# Vadim A Frolov

List of Publications by Year
in descending order

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|---|---|---|---|
| 51 papers | 3,725 citations | 218381 26 h-index | 344852 36 g-index |
| 53 all docs | 53 docs citations | 53 times ranked | 4296 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Molecular Shape Solution for Mesoscopic Remodeling of Cellular Membranes. Annual Review of Biophysics, 2022, 51, 473-497. | 4.5 | 16 |
| 2 | Reconstitution and real-time quantification of membrane remodeling by single proteins and protein complexes. Nature Protocols, 2020, 15, 2443-2469. | 5.5 | 12 |
| 3 | Electrophysiological Methods for Detection of Membrane and Hemifission by Dynamin 1. Methods in Molecular Biology, 2020, 2159, 141-162. | 0.4 | 2 |
| 4 | Dynamic constriction and fission of endoplasmic reticulum membranes by reticulon. Nature Communications, 2019, 10, 5327. | 5.8 | 46 |
| 5 | Highly Charged Membrane Templates for Studying the Mechano-Chemistry of Dynamin 1. Biophysical Journal, 2018, 114, 281a. | 0.2 | 0 |
| 6 | Nanomechanics of Membrane Fission: Elasticity of the Precursor State. Biophysical Journal, 2018, 114, 606a-607a. | 0.2 | 0 |
| 7 | The 2018 biomembrane curvature and remodeling roadmap. Journal Physics D: Applied Physics, 2018, 51, 343001. | 1.3 | 212 |
| 8 | Bending Modulus of Multicomponent Lipid Membranes. Biophysical Journal, 2017, 112, 520a. | 0.2 | 0 |
| 9 | Catalytic Intermediates of Membrane Fission. Biophysical Journal, 2017, 112, 158a. | 0.2 | 0 |
| 10 | Membrane fission by dynamin: what we know and what we need to know. EMBO Journal, 2016, 35, 2270-2284. | 3.5 | 388 |
| 11 | Cholesterol Effect on the Elastic Properties of Unsaturated Lipid Bilayers. Biophysical Journal, 2016, 110, 369a-370a. | 0.2 | 0 |
| 12 | Synthesis, lipid membrane incorporation, and ion permeability testing of carbon nanotube porins. Nature Protocols, 2016, 11, 2029-2047. | 5.5 | 42 |
| 13 | Live Cell Interactions with Biocompatible Ultra-Short Carbon Nanotube Porins. Biophysical Journal, 2015, 108, 487a-488a. | 0.2 | 1 |
| 14 | Geometry of membrane fission. Chemistry and Physics of Lipids, 2015, 185, 129-140. | 1.5 | 40 |
| 15 | A hemi-fission intermediate links two mechanistically distinct stages of membrane fission. Nature, 2015, 524, 109-113. | 13.7 | 91 |
| 16 | Stochastic transport through carbon nanotubes in lipid bilayers and live cell membranes. Nature, 2014, 514, 612-615. | 13.7 | 350 |
| 17 | Rapid Determination of Geometry and Elastic Constants of Lipid Nanotubes. Biophysical Journal, 2014, 106, 700a. | 0.2 | 0 |
| 18 | Lipids as Regulators of Effective Membrane Rigidity. Biophysical Journal, 2014, 106, 288a. | 0.2 | 1 |

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|---|---|---|---|
| 19 | Quantification of Curvature Gradients in Highly Curved Tubular Lipid Bilayers. Biophysical Journal, 2013, 104, 243a. | 0.2 | 0 |
| 20 | The Regulatory Catalytic Step in Dynamin-Driven Membrane Fission. Biophysical Journal, 2013, 104, 617a. | 0.2 | 0 |
| 21 | Curvature Stimulates Assembly of Gag Shell through Distinct Fluid-Like Intermediate. Biophysical Journal, 2013, 104, 416a-417a. | 0.2 | 0 |
| 22 | Geometric Catalysis of Membrane Fission Driven by Flexible Dynamin Rings. Science, 2013, 339, 1433-1436. | 6.0 | 123 |
| 23 | Spatio-Temporal Organization of a Minimal Dynamin Machinery Producing Membrane Fission. Biophysical Journal, 2012, 102, 322a. | 0.2 | 0 |
| 24 | Coordination of Bending and Wedging in Membrane Fission. Biophysical Journal, 2012, 102, 322a. | 0.2 | 0 |
| 25 | Dynamin: Functional Design of a Membrane Fission Catalyst. Annual Review of Cell and Developmental Biology, 2011, 27, 79-105. | 4.0 | 264 |
| 26 | Variation of lipid membrane composition caused by strong bending. Biochemistry (Moscow) Supplement Series A: Membrane and Cell Biology, 2011, 5, 205-211. | 0.3 | 14 |
| 27 | Lipid Polymorphisms and Membrane Shape. Cold Spring Harbor Perspectives in Biology, 2011, 3, a004747-a004747. | 2.3 | 152 |
| 28 | Reconstitution of Proapoptotic BAK Function in Liposomes Reveals a Dual Role for Mitochondrial Lipids in the BAK-driven Membrane Permeabilization Process. Journal of Biological Chemistry, 2011, 286, 8213-8230. | 1.6 | 66 |
| 29 | Non-bilayer intermediates and pathways of membrane remodeling. Chemistry and Physics of Lipids, 2010, 163, S2. | 1.5 | 0 |
| 30 | Cooperative elastic stresses, the hydrophobic effect, and lipid tilt in membrane remodeling. FEBS Letters, 2010, 584, 1824-1829. | 1.3 | 31 |
| 31 | Membrane Curvature and Fission By Dynamin: Mechanics, Dynamics and Partners. Biophysical Journal, 2010, 98, 2a. | 0.2 | 2 |
| 32 | Domain-Driven Morphogenesis of Cellular Membranes. Current Biology, 2009, 19, R772-R780. | 1.8 | 33 |
| 33 | Shaping biological matter. Nature Materials, 2009, 8, 173-174. | 13.3 | 4 |
| 34 | Breakdown of Charged Lipid Asymmetry as a Result of Lipidic Pore Formation. Biophysical Journal, 2009, 96, 152a. | 0.2 | 0 |
| 35 | Fission Of Lipid Nanotube By Osmotic Pressure. Biophysical Journal, 2009, 96, 351a. | 0.2 | 0 |
| 36 | Measurement Of Mechanical Parameters Of Lipid Bilayer Form The Deformation Of Membrane Nanotube In Electric Field. Biophysical Journal, 2009, 96, 351a-352a. | 0.2 | 0 |

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|---|---|---|---|
| 37 | ER Biogenesis: Self-Assembly of Tubular Topology by Protein Hairpins. Current Biology, 2008, 18, R474-R476. | 1.8 | 12 |
| 38 | Flexible Scaffolding Made of Rigid BARs. Cell, 2008, 132, 727-729. | 13.5 | 6 |
| 39 | GTPase Cycle of Dynamin Is Coupled to Membrane Squeeze and Release, Leading to Spontaneous Fission. Cell, 2008, 135, 1276-1286. | 13.5 | 269 |
| 40 | Vesicle formation by self-assembly of membrane-bound matrix proteins into a fluidlike budding domain. Journal of Cell Biology, 2007, 179, 627-633. | 2.3 | 53 |
| 41 | â€œEntropic Trapsâ€•in the Kinetics of Phase Separation in Multicomponent Membranes Stabilize Nanodomains. Biophysical Journal, 2006, 91, 189-205. | 0.2 | 109 |
| 42 | Synaptotagmin: fusogenic role for calcium sensor?. Nature Structural and Molecular Biology, 2006, 13, 301-303. | 3.6 | 32 |
| 43 | Insulin stimulates the halting, tethering, and fusion of mobile GLUT4 vesicles in rat adipose cells. Journal of Cell Biology, 2005, 169, 481-489. | 2.3 | 158 |
| 44 | Membrane Permeability Changes at Early Stages of Influenza Hemagglutinin-Mediated Fusion. Biophysical Journal, 2003, 85, 1725-1733. | 0.2 | 84 |
| 45 | Shape bistability of a membrane neck: A toggle switch to control vesicle content release. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 8698-8703. | 3.3 | 53 |
| 46 | Voltage-Induced Nonconductive Pre-Pores and Metastable Single Pores in Unmodified Planar Lipid Bilayer. Biophysical Journal, 2001, 80, 1829-1836. | 0.2 | 236 |
| 47 | Pro-apoptotic Cleavage Products of Bcl-xL Form Cytochrome c-conducting Pores in Pure Lipid Membranes. Journal of Biological Chemistry, 2001, 276, 31083-31091. | 1.6 | 134 |
| 48 | Multiple Local Contact Sites are Induced by GPI-Linked Influenza Hemagglutinin During Hemifusion and Flickering Pore Formation. Traffic, 2000, 1, 622-630. | 1.3 | 58 |
| 49 | Structural intermediates in influenza haemagglutinin-mediated fusion. Molecular Membrane Biology, 1999, 16, 33-42. | 2.0 | 67 |
| 50 | The Pathway of Membrane Fusion Catalyzed by Influenza Hemagglutinin: Restriction of Lipids, Hemifusion, and Lipidic Fusion Pore Formation. Journal of Cell Biology, 1998, 140, 1369-1382. | 2.3 | 358 |
| 51 | An Early Stage of Membrane Fusion Mediated by the Low pH Conformation of Influenza Hemagglutinin Depends upon Membrane Lipids. Journal of Cell Biology, 1997, 136, 81-93. | 2.3 | 206 |