# Nikolay Surovtsev

List of Publications by Year
in descending order

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| 113 | 1,793 | 279798 | 330143 |
|---|---|---|---|
| papers | citations | 23 h-index | 37 g-index |

| 114 | 114 | 114 | 1307 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Light-scattering spectra of fast relaxation in glasses. Physical Review B, 1998, 58, 14888-14891. | 3.2 | 104 |
| 2 | Synthesis, structural and vibrational properties of microcrystalline RbNd(MoO4)2. Journal of Crystal Growth, 2011, 318, 683-686. | 1.5 | 91 |
| 3 | Connection between quasielastic Raman scattering and free volume in polymeric glasses and supercooled liquids. Journal of Chemical Physics, 1997, 107, 1057-1065. | 3.0 | 82 |
| 4 | A comprehensive light scattering study of the glass former toluene. Journal of Chemical Physics, 2000, 113, 1143-1153. | 3.0 | 77 |
| 5 | Frequency behavior of Raman coupling coefficient in glasses. Physical Review B, 2002, 66, . | 3.2 | 74 |
| 6 | Synthesis, structural and vibrational properties of microcrystalline Î²-RbSm(MoO4)2. Materials Letters, 2013, 106, 26-29. | 2.6 | 69 |
| 7 | Structural and vibrational properties of microcrystalline TlM(MoO4)2 (M=Nd, Pr) molybdates. Optical Materials, 2012, 34, 812-816. | 3.6 | 64 |
| 8 | Exploration of structural, vibrational and spectroscopic properties of self-activated orthorhombic double molybdate RbEu(MoO4)2 with isolated MoO4 units. Journal of Alloys and Compounds, 2019, 785, 692-697. | 5.5 | 64 |
| 9 | Effect of nitrogen impurities on the Raman line width in diamonds. Journal of Physics Condensed Matter, 1999, 11, 4767-4774. | 1.8 | 56 |
| 10 | Temperature-Dependent Hydrocarbon Chain Disorder in Phosphatidylcholine Bilayers Studied by Raman Spectroscopy. Journal of Physical Chemistry B, 2015, 119, 15613-15622. | 2.6 | 42 |
| 11 | Glycine phases formed from frozen aqueous solutions: Revisited. Journal of Chemical Physics, 2012, 137, 065103. | 3.0 | 37 |
| 12 | Low-Temperature Dynamical and Structural Properties of Saturated and Monounsaturated Phospholipid Bilayers Revealed by Raman and Spin-Label EPR Spectroscopy. Journal of Physical Chemistry B, 2012, 116, 8139-8144. | 2.6 | 32 |
| 13 | Combined photon-echo, luminescence and Raman spectroscopies of layered ensembles of colloidal quantum dots. Laser Physics, 2019, 29, 124009. | 1.2 | 32 |
| 14 | Raman study of low-frequency modes in three glycine polymorphs. Journal of Chemical Physics, 2011, 134, 045102. | 3.0 | 31 |
| 15 | On the glass-forming ability and short-range bond ordering of liquids. Chemical Physics Letters, 2009, 477, 57-59. | 2.6 | 28 |
| 16 | Formation of amorphous sapphire by a femtosecond laser pulse induced micro-explosion. Applied Surface Science, 2009, 255, 9745-9749. | 6.1 | 28 |
| 17 | Light scattering spectra of fast relaxation in B2O3 glass. Journal of Chemical Physics, 2000, 112, 2319-2324. | 3.0 | 27 |
| 18 | Lipid Droplet Phase Transition in Freezing Cat Embryos and Oocytes Probed by Raman Spectroscopy. Biophysical Journal, 2018, 115, 577-587. | 0.5 | 27 |

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|---|---|---|---|
| 19 | On the Low-Temperature Onset of Molecular Flexibility in Lipid Bilayers Seen by Raman Scattering. Journal of Physical Chemistry B, 2008, 112, 12361-12365. | 2.6 | 26 |
| 20 | Effect of Nitrogen Impurities on the Raman Line Width in Diamond, Revisited. Crystals, 2017, 7, 239. | 2.2 | 26 |
| 21 | Transition from Arrhenius to non-Arrhenius temperature dependence of structural relaxation time in glass-forming liquids: Continuous versus discontinuous scenario. Physical Review E, 2014, 90, 032308. | 2.1 | 25 |
| 22 | Evaluation of terahertz density of vibrational states from specific-heat data: Application to silica glass. Physical Review E, 2001, 64, 061102. | 2.1 | 24 |
| 23 | Density of states and light-vibration coupling coefficient inB2O3glasses with different thermal history. Physical Review B, 2003, 67, . | 3.2 | 24 |
| 24 | Conformational Changes of Lipids in Bilayers at the Dynamical Transition Near 200 K Seen by Raman Scattering. Journal of Physical Chemistry B, 2009, 113, 15558-15562. | 2.6 | 23 |
| 25 | Raman scattering evidence of hydrohalite formation on frozen yeast cells. Cryobiology, 2013, 66, 47-51. | 0.7 | 23 |
| 26 | Density of vibrational states and light-scattering coupling coefficient in the structural glass and glassy crystal of ethanol. Journal of Physics Condensed Matter, 2004, 16, 223-230. | 1.8 | 21 |
| 27 | Temperature dependence of the Landau-Placzek ratio in glass forming liquids. Journal of Chemical Physics, 2011, 135, 134510. | 3.0 | 21 |
| 28 | Flexibility of phospholipids with saturated and unsaturated chains studied by Raman scattering: The effect of cholesterol on dynamical and phase transitions. Journal of Chemical Physics, 2014, 140, 235103. | 3.0 | 20 |
| 29 | Brillouin spectroscopy of biorelevant fluids in relation to viscosity and solute concentration. Physical Review E, 2019, 99, 062410. | 2.1 | 20 |
| 30 | qDependence of Low-Frequency Raman Scattering in Silica Glass. Physical Review Letters, 1999, 82, 4476-4479. | 7.8 | 18 |
| 31 | Raman spectroscopy reveals the lipid phase transition in preimplantation mouse embryos during freezing. Archives of Biochemistry and Biophysics, 2017, 635, 37-43. | 3.0 | 18 |
| 32 | Low-frequency Raman spectra inLiNbO3: Within and beyond the standard paradigm of ferroelectric dynamics. Physical Review B, 2005, 72, . | 3.2 | 17 |
| 33 | Transition from single-molecule to cooperative dynamics in a simple glass former: Raman line-shape analysis. Physical Review E, 2007, 76, 021502. | 2.1 | 17 |
| 34 | Redox State of Cytochromes in Frozen Yeast Cells Probed by Resonance Raman Spectroscopy. Biophysical Journal, 2015, 109, 2227-2234. | 0.5 | 17 |
| 35 | Rayleigh-Brillouin light-scattering study of a simple glass former: Evidence of locally favored structures. Physical Review E, 2010, 82, 011503. | 2.1 | 16 |
| 36 | Temperature dependence of the Raman line width in diamond: Revisited. Journal of Raman Spectroscopy, 2015, 46, 171-176. | 2.5 | 15 |

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| 37 | Deuterated stearic acid uptake and accumulation in lipid droplets of cat oocytes. Archives of Biochemistry and Biophysics, 2020, 692, 108532. | 3.0 | 15 |
| 38 | Raman spectroscopy evidence of lipid separation in domestic cat oocytes during freezing. Cryobiology, 2020, 95, 177-182. | 0.7 | 15 |
| 39 | Low-frequency Raman scattering study of the ferroelectric phase transition in the DKDP crystal. Physics of the Solid State, 2008, 50, 1137-1143. | 0.6 | 14 |
| 40 | Low-Frequency Raman Scattering in a Xe Hydrate. Journal of Physical Chemistry B, 2013, 117, 10686-10690. | 2.6 | 13 |
| 41 | Normal vibrational modes of phospholipid bilayers observed by low-frequency Raman scattering. Physical Review E, 2017, 95, 032412. | 2.1 | 13 |
| 42 | Suppression of spurious background in low-frequency Raman spectroscopy. Optoelectronics, Instrumentation and Data Processing, 2017, 53, 250-254. | 0.6 | 12 |
| 43 | Membraneâ€“Sugar Interactions Probed by Low-Frequency Raman Spectroscopy: The Monolayer Adsorption Model. Langmuir, 2020, 36, 11655-11660. | 3.5 | 12 |
| 44 | Low-frequency Raman scattering in As2S3glass former around the liquidâ€“glass transition. Journal of Physics Condensed Matter, 2003, 15, 7651-7662. | 1.8 | 11 |
| 45 | Features of the Raman coupling coefficient of boson peak vibrations in glasses. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, 2867-2870. | 0.8 | 11 |
| 46 | Vibrational layer eigenmodes of binary phospholipid-cholesterol bilayers at low temperatures. Physical Review E, 2019, 99, 022417. | 2.1 | 11 |
| 47 | Normal vibrations of ternary DOPC/DPPC/cholesterol lipid bilayers by low-frequency Raman spectroscopy. RSC Advances, 2019, 9, 34451-34456. | 3.6 | 11 |
| 48 | Raman study of temperature-induced hydrocarbon chain disorder in saturated phosphatidylcholines. Chemistry and Physics of Lipids, 2020, 230, 104926. | 3.2 | 11 |
| 49 | Has the boson peak a contribution from propagating modes?. Journal of Physics Condensed Matter, 1998, 10, L113-L118. | 1.8 | 10 |
| 50 | Raman line shape analysis as a mean characterizing molecular glass-forming liquids. Journal of Non-Crystalline Solids, 2011, 357, 3058-3063. | 3.1 | 10 |
| 51 | Second harmonic generation in the paraelectric phase in powders and ceramics of BaTiO3. Physics of the Solid State, 2012, 54, 920-923. | 0.6 | 10 |
| 52 | Temperature effects in low-frequency Raman spectra of corticosteroid hormones. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2015, 118, 214-223. | 0.6 | 10 |
| 53 | Cryoprotectant redistribution along the frozen straw probed by Raman spectroscopy. Cryobiology, 2016, 72, 148-153. | 0.7 | 10 |
| 54 | Cu<sub>2</sub>ZnSnS<sub>4</sub> crystal growth using an SnCl<sub>2</sub> based flux. CrystEngComm, 2021, 23, 1025-1032. | 2.6 | 10 |

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| 55 | Relaxor-like features in pressure-treated barium titanate powder. Applied Physics Letters, 2015, 107, 102902. | 3.3 | 9 |
| 56 | Structural and vibrational properties of PVT grown BiTeCl microcrystals. Materials Research Express, 2019, 6, 045912. | 1.6 | 9 |
| 57 | Deciphering the orientation of lipid molecules by principal component analysis of Raman mapping data. Analyst, The, 2020, 145, 1466-1472. | 3.5 | 9 |
| 58 | Salient Properties of Raman Central Peak in LiNbO3and LiTaO3Crystals. Ferroelectrics, 2007, 348, 177-181. | 0.6 | 8 |
| 59 | Temperature of nanometer-scale structure appearance in glasses. Glass Physics and Chemistry, 2013, 39, 124-129. | 0.7 | 8 |
| 60 | Exploration of the Structural and Vibrational Properties of the Ternary Molybdate Tl<sub>5</sub>BiHf(MoO<sub>4</sub>)<sub>6</sub> with Isolated MoO<sub>4</sub> Units and Tl<sup>+</sup> Conductivity. Inorganic Chemistry, 2020, 59, 12681-12689. | 4.0 | 8 |
| 61 | Raman spectroscopy and DSC assay of the phase coexistence in binary DMPC/cholesterol multilamellar vesicles. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183514. | 2.6 | 8 |
| 62 | Suppression of fast relaxation and the Raman coupling coefficient in densified silica. Journal of Physics Condensed Matter, 2004, 16, 3035-3040. | 1.8 | 7 |
| 63 | Fast relaxation intensity versus silica glass density: existence of sharp peculiarity. Journal of Physics Condensed Matter, 2006, 18, 4763-4771. | 1.8 | 7 |
| 64 | Central Peak in Raman Spectra of Ferroelectric KDP and DKDP Crystals. Ferroelectrics, 2009, 379, 43-47. | 0.6 | 7 |
| 65 | Uniaxial mechanical stresses and their influence on the parameters of the ferroelectric phase transition in pressure-treated barium titanate. Ferroelectrics, 2017, 508, 161-166. | 0.6 | 7 |
| 66 | Specific features in the behavior of the central peak in Raman spectra of lithium tantalate. Physics of the Solid State, 2006, 48, 2317-2321. | 0.6 | 6 |
| 67 | Dielectric susceptibility of a deuterated KDP crystal from experiment on Raman scattering and in the cluster approximation. Physics of the Solid State, 2011, 53, 1371-1377. | 0.6 | 6 |
| 68 | Local residual stresses in pressure-treated barium titanate powders probed by second harmonic generation. Ferroelectrics, 2016, 501, 9-14. | 0.6 | 6 |
| 69 | Raman spectroscopy for quantification of water-to-lipid ratio in phospholipid suspensions. Vibrational Spectroscopy, 2018, 97, 102-105. | 2.2 | 6 |
| 70 | Effect of low temperatures on cytochrome photoresponse in mouse embryos. Archives of Biochemistry and Biophysics, 2019, 669, 32-38. | 3.0 | 6 |
| 71 | Raman spectra of deuterated hydrocarbons for labeling applications. Journal of Raman Spectroscopy, 2022, 53, 297-309. | 2.5 | 6 |
| 72 | Temperature Dependence of Hyperfine Interaction for 15N Nitroxide in a Glassy Matrix at 10â€“210ÂK. Applied Magnetic Resonance, 2011, 41, 411-429. | 1.2 | 5 |

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| 73 | Photobleaching of the resonance Raman lines of cytochromes in living yeast cells. Journal of Photochemistry and Photobiology B: Biology, 2014, 141, 269-274. | 3.8 | 5 |
| 74 | Origin of the anomaly in the behavior of the viscosity of water near 0Â°C. JETP Letters, 2015, 102, 732-736. | 1.4 | 5 |
| 75 | Second harmonic generation study of local polar inhomogeneities in Pb3(MgNb2)O9. Physics of the Solid State, 2015, 57, 472-475. | 0.6 | 5 |
| 76 | Stretch Vibrations of CH2 as a Measure of Conformational and Lateral Orders in Fatty Acid and Phospholipid Layers. Optoelectronics, Instrumentation and Data Processing, 2018, 54, 538-545. | 0.6 | 5 |
| 77 | Brillouin study of elastic properties of nanometric phospholipid layers in aqueous suspensions of vesicles. Ferroelectrics, 2019, 541, 10-16. | 0.6 | 5 |
| 78 | Residual mechanical stresses in pressure treated BaTiO3 powder. Ceramics International, 2019, 45, 12455-12460. | 4.8 | 5 |
| 79 | Effect of the Hydrocarbon Chain Disorder in Phosphatidylcholine Bilayers on Gigahertz Sound Velocity. Journal of Physical Chemistry B, 2020, 124, 9079-9085. | 2.6 | 5 |
| 80 | Raman Spectroscopic Study of Phase Coexistence in Binary Phospholipid Bilayers. Applied Spectroscopy, 2021, 75, 87-93. | 2.2 | 5 |
| 81 | Lipid phase transitions in cat oocytes supplemented with deuterated fatty acids. Biophysical Journal, 2021, 120, 5619-5630. | 0.5 | 5 |
| 82 | Low-frequency inelastic light scattering in a ZBLAN (ZrF4-BaF2-LaF3-AlF3-NaF) glass. Journal of Chemical Physics, 2014, 140, 184508. | 3.0 | 4 |
| 83 | Glass crystallization in the MnNbOF5-BaF2-BiF3 system as probed by Raman spectroscopy. Russian Journal of Inorganic Chemistry, 2014, 59, 831-837. | 1.3 | 4 |
| 84 | Local residual stresses in pressure-treated barium titanate powders probed by inelastic light scattering. Ferroelectrics, 2016, 496, 225-230. | 0.6 | 4 |
| 85 | Temperature dependence of the Landau-Placzek ratio in liquid water. Physical Review E, 2017, 96, 042608. | 2.1 | 4 |
| 86 | Ionic liquid glasses: properties and applications. Russian Chemical Reviews, 2022, 91, . | 6.5 | 4 |
| 87 | Raman scattering in protonated and deuterated 1,2-dipalmitoyl-sn-glycero-3-phosphatidylcholine (DPPC): Indicators of conformational and lateral orders. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2022, 267, 120583. | 3.9 | 4 |
| 88 | Dynamic response on a nanometer scale of binary phospholipid-cholesterol vesicles: Low-frequency Raman scattering insight. Physical Review E, 2021, 104, 054406. | 2.1 | 4 |
| 89 | Specific features of the central peak in the Raman spectra of a lithium niobate crystal. Physics of the Solid State, 2006, 48, 1094-1098. | 0.6 | 3 |
| 90 | Investigation of the fast relaxation in glass-forming selenium by low-frequency Raman spectroscopy. Glass Physics and Chemistry, 2008, 34, 30-36. | 0.7 | 3 |

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| 91 | Central peak in the strontium titanate crystal near the tetragonal-to-cubic phase transition. Physics of the Solid State, 2012, 54, 924-926. | 0.6 | 3 |
| 92 | Inelastic light scattering study of hydrogen-bonded glass formers: Glycerol and ethanol. Journal of Non-Crystalline Solids, 2017, 471, 429-434. | 3.1 | 3 |
| 93 | Effect of glycerol on photobleaching of cytochrome Raman lines in frozen yeast cells. European Biophysics Journal, 2018, 47, 655-662. | 2.2 | 3 |
| 94 | Vibrational eigenmodes of phospholipid layers in lowâ€wavenumber Raman spectrum of multilamellar vesicles. Journal of Raman Spectroscopy, 2019, 50, 1691-1699. | 2.5 | 3 |
| 95 | Optical investigations of fluctuation of order parameter in THz range in SrxBa1-xNb2O6 crystals with different chemical compositions. Ferroelectrics, 2020, 560, 102-109. | 0.6 | 3 |
| 96 | Temperature dependence of elastic properties of the phospholipid vesicles in aqueous suspension probed by Brillouin spectroscopy. Journal of Physics Condensed Matter, 2021, 33, 495102. | 1.8 | 3 |
| 97 | A monoclinic semiorganic molecular crystal GUHP for terahertz photonics and optoelectronics. Scientific Reports, 2021, 11, 23433. | 3.3 | 3 |
| 98 | Coexistence of lipid phases in multilayer phospholipid films probed by Raman mapping. Analyst, The, 2022, 147, 3748-3755. | 3.5 | 3 |
| 99 | On the universal regularities of the lattice dynamics in ferroelectrics. Physics of the Solid State, 2009, 51, 1390-1393. | 0.6 | 2 |
| 100 | Lowâ€wavenumber Raman scattering of phospholipid bilayers in fluid, ripple, and gel phases. Journal of Raman Spectroscopy, 2020, 51, 952-958. | 2.5 | 2 |
| 101 | On the Mutual Relationships between Molecular Probe Mobility and Free Volume and Polymer Dynamics in Organic Glass Formers: cis-1,4-poly(isoprene). Polymers, 2021, 13, 294. | 4.5 | 2 |
| 102 | Brillouin Spectroscopy of Binary Phospholipidâ€“Cholesterol Bilayers. Applied Spectroscopy, 2022, 76, 1206-1215. | 2.2 | 2 |
| 103 | Order Parameter Dynamics and Hydrogen Bond Potential in DKDP. Ferroelectrics, 2012, 440, 113-118. | 0.6 | 1 |
| 104 | Dynamics of the order parameter and the potential of the hydrogen bond in a ferroelectric DKDP crystal. Journal of Experimental and Theoretical Physics, 2013, 116, 280-285. | 0.9 | 1 |
| 105 | Structural Properties of Glass-Forming Ethanol and Glycerol From Oâ€“H Vibrational Spectra. Journal of Structural Chemistry, 2018, 59, 321-327. | 1.0 | 1 |
| 106 | Frequencies of Stretching and Bending OH (OD) Vibrations in KDP (DKDP) Crystals, According to the Temperature Dependence of Their Raman Spectrum. Bulletin of the Russian Academy of Sciences: Physics, 2018, 82, 294-298. | 0.6 | 1 |
| 107 | Second-order-derivative analysis of structural relaxation time in the elastic model of glass-forming liquids. Physical Review E, 2020, 101, 052610. | 2.1 | 1 |
| 108 | Determination of the Orientation of Phospholipid Molecules in Planar Structures from Raman Spectra. Optoelectronics, Instrumentation and Data Processing, 2019, 55, 495-500. | 0.6 | 1 |

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| 109 | Conformational state diagram of DOPC/DPPCd62/cholesterol mixtures. Biochimica Et Biophysica Acta - Biomembranes, 2022, 1864, 183869. | 2.6 | 1 |
| 110 | Stimulated Raman scattering of light in optical silica fiber under subnanosecond pumping. Optoelectronics, Instrumentation and Data Processing, 2013, 49, 416-422. | 0.6 | 0 |
| 111 | Nanometer structure as a key to various phenomena in ferroelectrics. Ferroelectrics, 2021, 575, 37-42. | 0.6 | 0 |
| 112 | Possibilities of Brillouin spectroscopy in the study of xenogeneic collagen-containing materials. , 2022, , . | | 0 |
| 113 | Strontium barium niobate crystals with various chemical compositions probed by Raman and Brillouin scattering. Ferroelectrics, 2022, 592, 108-115. | 0.6 | 0 |