# Peter Pohl

List of Publications by Year
in descending order

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|---|---|---|---|
| 115 papers | 6,399 citations | 57631 44 h-index | 74018 75 g-index |
| 126 all docs | 126 docs citations | 126 times ranked | 6815 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Determinants of Lipid Domain Size. International Journal of Molecular Sciences, 2022, 23, 3502. | 1.8 | 7 |
| 2 | Photoswitching of model ion channels in lipid bilayers. Journal of Photochemistry and Photobiology B: Biology, 2021, 224, 112320. | 1.7 | 17 |
| 3 | Biophysical Reviewsâ€™ â€œMeet the Councilor Seriesâ€â€”a profile of Peter Pohl. Biophysical Reviews, 2021, 13, 839-844. | 1.5 | 1 |
| 4 | The energetic barrier to single-file water flow through narrow channels. Biophysical Reviews, 2021, 13, 913-923. | 1.5 | 18 |
| 5 | Voltage Sensing in Bacterial Protein Translocation. Biomolecules, 2020, 10, 78. | 1.8 | 11 |
| 6 | Interaction of the motor protein SecA and the bacterial protein translocation channel SecYEG in the absence of ATP. Nanoscale Advances, 2020, 2, 3431-3443. | 2.2 | 6 |
| 7 | Micropipette Aspirationâ€Based Assessment of Single Channel Water Permeability. Biotechnology Journal, 2020, 15, e1900450. | 1.8 | 15 |
| 8 | Ordered Lipid Domains Assemble via Concerted Recruitment of Constituents from Both Membrane Leaflets. Physical Review Letters, 2020, 124, 108102. | 2.9 | 29 |
| 9 | Elasticity and phase behaviour of biomimetic membrane systems containing tetraether archaeal lipids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2020, 601, 124974. | 2.3 | 9 |
| 10 | Intrinsic Membrane Permeability to Small Molecules. Chemical Reviews, 2019, 119, 5922-5953. | 23.0 | 135 |
| 11 | The Effect of Buffers on Weak Acid Uptake by Vesicles. Biomolecules, 2019, 9, 63. | 1.8 | 17 |
| 12 | Driving Forces of Translocation Through Bacterial Translocon SecYEG. Journal of Membrane Biology, 2018, 251, 329-343. | 1.0 | 27 |
| 13 | Positively charged residues at the channel mouth boost single-file water flow. Faraday Discussions, 2018, 209, 55-65. | 1.6 | 35 |
| 14 | Comment on â€œEnhanced water permeability and tunable ion selectivity in subnanometer carbon nanotube porinsâ€• Science, 2018, 359, . | 6.0 | 33 |
| 15 | Label-free and charge-sensitive dynamic imaging of lipid membrane hydration on millisecond time scales. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4081-4086. | 3.3 | 38 |
| 16 | Understanding Conformational Dynamics of Complex Lipid Mixtures Relevant to Biology. Journal of Membrane Biology, 2018, 251, 609-631. | 1.0 | 33 |
| 17 | Passive Permeability of Planar Lipid Bilayers toÂOrganic Anions. Biophysical Journal, 2018, 115, 1931-1941. | 0.2 | 38 |
| 18 | Residence time of singlet oxygen in membranes. Scientific Reports, 2018, 8, 14000. | 1.6 | 17 |

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|---|---|---|---|
| 19 | Structure and function of natural proteins for water transport: general discussion. Faraday Discussions, 2018, 209, 83-95. | 1.6 | 4 |
| 20 | Biomimetic water channels: general discussion. Faraday Discussions, 2018, 209, 205-229. | 1.6 | 10 |
| 21 | Applications to water transport systems: general discussion. Faraday Discussions, 2018, 209, 389-414. | 1.6 | 4 |
| 22 | Single-file transport of water through membrane channels. Faraday Discussions, 2018, 209, 9-33. | 1.6 | 65 |
| 23 | Mechanism of Long-Chain Free Fatty Acid Protonation at the Membrane-Water Interface. Biophysical Journal, 2018, 114, 2142-2151. | 0.2 | 57 |
| 24 | Membrane Permeabilities of Ascorbic Acid and Ascorbate. Biomolecules, 2018, 8, 73. | 1.8 | 29 |
| 25 | Interfacial water molecules at biological membranes: Structural features and role for lateral proton diffusion. PLoS ONE, 2018, 13, e0193454. | 1.1 | 12 |
| 26 | Undulations Drive Domain Registration from theÂTwo Membrane Leaflets. Biophysical Journal, 2017, 112, 339-345. | 0.2 | 34 |
| 27 | Origin of proton affinity to membrane/water interfaces. Scientific Reports, 2017, 7, 4553. | 1.6 | 49 |
| 28 | Oxidation and lateral diffusion of styryl dyes on the surface of a bilayer lipid membrane. Russian Journal of Electrochemistry, 2017, 53, 1171-1181. | 0.3 | 1 |
| 29 | YidC and SecYEG form a heterotetrameric protein translocation channel. Scientific Reports, 2017, 7, 101. | 1.6 | 45 |
| 30 | Tuning membrane protein mobility by confinement into nanodomains. Nature Nanotechnology, 2017, 12, 260-266. | 15.6 | 34 |
| 31 | Voltage-sensitive styryl dyes as singlet oxygen targets on the surface of bilayer lipid membrane. Journal of Photochemistry and Photobiology B: Biology, 2016, 161, 162-169. | 1.7 | 19 |
| 32 | Water Determines the Structure and Dynamics of Proteins. Chemical Reviews, 2016, 116, 7673-7697. | 23.0 | 645 |
| 33 | GalimzyanovetÂal.Reply:. Physical Review Letters, 2016, 116, 079802. | 2.9 | 14 |
| 34 | Protons and Hydroxide Ions in Aqueous Systems. Chemical Reviews, 2016, 116, 7642-7672. | 23.0 | 358 |
| 35 | Elastic deformations of bolalipid membranes. Soft Matter, 2016, 12, 2357-2364. | 1.2 | 13 |
| 36 | The Sodium Glucose Cotransporter SGLT1 Is an Extremely Efficient Facilitator of Passive Water Transport. Journal of Biological Chemistry, 2016, 291, 9712-9720. | 1.6 | 38 |

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| 37 | Elastic Membrane Deformations Govern Interleaflet Coupling of Lipid-Ordered Domains. Physical Review Letters, 2015, 115, 088101. | 2.9 | 66 |
| 38 | 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. | 4.7 | 135 |
| 39 | Mobility of Single-File Water Molecules in Aquaporins. Biophysical Journal, 2015, 108, 182a. | 0.2 | 2 |
| 40 | High-Speed AFM Images of Thermal Motion Provide Stiffness Map of Interfacial Membrane Protein Moieties. Nano Letters, 2015, 15, 759-763. | 4.5 | 49 |
| 41 | Effects of secreted factors in culture medium of annulus fibrosus cells on microvascular endothelial cells: elucidating the possible pathomechanisms of matrix degradation and nerve in-growth in disc degeneration. Osteoarthritis and Cartilage, 2014, 22, 344-354. | 0.6 | 39 |
| 42 | Ion Conductivity of the Bacterial Translocation Channel SecYEG Engaged in Translocation. Journal of Biological Chemistry, 2014, 289, 24611-24616. | 1.6 | 25 |
| 43 | Real-Time Monitoring of Membrane-Protein Reconstitution by Isothermal Titration Calorimetry. Analytical Chemistry, 2014, 86, 920-927. | 3.2 | 27 |
| 44 | Long and Short Lipid Molecules Experience the Same Interleaflet Drag in Lipid Bilayers. Physical Review Letters, 2013, 110, 268101. | 2.9 | 40 |
| 45 | Local Partition Coefficients Govern Solute Permeability of Cholesterol-Containing Membranes. Biophysical Journal, 2013, 105, 2760-2770. | 0.2 | 67 |
| 46 | The Bacterial Translocon SecYEG Opens upon Ribosome Binding. Journal of Biological Chemistry, 2013, 288, 17941-17946. | 1.6 | 42 |
| 47 | Filter gate closure inhibits ion but not water transport through potassium channels. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10842-10847. | 3.3 | 61 |
| 48 | Uroplakins Do Not Restrict CO2 Transport through Urothelium. Journal of Biological Chemistry, 2012, 287, 11011-11017. | 1.6 | 15 |
| 49 | Mechanism for Targeting the A-kinase Anchoring Protein AKAP18Î´ to the Membrane. Journal of Biological Chemistry, 2012, 287, 42495-42501. | 1.6 | 20 |
| 50 | A consensus segment in the M2 domain of the hP2X7 receptor shows ion channel activity in planar lipid bilayers and in biological membranes. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 64-71. | 1.4 | 5 |
| 51 | Design of Peptide-Membrane Interactions to Modulate Single-File Water Transport through Modified Gramicidin Channels. Biophysical Journal, 2012, 103, 1698-1705. | 0.2 | 8 |
| 52 | Water at hydrophobic interfaces delays proton surface-to-bulk transfer and provides a pathway for lateral proton diffusion. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 9744-9749. | 3.3 | 104 |
| 53 | Electrostatically Induced Recruitment of Membrane Peptides into Clusters Requires Ligand Binding at Both Interfaces. PLoS ONE, 2012, 7, e52839. | 1.1 | 9 |
| 54 | Protons migrate along interfacial water without significant contributions from jumps between ionizable groups on the membrane surface. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14461-14466. | 3.3 | 100 |

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| 55 | Intrinsic CO<sub>2</sub> Permeability of Cell Membranes and Potential Biological Relevance of CO<sub>2</sub> Channels. ChemPhysChem, 2011, 12, 1017-1019. | 1.0 | 56 |
| 56 | Monitoring Single-channel Water Permeability in Polarized Cells. Journal of Biological Chemistry, 2011, 286, 39926-39932. | 1.6 | 18 |
| 57 | Routes of Epithelial Water Flow: Aquaporins versus Cotransporters. Biophysical Journal, 2010, 99, 3647-3656. | 0.2 | 27 |
| 58 | No facilitator required for membrane transport of hydrogen sulfide. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 16633-16638. | 3.3 | 309 |
| 59 | 110 Years of the Meyerâ€“Overton Rule: Predicting Membrane Permeability of Gases and Other Small Compounds. ChemPhysChem, 2009, 10, 1405-1414. | 1.0 | 193 |
| 60 | Coupled Diffusion of Peripherally Bound Peptides along the Outer and Inner Membrane Leaflets. Biophysical Journal, 2009, 96, 2689-2695. | 0.2 | 38 |
| 61 | Membrane Transport of Singlet Oxygen Monitored by Dipole Potential Measurements. Biophysical Journal, 2009, 96, 77-85. | 0.2 | 24 |
| 62 | Microinjection in combination with microfluorimetry to study proton diffusion along phospholipid membranes. European Biophysics Journal, 2008, 37, 865-870. | 1.2 | 21 |
| 63 | Influence of Amphiphilic Block Copolymer Induced Changes in Membrane Ion Conductance on the Reversal of Multidrug Resistance. Journal of Medicinal Chemistry, 2008, 51, 4253-4259. | 2.9 | 14 |
| 64 | Cholesterol's decoupling effect on membrane partitioning and permeability revisited: Is there anything beyond Fick's law of diffusion?. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 2154-2156. | 1.4 | 15 |
| 65 | Carbon Dioxide Transport through Membranes. Journal of Biological Chemistry, 2008, 283, 25340-25347. | 1.6 | 143 |
| 66 | Passive transport across bilayer lipid membranes: Overton continues to rule. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, E123; author reply E124. | 3.3 | 33 |
| 67 | Fast and Selective Ammonia Transport by Aquaporin-8. Journal of Biological Chemistry, 2007, 282, 5296-5301. | 1.6 | 185 |
| 68 | Compartmentalization of cAMP-Dependent Signaling by Phosphodiesterase-4D Is Involved in the Regulation of Vasopressin-Mediated Water Reabsorption in Renal Principal Cells. Journal of the American Society of Nephrology: JASN, 2007, 18, 199-212. | 3.0 | 134 |
| 69 | Determining the Conductance of the SecY Protein Translocation Channel for Small Molecules. Molecular Cell, 2007, 26, 501-509. | 4.5 | 102 |
| 70 | Invariance of Single-File Water Mobility in Gramicidin-like Peptidic Pores as Function of Pore Length. Biophysical Journal, 2007, 92, 3930-3937. | 0.2 | 31 |
| 71 | A New Model of Weak Acid Permeation through Membranes Revisited: Does Overton Still Rule?. Biophysical Journal, 2006, 90, L86-L88. | 0.2 | 73 |
| 72 | Hochschulen und Forschungsinstitute. Nachrichten Aus Der Chemie, 2006, 54, 360-360. | 0.0 | 0 |

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| 73 | Mobility of a One-Dimensional Confined File of Water Molecules as a Function of File Length. Physical Review Letters, 2006, 96, 148101. | 2.9 | 46 |
| 74 | Effect of block architecture on the ability of polyalkylene oxides to overcome multidrug resistance of tumor cells. Journal of Drug Delivery Science and Technology, 2006, 16, 259-265. | 1.4 | 3 |
| 75 | (Coumarin-4-yl)methyl Esters as Highly Efficient, Ultrafast Phototriggers for Protons and Their Application to Acidifying Membrane Surfaces. Angewandte Chemie - International Edition, 2005, 44, 1195-1198. | 7.2 | 79 |
| 76 | Proton exclusion by an aquaglyceroprotein: a voltage clamp study. Biology of the Cell, 2005, 97, 545-550. | 0.7 | 38 |
| 77 | A Critical Reassessment of Penetratin Translocation Across Lipid Membranes. Biophysical Journal, 2005, 89, 2513-2521. | 0.2 | 76 |
| 78 | Aquaporin-1, Nothing but a Water Channel. Journal of Biological Chemistry, 2004, 279, 11364-11367. | 1.6 | 51 |
| 79 | Combined transport of water and ions through membrane channels. Biological Chemistry, 2004, 385, 921-6. | 1.2 | 30 |
| 80 | Membrane destabilization by ricin. European Biophysics Journal, 2004, 33, 572-579. | 1.2 | 20 |
| 81 | Beyond the diffusion limit: Water flow through the empty bacterial potassium channel. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 4805-4809. | 3.3 | 71 |
| 82 | Ionophoric Activity of Pluronic Block Copolymersâ€. Biochemistry, 2004, 43, 3696-3703. | 1.2 | 50 |
| 83 | Cyclic AMP is sufficient for triggering the exocytic recruitment of aquaporinâ€2 in renal epithelial cells. EMBO Reports, 2003, 4, 88-93. | 2.0 | 72 |
| 84 | Water transport. Membrane Science and Technology, 2003, , 295-314. | 0.5 | 1 |
| 85 | Structural Proton Diffusion along Lipid Bilayers. Biophysical Journal, 2003, 84, 1031-1037. | 0.2 | 115 |
| 86 | Transport Kinetics of Uncoupling Proteins. Journal of Biological Chemistry, 2003, 278, 32497-32500. | 1.6 | 52 |
| 87 | Water Permeation through Gramicidin A: Desformylation and the Double Helix: A Molecular Dynamics Study. Biophysical Journal, 2002, 82, 2934-2942. | 0.2 | 89 |
| 88 | Origin of membrane dipole potential: Contribution of the phospholipid fatty acid chains. Chemistry and Physics of Lipids, 2002, 117, 19-27. | 1.5 | 95 |
| 89 | Water and Ion Permeation of Aquaporin-1 in Planar Lipid Bilayers. Journal of Biological Chemistry, 2001, 276, 31515-31520. | 1.6 | 111 |
| 90 | Highly selective water channel activity measured by voltage clamp: Analysis of planar lipid bilayers reconstituted with purified AqpZ. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 9624-9629. | 3.3 | 93 |

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| 91 | Water Permeability of Asymmetric Planar Lipid Bilayers. Journal of General Physiology, 2001, 118, 333-340. | 0.9 | 75 |
| 92 | Ultrasound enhancement of liposome-mediated cell transfection is caused by cavitation effects. Ultrasound in Medicine and Biology, 2000, 26, 897-903. | 0.7 | 118 |
| 93 | Membrane Photopotential Generation by Interfacial Differences in the Turnover of a Photodynamic Reaction. Biophysical Journal, 2000, 79, 2121-2131. | 0.2 | 14 |
| 94 | Desformylgramicidin: A Model Channel with an Extremely High Water Permeability. Biophysical Journal, 2000, 79, 2526-2534. | 0.2 | 47 |
| 95 | Solvent Drag across Gramicidin Channels Demonstrated by Microelectrodes. Biophysical Journal, 2000, 78, 2426-2434. | 0.2 | 45 |
| 96 | Photosensitizer Binding to Lipid Bilayers as a Precondition for the Photoinactivation of Membrane Channels. Biophysical Journal, 2000, 78, 2572-2580. | 0.2 | 71 |
| 97 | Changes of Intrinsic Membrane Potentials Induced by Flip-Flop of Long-Chain Fatty Acidsâ€. Biochemistry, 2000, 39, 1834-1839. | 1.2 | 54 |
| 98 | Volume Flux Across Red Cell AQP1 and E. Coli AQPZ Water Channel Proteins Reconstituted into Planar Lipid Bilayers. , 2000, , 41-48. | | 1 |
| 99 | Membrane fusion mediated by ricin and viscumin. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1371, 11-16. | 1.4 | 26 |
| 100 | Changes of the membrane potential profile induced by verapamil and propranolol. Biochimica Et Biophysica Acta - Biomembranes, 1998, 1373, 170-178. | 1.4 | 41 |
| 101 | Coupling of proton source and sink via H+ -migration along the membrane surface as revealed by double patch-clamp experiments. FEBS Letters, 1998, 429, 197-200. | 1.3 | 27 |
| 102 | The Size of the Unstirred Layer as a Function of the Solute Diffusion Coefficient. Biophysical Journal, 1998, 75, 1403-1409. | 0.2 | 139 |
| 103 | Dehydration of Model Membranes Induced by Lectins from Ricinuscommunis and Viscumalbum. Biophysical Journal, 1998, 75, 2868-2876. | 0.2 | 11 |
| 104 | The effect of a transmembrane osmotic flux on the ion concentration distribution in the immediate membrane vicinity measured by microelectrodes. Biophysical Journal, 1997, 72, 1711-1718. | 0.2 | 62 |
| 105 | Permeation of ammonia across bilayer lipid membranes studied by ammonium ion selective microelectrodes. Biophysical Journal, 1997, 72, 2187-2195. | 0.2 | 80 |
| 106 | The role of structural domains in RIP II toxin model membrane binding. FEBS Letters, 1997, 402, 91-93. | 1.3 | 17 |
| 107 | Permeation of phloretin across bilayer lipid membranes monitored by dipole potential and microelectrode measurements. Biochimica Et Biophysica Acta - Biomembranes, 1997, 1323, 163-172. | 1.4 | 60 |
| 108 | Immunotoxins containing A-chain of mistletoe lectin I are more active than immunotoxins with ricin A-chain. FEBS Letters, 1996, 392, 166-168. | 1.3 | 36 |

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| 109 | Visualization of the Reaction Layer in the Immediate Membrane Vicinity. Archives of Biochemistry and Biophysics, 1996, 333, 225-232. | 1.4 | 23 |
| 110 | Effects of ultrasound on agglutination and aggregation of human erythrocytes in vitro. Ultrasound in Medicine and Biology, 1995, 21, 711-719. | 0.7 | 21 |
| 111 | Steady-state nonmonotonic concentration profiles in the unstirred layers of bilayer lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 1995, 1235, 57-61. | 1.4 | 10 |
| 112 | Effect of ultrasound on the pH profiles in the unstirred layers near planar bilayer lipid membranes measured by microelectrodes. Biochimica Et Biophysica Acta - Biomembranes, 1993, 1152, 155-160. | 1.4 | 40 |
| 113 | Effects of ultrasound on the steady-state transmembrane pH gradient and the permeability of acetic acid through bilayer lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 1993, 1145, 279-283. | 1.4 | 29 |
| 114 | Weak acid transport across bilayer lipid membrane in the presence of buffers. Theoretical and experimental pH profiles in the unstirred layers. Biophysical Journal, 1993, 64, 1701-1710. | 0.2 | 65 |
| 115 | Kinetic properties of cation/H+-exchange: calcimycin (A23187)-mediated Ca2+/2H+-exchange on the bilayer lipid membrane. Biochimica Et Biophysica Acta - Biomembranes, 1990, 1027, 295-300. | 1.4 | 21 |