

# Andrei Naumov

## List of Publications by Year in descending order

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108  
papers

1,497  
citations

304368

22  
h-index

414034

32  
g-index

115  
all docs

115  
docs citations

115  
times ranked

507  
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-temperature spectroscopy of organic molecules in solid matrices: from the Shpol'skii effect to laser luminescent spectromicroscopy for all effectively emitting single molecules. <i>Physics-Usp ekhi</i> , 2013, 56, 605-622.	0.8	89
2	LÃ©vy Statistics for Random Single-Molecule Line Shapes in a Glass. <i>Physical Review Letters</i> , 2003, 91, 075502.	2.9	51
3	Laser selective spectromicroscopy of myriad single molecules: tool for far-field multicolour materials nanodiagnostics. <i>European Physical Journal D</i> , 2014, 68, 1.	0.6	46
4	Photon echoes in doped organic amorphous systems over a wide (0.35â€“50K) temperature range. <i>Journal of Luminescence</i> , 2000, 86, 265-272.	1.5	45
5	Distributions of moments of single-molecule spectral lines and the dynamics of amorphous solids. <i>Physical Review B</i> , 2001, 63, .	1.1	42
6	Experimental Evidence of the Local Character of Vibrations Constituting the Boson Peak in Amorphous Solids. <i>Physical Review Letters</i> , 2006, 97, 185501.	2.9	40
7	Does the Standard Model of Low-Temperature Glass Dynamics Describe a Real Glass?. <i>Physical Review Letters</i> , 2007, 98, 145501.	2.9	35
8	Two Mechanisms of Fluorescence Intermittency in Single Core/Shell Quantum Dot. <i>Journal of Physical Chemistry C</i> , 2015, 119, 22646-22652.	1.5	33
9	Local vibrations in disordered solids studied via single-molecule spectroscopy: Comparison with neutron, nuclear, Raman scattering, and photon echo data. <i>Physical Review B</i> , 2008, 77, .	1.1	32
10	Farâ€“Field Nanodiagnostics of Solids with Visible Light by Spectrally Selective Imaging. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 9747-9750.	7.2	32
11	Combined photon-echo, luminescence and Raman spectroscopies of layered ensembles of colloidal quantum dots. <i>Laser Physics</i> , 2019, 29, 124009.	0.6	32
12	Micro-Refractometry and Local-Field Mapping with Single Molecules. <i>Nano Letters</i> , 2018, 18, 6129-6134.	4.5	31
13	Moments of single-molecule spectra in low-temperature glasses: Measurements and model calculations. <i>Journal of Chemical Physics</i> , 2002, 116, 8132-8138.	1.2	30
14	Orthoâ€“Dichlorobenzene Doped with Terryleneâ€“a Highly Photoâ€“Stable Singleâ€“Molecule System Promising for Photonics Applications. <i>ChemPhysChem</i> , 2010, 11, 182-187.	1.0	30
15	Ag-Nanowire Bundles with Gap Hot Spots Synthesized in Track-Etched Membranes as Effective SERS-Substrates. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 1375.	1.3	30
16	Low-temperature dynamics in amorphous polymers and low-molecular-weight glassesâ€“what is the difference?. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 1843-1848.	1.3	29
17	Dynamics of a doped polymer at temperatures where the two-level system model of glasses fails: Study by single-molecule spectroscopy. <i>Journal of Chemical Physics</i> , 2003, 119, 6296-6301.	1.2	27
18	Impurity spectroscopy at its ultimate limit: relation between bulk spectrum, inhomogeneous broadening, and local disorder by spectroscopy of (nearly) all individual dopant molecules in solids. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 1734-1742.	1.3	27

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19	Multifunctional far-field luminescence nanoscope for studying single molecules and quantum dots (50th anniversary of the Institute of Spectroscopy, Russian Academy of Sciences). <i>Physics-Uspexhi</i> , 2019, 62, 294-303.	0.8	27
20	Dyes characterization for multi-color nanodiagnostics by phonon-less optical reconstruction single-molecule spectromicroscopy. <i>Journal of Luminescence</i> , 2014, 152, 15-22.	1.5	25
21	Study of Vibronic Interactions in Impurity Centers by Conjugate Fluorescence and Absorption Spectra with a Poorly Resolved Vibrational Structure. <i>Optics and Spectroscopy (English Translation of Optika)</i> Tj ETQq1 1 00784314 rgBT /Overlock 10 Tf 50	0.7	24
22	Isotope effect in the linewidth distribution of single-molecule spectra in doped toluene at 2K. <i>Journal of Luminescence</i> , 2007, 127, 213-217.	1.5	23
23	Auger Ionization and Tunneling Neutralization of Single CdSe/ZnS Nanocrystals Revealed by Excitation Intensity Variation. <i>Journal of Physical Chemistry C</i> , 2016, 120, 22004-22011.	1.5	22
24	Analysis of the Temperature Dependence of the Exciton Luminescence Spectra of Cadmium Selenide Quantum Dots Grown in a Liquid Crystal Matrix. <i>Optics and Spectroscopy (English Translation of Optika)</i> Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.7	21
25	Quasi-localized low-frequency vibrational modes of disordered solids II. Study by single-molecule spectroscopy. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 3487-3492.	0.7	20
26	Dispersion of the local parameters of quasilocated low-frequency vibrational modes in a low-temperature glass: Direct observation via single-molecule spectroscopy. <i>Journal of Chemical Physics</i> , 2005, 122, 244705.	1.2	20
27	Looking at a blinking quantum emitter through time slots: The effect of blind times. <i>Physical Review E</i> , 2015, 92, 032102.	0.8	20
28	Spatially-resolved luminescence spectroscopy of CdSe quantum dots synthesized in ionic liquid crystal matrices. <i>Journal of Luminescence</i> , 2016, 169, 799-803.	1.5	20
29	A Two-Pulse Incoherent Photon Echo in a Thin Layer of CdSe/CdS/ZnS Quantum Dots at a Cryogenic Temperature. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018, 82, 1478-1481.	0.1	20
30	Low-temperature dynamics of amorphous polymers and evolution over time of spectra of single impurity molecules: I. Experiment. <i>Optics and Spectroscopy (English Translation of Optika I)</i> Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 297 T	0.7	19
31	Revisiting the combined photon echo and single-molecule studies of low-temperature dynamics in a dye-doped polymer. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017, 11, 1600414.	1.2	19
32	Photon echo in the ensemble of semiconductor quantum dots spread on a glass substrate. <i>Journal of Physics: Conference Series</i> , 2017, 859, 012010.	0.3	19
33	Incoherent Photon Echo in an Inhomogeneous Ensemble of Semiconductor Colloidal Quantum Dots at Low Temperatures. <i>Bulletin of the Lebedev Physics Institute</i> , 2018, 45, 91-94.	0.1	19
34	Quasi-localized low-frequency vibrational modes of disordered solids I. Study by photon echo. <i>Physica Status Solidi (B): Basic Research</i> , 2004, 241, 3480-3486.	0.7	18
35	Single-molecule spectromicroscopy: a route towards sub-wavelength refractometry. <i>Faraday Discussions</i> , 2015, 184, 263-274.	1.6	18
36	Spectrally resolved analysis of fluorescence blinking of single dye molecules in polymers at low temperatures. <i>Journal of Chemical Physics</i> , 2012, 137, 194903.	1.2	17

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37	A tool for alignment of multiple laser beams in pump-probe experiments. Measurement Science and Technology, 2013, 24, 027002.	1.4	17
38	Lack of Photon Antibunching Supports Supertrap Model of Photoluminescence Blinking in Perovskite Submicrometer Crystals. Advanced Optical Materials, 2021, 9, 2001596.	3.6	17
39	Study of Local Fields of Dendrite Nanostructures in Hot Spots Formed on SERS-Active Substrates Produced via Template-Assisted Synthesis. Bulletin of the Russian Academy of Sciences: Physics, 2020, 84, 1465-1468.	0.1	17
40	Single molecules as spectral nanoprob es for the diagnostics of dynamic processes in solid media. Physics-Usp ekhi, 2009, 52, .	0.8	16
41	Photon echoes in an impurity polymer: New data on the low-temperature processes of phase relaxation and their relationship to the broadening of zero-phonon lines of single molecules. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 1254-1259.	0.1	16
42	Preparation and optical characterization of nanocomposites with semiconductor colloidal quantum dots. Bulletin of the Russian Academy of Sciences: Physics, 2017, 81, 1396-1400.	0.1	16
43	Luminescence Microscopy of Single Quantum Dot Pairs with Nanometer Spatial Resolution. JETP Letters, 2018, 108, 30-37.	0.4	15
44	Dynamics of amorphous polymers in the temperature region where the standard model of low-temperature glasses begin to fail: studies by single molecule spectroscopy and comparison with photon echo data. Journal of Luminescence, 2004, 107, 287-297.	1.5	13
45	Evaluation of parameters of intramolecular interaction from absorption and fluorescence spectra of substituted arylpolyene with poor resolved vibrational structure. Journal of Luminescence, 2005, 111, 37-45.	1.5	13
46	A luminescence visualizer for exact convergence of laser beams in photon-echo spectroscopy, four-wave mixing, and related techniques. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya) 2007, 10, 107-110.	0.0	10
47	Quantum optics, molecular spectroscopy and low-temperature spectroscopy: general discussion. Faraday Discussions, 2015, 184, 275-303.	1.6	13
48	Low-temperature dynamics of amorphous polymers and evolution over time of spectra of single impurity molecules: II. Model calculations and analysis of results. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya) 2007, 10, 107-110.	0.0	10
49	Effect of Concentration on the Spectral Luminescent Properties of Quantum Dots in Colloidal Solutions. Bulletin of the Russian Academy of Sciences: Physics, 2020, 84, 40-43.	0.1	12
50	Optical dephasing in doped organic glasses over a wide (0.35-100 K) temperature range: Solid toluene doped with Zn octaethylporphine. Journal of Chemical Physics, 2002, 116, 8959-8965.	1.2	11
51	On the 40th anniversary of the Institute of Spectroscopy of the Russian Academy of Sciences (Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, 8 October) Optics and Spectroscopy (English Translation of Optika i Spektroskopiya) 2011, 14, 143-144.	0.7	11
52	Fluorescence Imaging for Ultrafiltration of Individual Nanoparticles from a Colloidal Solution in Track Membranes. Journal of Applied Spectroscopy, 2018, 85, 916-922.	0.3	11
53	Thermal activation of two-level systems in a polymer glass as studied with single-molecule spectroscopy. Journal of Chemical Physics, 2003, 119, 3836-3839.	1.2	10
54	Theoretical modeling of single-molecule fluorescence with complicated photon statistics. Physical Review A, 2012, 86, .	1.0	10

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55	Toward single-molecule surface-enhanced Raman scattering with novel type of metasurfaces synthesized by crack-stretching of metallized track-etched membranes. <i>Journal of Chemical Physics</i> , 2022, 156, 034902.	1.2	10
56	Experimental evidence for Lévy statistics in single-molecule spectroscopy in a low-temperature glass—manifestation of long-range interactions. <i>Journal of Luminescence</i> , 2004, 107, 21-31.	1.5	9
57	Frequency dependence of the quadratic electron-phonon coupling constant in a polymer glass: Direct measurement by single-molecule spectroscopy. <i>Physical Review B</i> , 2009, 79, .	1.1	9
58	Contribution of electron-phonon coupling to the luminescence spectra of single colloidal quantum dots. <i>Journal of Chemical Physics</i> , 2019, 151, 174710.	1.2	9
59	Microscopic Insight into the Inhomogeneous Broadening of Zero-Phonon Lines of GeV <sup>+</sup> Color Centers in Chemical Vapor Deposition Diamond Films Synthesized from Gaseous Germane. <i>Journal of Physical Chemistry C</i> , 2021, 125, 17774-17785.	1.5	9
60	Statistical Analysis of Spectra of Single Impurity Molecules and Dynamics of Disordered Solids: II. Manifestation of Interaction of Two-Level Systems with Impurity Molecules at Different Distances. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2005, 98, 747.	0.2	8
61	Effect of impurity molecules on the low-temperature vibrational dynamics of polyisobutylene: Investigation by single-molecule spectroscopy. <i>Journal of Chemical Physics</i> , 2009, 130, 184507.	1.2	8
62	Observation of structural relaxations in disordered solid media via spectral histories of single impurity molecules. <i>Physics of the Solid State</i> , 2013, 55, 710-719.	0.2	8
63	Dispersion of Lifetimes of Excited States of Single Molecules in Organic Matrices at Ultralow Temperatures. <i>Journal of Experimental and Theoretical Physics</i> , 2019, 128, 655-663.	0.2	8
64	Nonexponential two-pulse photon echo decay in amorphous solids at low temperatures. <i>Journal of Luminescence</i> , 2000, 86, 273-278.	1.5	7
65	Luminescence and absorption spectra of polyatomic molecules subjected to conformational transitions. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2001, 91, 704-710.	0.2	6
66	Fluorescence spectra of some cross-conjugate ketones: Experiment and calculations based on the model of two-well adiabatic potentials. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2000, 86, 273-278.	0.2	6
67	Wide-Range Spectral Diffusion in Single Mg-Tetraazaporphyrin Molecules in a Polymer Matrix at Cryogenic Temperatures. <i>JETP Letters</i> , 2018, 107, 406-411.	0.4	6
68	Statistical Analysis of Spectra of Single Impurity Molecules and Dynamics of Disordered Solids: I. Distributions of Linewidths, Moments, and Cumulants. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2005, 98, 747.	0.2	6
69	Density of vibrational states in amorphous solid media: Measurement by single-molecule spectroscopy. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2008, 72, 708-711.	0.1	5
70	Single quantum emitters detection with amateur CCD: Comparison to a scientific-grade camera. <i>Optics and Laser Technology</i> , 2021, 143, 107301.	2.2	5
71	Optical dephasing in solid toluene activated by octaethylporphine zinc. <i>Physics of the Solid State</i> , 2003, 45, 224-230.	0.2	4
72	Participation of oxygen in the bacterial transformation of 2,4,6-trinitrotoluene. <i>Biochemistry (Moscow)</i> , 2008, 73, 463-469.	0.7	4

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73	Low temperature spectral dynamics of single molecules in ultrathin polymer films. <i>Journal of Chemical Physics</i> , 2014, 140, 204907.	1.2	4
74	Super-Resolution Definition of Coordinates of Single Semiconductor Nanocrystal (Quantum Dot): Luminescence Intensity Dependence. <i>EPJ Web of Conferences</i> , 2015, 103, 05003.	0.1	4
75	Stochastic superflares of photoluminescence from a single microdiamond with germanium-vacancy color centers: A general phenomenon or a unique observation. <i>Physical Review B</i> , 2020, 102, .	1.1	4
76	Electron-phonon interaction in colloidal CdSe quantum dots embedded in different solid matrices. <i>Journal of Physics: Conference Series</i> , 2020, 1461, 012114.	0.3	4
77	Improving the Energy Efficiency of Diffraction Optical Elements for 3D Nanoscopy. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2019, 83, 1453-1458.	0.1	4
78	AFM Characterization of Track-Etched Membranes: Pores Parameters Distribution and Disorder Factor. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 1334.	1.3	4
79	Minimal distance between chromophore and two-level systems in amorphous solids: effect on photon echo and single molecule spectroscopy data. <i>Journal of Luminescence</i> , 2002, 98, 63-74.	1.5	3
80	Structural relaxations in disordered solids below T <sub>g</sub> : Study by thermal-cycling single-molecule spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 466-471.	1.5	3
81	Fluorescence microscopy and spectroscopy of subsurface layer dynamics of polymers with nanometer resolution in the axial direction. <i>Faraday Discussions</i> , 2015, 184, 237-249.	1.6	3
82	Measuring Fluctuations in the Intensity of a Single Point-Like Luminescence Emitter: Artifacts in Processing Microscopic Images. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018, 82, 1482-1486.	0.1	3
83	Direct Observation of a Quasilocalized Low-Frequency Vibrational Mode in the Fluorescence Excitation Spectrum of a Single Impurity Molecule in a Polymer Matrix. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , 2019, 126, 44-48.	0.2	3
84	Using Epi-Luminescence Microscopy to Visualize and Control the Distribution of Luminophores on a Highly-Developed Surface. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2021, 85, 1393-1399.	0.1	3
85	Nonergodicity in long-term spectral dynamics of single dye molecules in the low-temperature polymer and organic glass. <i>Laser Physics</i> , 2014, 24, 094001.	0.6	2
86	The Hough Transform as a Basis for Image Recognition and Fluorescent Nanoparticle Tracking. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018, 82, 1034-1037.	0.1	2
87	Three-dimensional fluorescence nanoscopy of single quantum emitters based on the optics of spiral light beams. <i>Physics-Uspexhi</i> , 2022, 65, 617-626.	0.8	2
88	Modified Model of Photon Echoes in Low-Temperature Glasses: Effect of Minimal Distance between Two-Level Systems and Chromophore. <i>Journal of Physical Chemistry B</i> , 2003, 107, 2054-2060.	1.2	1
89	Do impurity chromophores affect the tunneling dynamics of an amorphous polymer? Investigation by single-molecule spectroscopy. <i>Molecular Physics</i> , 2009, 107, 1943-1953.	0.8	1
90	Moments distributions of single dye molecule spectra in a low-temperature polymer: Analysis of system ergodicity. <i>Journal of Physics: Conference Series</i> , 2013, 478, 012005.	0.3	1

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91	Manifestation of tunneling TLS dynamics of a polymer matrix in single-molecule fluorescence blinking. Bulletin of the Russian Academy of Sciences: Physics, 2014, 78, 184-188.	0.1	1
92	Local-Field Effects in the Zero-Phonon Spectral Lines of Single Impurity Molecules in Solid Matrices at Low Temperatures. EPJ Web of Conferences, 2015, 103, 05001.	0.1	1
93	Temperature Dependences of Single Dye-Molecules Zero-Phonon Line Widths in a Broad Range of Low Temperatures. EPJ Web of Conferences, 2015, 103, 05002.	0.1	1
94	Spectroscopy of single organic dye-molecules and semiconductor quantum dots: basic aspects and applications in nanoscopy. EPJ Web of Conferences, 2017, 132, 01009.	0.1	1
95	Effect of Identical Sets of Structural Elements of $\pi$ -Conjugated Molecules on the Parameters of Intra- and Intermolecular Interaction. Bulletin of the Russian Academy of Sciences: Physics, 2020, 84, 272-280.	0.1	1
96	Stable Luminescence of Single Quantum Emitters: Applications in Quantum Optics. EPJ Web of Conferences, 2015, 103, 05004.	0.1	0
97	Russian–British Symposium on Quantum Technologies. Quantum Electronics, 2017, 47, 777-777.	0.3	0
98	New methods of statistical processing of single-molecule spectromicroscopy data for mapping of local fields and effective indices of refraction in the layer of a host matrix. EPJ Web of Conferences, 2017, 132, 03008.	0.1	0
99	Combined analysis of the temperature dependences of the fluorescence spectra and images of single molecules in polymer films. EPJ Web of Conferences, 2017, 161, 03001.	0.1	0
100	XIII International Conference on Hole Burning, Single Molecule, and Related Spectroscopies: Science and Applications (HBSM-2018): preface. EPJ Web of Conferences, 2018, 190, 00001.	0.1	0
101	Structural and time-domain peculiarities of the fluorescence excitation spectra of single Mg-TAP in a polymer at low temperatures. EPJ Web of Conferences, 2018, 190, 04019.	0.1	0
102	The study of a new family of phase masks for three-dimensional fluorescence nanoscopy. EPJ Web of Conferences, 2018, 190, 04007.	0.1	0
103	Low-temperature dynamics in a dye-doped polymer: correspondence between the data obtained by photon echo and single molecule spectroscopy. EPJ Web of Conferences, 2018, 190, 04008.	0.1	0
104	Local and macroscopic characterization with single molecules and single quantum emitters. EPJ Web of Conferences, 2018, 190, 03002.	0.1	0
105	Spontaneous transitions to enhanced fluorescence for GeV centers in a single microcrystalline diamond. EPJ Web of Conferences, 2018, 190, 04012.	0.1	0
106	Characterization of Dielectric Solids with Single Quantum Emitters: From Measuring at the Nano-Scale to Mapping at Micro- and Macro-Level. , 2019, , .		0
107	Ultrafast Dynamics in Quantum Dot Doped Nanocomposites at Low Temperatures: Study by Means of Site-Selective Spectroscopy. , 2019, , .		0
108	Microrefractometry and Mapping of the Local Fields by Multiparameter Fluorescence Nanoscopy of Single Molecules and Quantum Dots. , 2020, , .		0