
25	Lateral redistribution of transmembrane proteins and liquid-ordered domains in lipid membranes with inhomogeneous curvature. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2016**, 10, 259-268	0.7	1
24	Membrane fusion. Two possible mechanisms underlying a decrease in the fusion energy barrier in the presence of fusion proteins. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2015**, 9, 65-76	0.7	2
23	Elastic Membrane Deformations Govern Interleaflet Coupling of Lipid-Ordered Domains. *Physical Review Letters*, **2015**, 115, 088101	7.4	49
22	The mobility of single-file water molecules is governed by the number of H-bonds they may form with channel-lining residues. *Science Advances*, **2015**, 1, e1400083	14.3	94
21	Geometry of membrane fission. *Chemistry and Physics of Lipids*, **2015**, 185, 129-40	3.7	30
20	Model of membrane fusion: Continuous transition to fusion pore with regard of hydrophobic and hydration interactions. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2014**, 8, 153-161	0.7	7
19	Isoprenoid lipid chains increase membrane resistance to pore formation. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2014**, 8, 304-308	0.7	4
18	Line tension and structure of through pore edge in lipid bilayer. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2014**, 8, 297-303	0.7	2
17	Energy of the interaction between membrane lipid domains calculated from splay and tilt deformations. *JETP Letters*, **2013**, 96, 681-686	1.2	19
16	Long and short lipid molecules experience the same interleaflet drag in lipid bilayers. *Physical Review Letters*, **2013**, 110, 268101	7.4	33
15	Stabilization of a complex of fusion proteins by membrane deformations. *Biophysics (Russian Federation)*, **2013**, 58, 653-659	0.7	
14	Membrane shape changes at initial stage of membrane fusion under the action of proteins inducing spontaneous curvature. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2013**, 7, 234-241	0.7	1
13	Geometric catalysis of membrane fission driven by flexible dynamin rings. *Science*, **2013**, 339, 1433-6	33.3	102

12	Phase separation in lipid membranes induced by the elastic properties of components. *JETP Letters*, **2011**, 93, 463-469	1.2	7
11	Variation of lipid membrane composition caused by strong bending. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2011**, 5, 205-211	0.7	8
10	Stabilization of bilayer structure of raft due to elastic deformations of membrane. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2011**, 5, 286-292	0.7	9
9	Line tension and structure of raft boundary calculated from bending, tilt, and lateral compression/stretching. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2011**, 5, 385-391	0.7	1
8	Membrane Curvature and Fission By Dynamin: Mechanics, Dynamics and Partners. *Biophysical Journal*, **2010**, 98, 2a	2.9	2
7	Ganglioside GM1 increases line tension at raft boundary in model membranes. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2009**, 3, 216-222	0.7	8
6	Calculation of line tension in various models of lipid bilayer pore edge. *Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology*, **2009**, 3, 223-230	0.7	5
5	GTPase cycle of dynamin is coupled to membrane squeeze and release, leading to spontaneous fission. *Cell*, **2008**, 135, 1276-86	56.2	231
4	Domain formation in membranes caused by lipid wetting of protein. *Physical Review E*, **2008**, 77, 051901	2.4	27
3	Lateral tension increases the line tension between two domains in a lipid bilayer membrane. *Physical Review E*, **2007**, 75, 011919	2.4	63
2	Line tension and interaction energies of membrane rafts calculated from lipid splay and tilt. *Biophysical Journal*, **2005**, 88, 1120-33	2.9	258
1	An elastic theory for line tension at a boundary separating two lipid monolayer regions of different thickness. *Journal of Electroanalytical Chemistry*, **2004**, 564, 13-18	4.1	63