# Norbert Kucerka

List of Publications by Year
in descending order



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|---|---|---|---|
| 116 papers | 7,958 citations | 66343 42 h-index | 49909 87 g-index |
| 117 all docs | 117 docs citations | 117 times ranked | 6552 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Fluid phase lipid areas and bilayer thicknesses of commonly used phosphatidylcholines as a function of temperature. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 2761-2771. | 2.6 | 850 |
| 2 | Structure of Fully Hydrated Fluid Phase Lipid Bilayers with Monounsaturated Chains. Journal of Membrane Biology, 2006, 208, 193-202. | 2.1 | 715 |
| 3 | Structure of Fully Hydrated Fluid Phase DMPC and DLPC Lipid Bilayers Using X-Ray Scattering from Oriented Multilamellar Arrays and from Unilamellar Vesicles. Biophysical Journal, 2005, 88, 2626-2637. | 0.5 | 531 |
| 4 | Lipid Bilayer Structure Determined by the Simultaneous Analysis of Neutron and X-Ray Scattering Data. Biophysical Journal, 2008, 95, 2356-2367. | 0.5 | 518 |
| 5 | Temperature Dependence of Structure, Bending Rigidity, and Bilayer Interactions of Dioleoylphosphatidylcholine Bilayers. Biophysical Journal, 2008, 94, 117-124. | 0.5 | 307 |
| 6 | Bilayer Thickness Mismatch Controls Domain Size in Model Membranes. Journal of the American Chemical Society, 2013, 135, 6853-6859. | 13.7 | 267 |
| 7 | Simulation-Based Methods for Interpreting X-Ray Data from Lipid Bilayers. Biophysical Journal, 2006, 90, 2796-2807. | 0.5 | 219 |
| 8 | Applications of neutron and X-ray scattering to the study of biologically relevant model membranes. Chemistry and Physics of Lipids, 2010, 163, 460-479. | 3.2 | 195 |
| 9 | Molecular structures of fluid phase phosphatidylglycerol bilayers as determined by small angle neutron and X-ray scattering. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 2135-2148. | 2.6 | 189 |
| 10 | Bilayer thickness and lipid interface area in unilamellar extruded 1,2-diacylphosphatidylcholine liposomes: a small-angle neutron scattering study. Biochimica Et Biophysica Acta - Biomembranes, 2001, 1512, 40-52. | 2.6 | 174 |
| 11 | Closer Look at Structure of Fully Hydrated Fluid Phase DPPC Bilayers. Biophysical Journal, 2006, 90, L83-L85. | 0.5 | 165 |
| 12 | Determination of bilayer thickness and lipid surface area in unilamellar dimyristoylphosphatidylcholine vesicles from small-angle neutron scattering curves: a comparison of evaluation methods. European Biophysics Journal, 2004, 33, 328-334. | 2.2 | 151 |
| 13 | The Effect of Cholesterol on Short- and Long-Chain Monounsaturated Lipid Bilayers as Determined by Molecular Dynamics Simulations and X-Ray Scattering. Biophysical Journal, 2008, 95, 2792-2805. | 0.5 | 148 |
| 14 | Swelling of phospholipids by monovalent salt. Journal of Lipid Research, 2006, 47, 302-309. | 4.2 | 140 |
| 15 | Curvature Effect on the Structure of Phospholipid Bilayers. Langmuir, 2007, 23, 1292-1299. | 3.5 | 124 |
| 16 | Tocopherol Activity Correlates with Its Location in a Membrane: A New Perspective on the Antioxidant Vitamin E. Journal of the American Chemical Society, 2013, 135, 7523-7533. | 13.7 | 114 |
| 17 | Cholesterol in Bilayers with PUFA Chains: Doping with DMPC or POPC Results in Sterol Reorientation and Membrane-Domain Formation. Biochemistry, 2010, 49, 7485-7493. | 2.5 | 109 |
| 18 | The Observation of Highly Ordered Domains in Membranes with Cholesterol. PLoS ONE, 2013, 8, e66162. | 2.5 | 100 |

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|---|---|---|---|
| 19 | Alamethicin in lipid bilayers: Combined use of X-ray scattering and MD simulations. Biochimica Et Biophysica Acta - Biomembranes, 2009, 1788, 1387-1397. | 2.6 | 99 |
| 20 | Comparing Membrane Simulations to Scattering Experiments: Introducing the SIMtoEXP Software. Journal of Membrane Biology, 2010, 235, 43-50. | 2.1 | 97 |
| 21 | Anomalous swelling of lipid bilayer stacks is caused by softening of the bending modulus. Physical Review E, 2005, 71, 041904. | 2.1 | 94 |
| 22 | Areas of Monounsaturated Diacylphosphatidylcholines. Biophysical Journal, 2009, 97, 1926-1932. | 0.5 | 94 |
| 23 | Scattering Density Profile Model of POPG Bilayers As Determined by Molecular Dynamics Simulations and Small-Angle Neutron and X-ray Scattering Experiments. Journal of Physical Chemistry B, 2012, 116, 232-239. | 2.6 | 92 |
| 24 | Effect of melatonin and cholesterol on the structure of DOPC and DPPC membranes. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 2247-2254. | 2.6 | 92 |
| 25 | Structure and water permeability of fully hydrated diphytanoylPC. Chemistry and Physics of Lipids, 2010, 163, 630-637. | 3.2 | 89 |
| 26 | Influence of cholesterol on the bilayer properties of monounsaturated phosphatidylcholine unilamellar vesicles. European Physical Journal E, 2007, 23, 247-254. | 1.6 | 87 |
| 27 | Structural changes in dipalmitoylphosphatidylcholine bilayer promoted by Ca2+ ions: a small-angle neutron scattering study. Chemistry and Physics of Lipids, 2008, 155, 80-89. | 3.2 | 85 |
| 28 | The molecular structure of a phosphatidylserine bilayer determined by scattering and molecular dynamics simulations. Soft Matter, 2014, 10, 3716. | 2.7 | 84 |
| 29 | Cholesterol's location in lipid bilayers. Chemistry and Physics of Lipids, 2016, 199, 17-25. | 3.2 | 83 |
| 30 | Effect of Cations on the Structure of Bilayers Formed by Lipopolysaccharides Isolated from Pseudomonas aeruginosa PAO1. Journal of Physical Chemistry B, 2008, 112, 8057-8062. | 2.6 | 82 |
| 31 | Molecular Structures of Fluid Phosphatidylethanolamine Bilayers Obtained from Simulation-to-Experiment Comparisons and Experimental Scattering Density Profiles. Journal of Physical Chemistry B, 2015, 119, 1947-1956. | 2.6 | 81 |
| 32 | Chain Conformation of a New Class of PEG-Based Thermoresponsive Polymer Brushes Grafted on Silicon as Determined by Neutron Reflectometry. Langmuir, 2009, 25, 10271-10278. | 3.5 | 79 |
| 33 | Models to analyze small-angle neutron scattering from unilamellar lipid vesicles. Physical Review E, 2004, 69, 051903. | 2.1 | 77 |
| 34 | Structural Significance of Lipid Diversity as Studied by Small Angle Neutron and X-ray Scattering. Membranes, 2015, 5, 454-472. | 3.0 | 70 |
| 35 | Model-based approaches for the determination of lipid bilayer structure from small-angle neutron and X-ray scattering data. European Biophysics Journal, 2012, 41, 875-890. | 2.2 | 66 |
| 36 | Global small-angle X-ray scattering data analysis for multilamellar vesicles: the evolution of the scattering density profile model. Journal of Applied Crystallography, 2014, 47, 173-180. | 4.5 | 62 |

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| 37 | Interaction of Aspirin (Acetylsalicylic Acid) with Lipid Membranes. PLoS ONE, 2012, 7, e34357. | 2.5 | 58 |
| 38 | Structure of Cholesterol in Lipid Rafts. Physical Review Letters, 2014, 113, 228101. | 7.8 | 55 |
| 39 | Influence of N-dodecyl-N,N-dimethylamine N-oxide on the activity of sarcoplasmic reticulum Ca2+-transporting ATPase reconstituted into diacylphosphatidylcholine vesicles: Effects of bilayer physical parameters. Biophysical Chemistry, 2006, 119, 69-77. | 2.8 | 51 |
| 40 | The Functional Significance of Lipid Diversity: Orientation of Cholesterol in Bilayers Is Determined by Lipid Species. Journal of the American Chemical Society, 2009, 131, 16358-16359. | 13.7 | 51 |
| 41 | Neutron Diffraction Study ofPseudomonasaeruginosaLipopolysaccharide Bilayers. Journal of Physical Chemistry B, 2007, 111, 2477-2483. | 2.6 | 48 |
| 42 | What determines the thickness of a biological membrane. General Physiology and Biophysics, 2009, 28, 117-125. | 0.9 | 47 |
| 43 | Revisiting the bilayer structures of fluid phase phosphatidylglycerol lipids: Accounting for exchangeable hydrogens. Biochimica Et Biophysica Acta - Biomembranes, 2014, 1838, 2966-2969. | 2.6 | 46 |
| 44 | The study of liposomes, lamellae and membranes using neutrons and X-rays. Current Opinion in Colloid and Interface Science, 2007, 12, 17-22. | 7.4 | 41 |
| 45 | Formation of Kinetically Trapped Nanoscopic Unilamellar Vesicles from Metastable Nanodiscs. Langmuir, 2011, 27, 14308-14316. | 3.5 | 41 |
| 46 | Co-existence of gel and fluid lipid domains in single-component phospholipid membranes. Soft Matter, 2012, 8, 4687. | 2.7 | 38 |
| 47 | Dimyristoyl Phosphatidylcholine: A Remarkable Exception to Î±-Tocopherolâ€™s Membrane Presence. Journal of the American Chemical Society, 2014, 136, 203-210. | 13.7 | 38 |
| 48 | Interactions between Ether Phospholipids and Cholesterol As Determined by Scattering and Molecular Dynamics Simulations. Journal of Physical Chemistry B, 2012, 116, 14829-14838. | 2.6 | 36 |
| 49 | Morphological Characterization of DMPC/CHAPSO Bicellar Mixtures: A Combined SANS and NMR Study. Langmuir, 2013, 29, 15943-15957. | 3.5 | 36 |
| 50 | Î±-Tocopherol Is Well Designed to Protect Polyunsaturated Phospholipids: MD Simulations. Biophysical Journal, 2015, 109, 1608-1618. | 0.5 | 36 |
| 51 | Hydrophobic thickness, lipid surface area and polar region hydration in monounsaturated diacylphosphatidylcholine bilayers: SANS study of effects of cholesterol and Î²-sitosterol in unilamellar vesicles. Biochimica Et Biophysica Acta - Biomembranes, 2008, 1778, 2627-2632. | 2.6 | 34 |
| 52 | Calcium and Zinc Differentially Affect the Structure of Lipid Membranes. Langmuir, 2017, 33, 3134-3141. | 3.5 | 34 |
| 53 | Spontaneously Formed Unilamellar Vesicles. Methods in Enzymology, 2009, 465, 3-20. | 1.0 | 33 |
| 54 | Aspirin inhibits formation of cholesterol rafts in fluid lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2015, 1848, 805-812. | 2.6 | 33 |

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| 55 | <i>Î±-</i>Tocopherolâ€™s Location in Membranes Is Not Affected by Their Composition. Langmuir, 2015, 31, 4464-4472. | 3.5 | 30 |
| 56 | Asymmetric Distribution of Cholesterol in Unilamellar Vesicles of Monounsaturated Phospholipids. Langmuir, 2009, 25, 13522-13527. | 3.5 | 28 |
| 57 | The effect of aliphatic alcohols on fluid bilayers in unilamellar DOPC vesicles â€" A small-angle neutron scattering and molecular dynamics study. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 2136-2146. | 2.6 | 28 |
| 58 | Growth kinetics of lipid-based nanodiscs to unilamellar vesiclesâ€"A time-resolved small angle neutron scattering (SANS) study. Biochimica Et Biophysica Acta - Biomembranes, 2013, 1828, 1025-1035. | 2.6 | 28 |
| 59 | Alcohol Interactions with Lipid Bilayers. Molecules, 2017, 22, 2078. | 3.8 | 28 |
| 60 | Small-Angle Neutron Scattering to Detect Rafts and Lipid Domains. Methods in Molecular Biology, 2007, 398, 231-244. | 0.9 | 27 |
| 61 | Scattering from laterally heterogeneous vesicles. II. The form factor. Journal of Applied Crystallography, 2007, 40, 513-525. | 4.5 | 25 |
| 62 | Neutron and X-ray scattering for biophysics and biotechnology: examples of self-assembled lipid systems. Soft Matter, 2009, 5, 2694. | 2.7 | 25 |
| 63 | Small-angle neutron scattering study of the n-decane effect on the bilayer thickness in extruded unilamellar dioleoylphosphatidylcholine liposomes. Biophysical Chemistry, 2000, 88, 165-170. | 2.8 | 24 |
| 64 | Small-angle neutron scattering study of the lipid bilayer thickness in unilamellar dioleoylphosphatidylcholine vesicles prepared by the cholate dilution method: n-decane effect. Biochimica Et Biophysica Acta - Biomembranes, 2003, 1611, 31-34. | 2.6 | 24 |
| 65 | The effects of cholesterol and Î²-sitosterol on the structure of saturated diacylphosphatidylcholine bilayers. European Biophysics Journal, 2011, 40, 153-163. | 2.2 | 24 |
| 66 | Interaction of the full-length Bax protein with biomimetic mitochondrial liposomes: A small-angle neutron scattering and fluorescence study. Biochimica Et Biophysica Acta - Biomembranes, 2012, 1818, 384-401. | 2.6 | 24 |
| 67 | Molecular Structure of Sphingomyelin in Fluid Phase Bilayers Determined by the Joint Analysis of Small-Angle Neutron and X-ray Scattering Data. Journal of Physical Chemistry B, 2020, 124, 5186-5200. | 2.6 | 24 |
| 68 | Scattering from laterally heterogeneous vesicles. I. Model-independent analysis. Journal of Applied Crystallography, 2006, 39, 791-796. | 4.5 | 21 |
| 69 | The component group structure of DPPC bilayers obtained by specular neutron reflectometry. Soft Matter, 2015, 11, 6275-6283. | 2.7 | 21 |
| 70 | The structures of polyunsaturated lipid bilayers by joint refinement of neutron and X-ray scattering data. Chemistry and Physics of Lipids, 2020, 229, 104892. | 3.2 | 21 |
| 71 | The influence of curvature on membrane domains. European Biophysics Journal, 2008, 37, 665-671. | 2.2 | 20 |
| 72 | Influence of Cholesterol and Î²-Sitosterol on the Structure of EYPC Bilayers. Journal of Membrane Biology, 2011, 243, 1-13. | 2.1 | 19 |

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| 73 | Structure from substrate supported lipid bilayers (Review). Biointerphases, 2008, 3, FB55-FB63. | 1.6 | 18 |
| 74 | Long and very long lamellar phases in model stratum corneum lipid membranes. Journal of Lipid Research, 2019, 60, 963-971. | 4.2 | 18 |
| 75 | Small-Angle Scattering from Homogenous and Heterogeneous Lipid Bilayers. Behavior Research Methods, 2010, , 201-235. | 4.0 | 17 |
| 76 | Bilayer thickness in unilamellar phosphatidylcholine vesicles: small-angle neutron scattering using contrast variation. Physica B: Condensed Matter, 2004, 350, E639-E642. | 2.7 | 13 |
| 77 | Lipid bilayer â€" DNA interaction mediated by divalent metal cations: SANS and SAXD study. Journal of Physics: Conference Series, 2012, 351, 012011. | 0.4 | 13 |
| 78 | Size and distribution of the iron oxide nanoparticles in SBA-15 nanoporous silica via SANS study. Scientific Reports, 2019, 9, 15852. | 3.3 | 13 |
| 79 | Partial area of cholesterol in monounsaturated diacylphosphatidylcholine bilayers. Chemistry and Physics of Lipids, 2010, 163, 765-770. | 3.2 | 12 |
| 80 | Cationâ€"Zwitterionic Lipid Interactions Are Affected by the Lateral Area per Lipid. Langmuir, 2021, 37, 278-288. | 3.5 | 12 |
| 81 | Structural changes introduced by cholesterol and melatonin to the model membranes mimicking preclinical conformational diseases. General Physiology and Biophysics, 2020, 39, 135-144. | 0.9 | 12 |
| 82 | The membrane structure and function affected by water. Chemistry and Physics of Lipids, 2019, 221, 140-144. | 3.2 | 11 |
| 83 | Effects of N,N-dimethyl-N-alkylamine-N-oxides on DOPC bilayers in unilamellar vesicles: small-angle neutron scattering study. European Biophysics Journal, 2014, 43, 179-189. | 2.2 | 9 |
| 84 | Scattering from laterally heterogeneous vesicles. III. Reconciling past and present work. Journal of Applied Crystallography, 2007, 40, 771-772. | 4.5 | 7 |
| 85 | Neutron Diffraction Study of Pseudomonas aeruginosa Lipopolysaccharide Bilayers. , 0, , . | | 7 |
| 86 | Adapting a triple-axis spectrometer for small angle neutron scattering measurements. Review of Scientific Instruments, 2008, 79, 095102. | 1.3 | 6 |
| 87 | Formation mechanism of self-assembled unilamellar vesiclesSpecial issue on Neutron Scattering in Canada. Canadian Journal of Physics, 2010, 88, 735-740. | 1.1 | 6 |
| 88 | Amyloid-beta peptide (25â€"35) triggers a reorganization of lipid membranes driven by temperature changes. Scientific Reports, 2021, 11, 21990. | 3.3 | 6 |
| 89 | The structural variety of DNA-DPPC-divalent metal cation aggregates: SAXD and SANS study. European Physical Journal: Special Topics, 2009, 167, 191-197. | 2.6 | 5 |
| 90 | Reflectometry and molecular dynamics study of the impact of cholesterol and melatonin on model lipid membranes. European Biophysics Journal, 2021, 50, 1025-1035. | 2.2 | 5 |

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| 91 | Interactions in the model membranes mimicking preclinical conformational diseases. Advances in Biomembranes and Lipid Self-Assembly, 2020, 31, 185-214. | 0.6 | 5 |
| 92 | The Detailed Scattering Density Profile Model of Pg Bilayers as Determined by Molecular Dynamics Simulations, and Small-Angle Neutron and X-ray Scattering Experiments. Biophysical Journal, 2012, 102, 504a-505a. | 0.5 | 4 |
| 93 | Investigating the competitive effects of cholesterol and melatonin in model lipid membranes. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183651. | 2.6 | 4 |
| 94 | Effect of alkan-1-ols on the structure of dopc model membrane. European Pharmaceutical Journal, 2017, 64, 4-8. | 0.3 | 4 |
| 95 | Molecular Structure of Phosphatidylglycerol Bilayers: Fluid Phase Lipid Areas and Bilayer Thicknesses as a Function of Temperature. Biophysical Journal, 2012, 102, 504a. | 0.5 | 3 |
| 96 | Melatonin Counteracts Cholesterol's Effects on Lipid Membrane Structure. Biophysical Journal, 2013, 104, 182a. | 0.5 | 3 |
| 97 | Cation-containing lipid membranes â€“ experiment and md simulations. European Pharmaceutical Journal, 2017, 64, 9-14. | 0.3 | 3 |
| 98 | SIMtoEXP: Software for Comparing Simulations to Experimental Scattering Data. Biophysical Journal, 2014, 106, 384a. | 0.5 | 2 |
| 99 | DMPC: A Remarkable Exception to the Tocopherol's Membrane Presence. Biophysical Journal, 2014, 106, 41a. | 0.5 | 2 |
| 100 | In-situ temperature-controllable shear flow device for neutron scattering measurementâ€"An example of aligned bicellar mixtures. Review of Scientific Instruments, 2015, 86, 025112. | 1.3 | 2 |
| 101 | III International Conference on Small Angle Neutron Scattering Dedicated to the 80th Anniversary of Yu. M. Ostanevich. Neutron News, 2016, 27, 14-16. | 0.2 | 2 |
| 102 | Approaches for a Closer Look at Problems of Liquid Membranes with Amyloid-Beta Peptides. Springer Proceedings in Physics, 2022, , 265-294. | 0.2 | 2 |
| 103 | The need to revisit lipid areas. Journal of Physics: Conference Series, 2010, 251, 012043. | 0.4 | 1 |
| 104 | Cholesterol in unusual places. Journal of Physics: Conference Series, 2010, 251, 012038. | 0.4 | 1 |
| 105 | Adapting a triple-axis spectrometer for small angle neutron scattering measurements. Journal of Physics: Conference Series, 2010, 251, 012061. | 0.4 | 1 |
| 106 | Hydrocarbon Thickness Dictates Cholesterol's Location, Orientation and Motion in a Phospholipid Bilayer. Biophysical Journal, 2015, 108, 86a. | 0.5 | 1 |
| 107 | Software for Direct Comparison of Membrane Scattering Experiments Data to Molecular Dynamics Simulations. Biophysical Journal, 2017, 112, 81a. | 0.5 | 1 |
| 108 | Cations Do Not Alter the Membrane Structure of POPCâ€"A Lipid With an Intermediate Area. Frontiers in Molecular Biosciences, 0, 9, . | 3.5 | 1 |

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| 109 | Bax Pore Formation: From Activation to Oligomerization. Biophysical Journal, 2010, 98, 464a. | 0.5 | 0 |
| 110 | Structure and Water Permeability of Fully Hydrated Diphytanoylpc. Biophysical Journal, 2010, 98, 282a. | 0.5 | 0 |
| 111 | Lipid Areas Obtained from the Simultaneous Analysis of Neutron and X-ray Scattering. Biophysical Journal, 2011, 100, 625a-626a. | 0.5 | 0 |
| 112 | The Location of Vitamin E in Model Membranes and its Effect on Oxidation. Biophysical Journal, 2013, 104, 249a-250a. | 0.5 | 0 |
| 113 | Interaction of Î±-Tocopherol with a Polyunsaturated Lipid Studied by MD Simulations. Biophysical Journal, 2013, 104, 590a. | 0.5 | 0 |
| 114 | MD Simulations on Alpha-Tocopherol in PUFA Containing Lipid. Biophysical Journal, 2014, 106, 94a. | 0.5 | 0 |
| 115 | The Molecular Structure of Sphingomyelin in Fluid Phase Bilayers Determined by the Joint Analysis of Neutron and X-Ray Scattering Data. Biophysical Journal, 2017, 112, 223a. | 0.5 | 0 |
| 116 | Lipid membranes loaded with Ca<sup>2+</sup> and Zn<sup>2+</sup> cations. Journal of Physics: Conference Series, 2017, 848, 012008. | 0.4 | 0 |