

Ilya A Akimov

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3370104/publications.pdf>

Version: 2024-02-01

139
papers

3,322
citations

172457

29
h-index

161849

54
g-index

143
all docs

143
docs citations

143
times ranked

3070
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced magneto-optical effects in magnetoplasmonic crystals. <i>Nature Nanotechnology</i> , 2011, 6, 370-376.	31.5	498
2	Plasmon-mediated magneto-optical transparency. <i>Nature Communications</i> , 2013, 4, 2128.	12.8	180
3	Optical and magnetic anisotropies of the hole states in Stranski-Krastanov quantum dots. <i>Physical Review B</i> , 2004, 70, .	3.2	161
4	Observation of the First-Order Raman Scattering in SrTiO ₃ Thin Films. <i>Physical Review Letters</i> , 1999, 82, 4500-4503.	7.8	160
5	Oxide Thin Films for Tunable Microwave Devices. , 2000, 4, 393-405.		112
6	Single-hole spin relaxation in a quantum dot. <i>Physical Review B</i> , 2003, 68, .	3.2	112
7	Electric-Field-Induced Soft-Mode Hardening in SrTiO ₃ Films. <i>Physical Review Letters</i> , 2000, 84, 4625-4628.	7.8	99
8	Tuning of the transverse magneto-optical Kerr effect in magneto-plasmonic crystals. <i>New Journal of Physics</i> , 2013, 15, 075024.	2.9	80
9	Photoluminescence of two-dimensional GaTe and GaSe films. <i>2D Materials</i> , 2015, 2, 035010.	4.4	76
10	Waveguide-Plasmon Polaritons Enhance Transverse Magneto-Optical Kerr Effect. <i>Physical Review X</i> , 2013, 3, .	8.9	75
11	Access to long-term optical memories using photon echoes retrieved from semiconductor spins. <i>Nature Photonics</i> , 2014, 8, 851-857.	31.4	74
12	Fine structure of the trion triplet state in a single self-assembled semiconductor quantum dot. <i>Applied Physics Letters</i> , 2002, 81, 4730-4732.	3.3	73
13	Electron-hole exchange interaction in a negatively charged quantum dot. <i>Physical Review B</i> , 2005, 71, .	3.2	71
14	In situ Raman scattering studies of the amorphous and crystalline Si nanoparticles. <i>Solid State Communications</i> , 2000, 113, 553-558.	1.9	69
15	Two-Photon Coherent Control of a Single Quantum Dot. <i>Physical Review Letters</i> , 2004, 92, 227401.	7.8	65
16	Plasmonic crystals for ultrafast nanophotonics: Optical switching of surface plasmon polaritons. <i>Physical Review B</i> , 2012, 85, .	3.2	58
17	Electron Spin Dynamics in a Self-Assembled Semiconductor Quantum Dot: The Limit of Low Magnetic Fields. <i>Physical Review Letters</i> , 2006, 97, 056602.	7.8	54
18	Dynamic spin polarization by orientation-dependent separation in a ferromagnet-semiconductor hybrid. <i>Nature Communications</i> , 2012, 3, 959.	12.8	53

#	ARTICLE	IF	CITATIONS
19	Stimulated Emission from the Biexciton in a Single Self-Assembled II-VI Quantum Dot. <i>Physical Review Letters</i> , 2006, 96, 067401.	7.8	50
20	Influence of confinement on biexciton binding in semiconductor quantum dot ensembles measured with two-dimensional spectroscopy. <i>Physical Review B</i> , 2013, 87, .	3.2	50
21	Generation of spin waves by a train of fs-laser pulses: a novel approach for tuning magnon wavelength. <i>Scientific Reports</i> , 2017, 7, 5668.	3.3	50
22	Long-range d exchange interaction in a ferromagnet-semiconductor hybrid structure. <i>Nature Physics</i> , 2016, 12, 85-91.	16.7	47
23	Coherent Coupling of Excitons and Trions in a Photoexcited CdTe/CdMgTe Quantum Well. <i>Physical Review Letters</i> , 2014, 112, 097401.	7.8	44
24	Fifth-order nonlinear optical response of excitonic states in an InAs quantum dot ensemble measured with two-dimensional spectroscopy. <i>Physical Review B</i> , 2013, 87, .	3.2	43
25	Magnetophotonic intensity effects in hybrid metal-dielectric structures. <i>Physical Review B</i> , 2014, 89, .	3.2	39
26	Magnetic-Field Control of Photon Echo from the Electron-Trion System in a CdTe Quantum Well: Shuffling Coherence between Optically Accessible and Inaccessible States. <i>Physical Review Letters</i> , 2012, 109, 157403.	7.8	36
27	Transformation of mode polarization in gyrotropic plasmonic waveguides. <i>Laser Physics</i> , 2014, 24, 094006.	1.2	36
28	Magnon Accumulation by Clocked Laser Excitation as Source of Long-Range Spin Waves in Transparent Magnetic Films. <i>Physical Review X</i> , 2017, 7, .	8.9	35
29	Collective single-mode precession of electron spins in an ensemble of singly charged (In,Ga)As/GaAs quantum dots. <i>Physical Review B</i> , 2009, 79, .	3.2	32
30	Nonequilibrium Nuclear-Electron Spin Dynamics in Semiconductor Quantum Dots. <i>Physical Review Letters</i> , 2007, 99, 036604.	7.8	30
31	Photon echo transients from an inhomogeneous ensemble of semiconductor quantum dots. <i>Physical Review B</i> , 2016, 93, .	3.2	28
32	Routing the emission of a near-surface light source by a magnetic field. <i>Nature Physics</i> , 2018, 14, 1043-1048.	16.7	27
33	Spin dynamics of electrons and holes in InGaAs/GaAs wells at millikelvin temperatures. <i>Physical Review B</i> , 2010, 81, .	3.2	26
34	Correlation and dephasing effects on the non-radiative coherence between bright excitons in an InAs QD ensemble measured with 2D spectroscopy. <i>Solid State Communications</i> , 2013, 163, 65-69.	1.9	25
35	Wide-band enhancement of the transverse magneto-optical Kerr effect in magnetite-based plasmonic crystals. <i>Physical Review B</i> , 2019, 100, .	3.2	25
36	Single CdSe quantum dots for high-bandwidth single-photon generation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 2189.	2.1	24

#	ARTICLE	IF	CITATIONS
37	Photon echoes from (In,Ga)As quantum dots embedded in a Tamm-plasmon microcavity. Physical Review B, 2017, 95, .	3.2	23
38	Electron-spin dynamics in Mn-doped GaAs using time-resolved magneto-optical techniques. Physical Review B, 2009, 80, .	3.2	20
39	Modulation of a surface plasmon-polariton resonance by subterahertz diffracted coherent phonons. Physical Review B, 2012, 86, .	3.2	19
40	Damping of Rabi oscillations in intensity-dependent photon echoes from exciton complexes in a CdTe/(Cd,Mg)Te single quantum well. Physical Review B, 2017, 96, .	3.2	19
41	Photon Echo from Localized Excitons in Semiconductor Nanostructures. Physics of the Solid State, 2018, 60, 1635-1644.	0.6	19
42	Spintronics of semiconductor, metallic, dielectric, and hybrid structures (100th anniversary of the) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50	2.2	19
43	Transverse magneto-optical Kerr effect at narrow optical resonances. Nanophotonics, 2019, 8, 287-296.	6.0	19
44	Spin processes related to trions in quantum dots. Physica Status Solidi A, 2004, 201, 412-420.	1.7	18
45	Orientation of electron spins in hybrid ferromagnet-semiconductor nanostructures. Physica Status Solidi (B): Basic Research, 2014, 251, 1663-1672.	1.5	15
46	Low voltage control of exchange coupling in a ferromagnet-semiconductor quantum well hybrid structure. Nature Communications, 2019, 10, 2899.	12.8	15
47	Hybrid structures of magnetic semiconductors and plasmonic crystals: a novel concept for magneto-optical devices [Invited]. Journal of the Optical Society of America B: Optical Physics, 2012, 29, A103.	2.1	14
48	Dynamics of exciton magnetic polarons in CdMnSe/CdMgSe quantum wells: Effect of self-localization. Physical Review B, 2017, 95, .	3.2	14
49	Direct measurement of the long-range p-d exchange coupling in a ferromagnet-semiconductor Co/CdMgTe/CdTe quantum well hybrid structure. Physical Review B, 2017, 96, .	3.2	14
50	Giant effective Zeeman splitting in a monolayer semiconductor realized by spin-selective strong light-matter coupling. Nature Photonics, 2022, 16, 632-636.	31.4	14
51	Quasiguidded modes of opaline photonic crystals covered by Ge_2S_7 . Physical Review B, 2017, 96, .	3.2	14
52	Polarimetry of photon echo on charged and neutral excitons in semiconductor quantum wells. Scientific Reports, 2019, 9, 5666.	3.3	12
53	Optical Orientation of Mn^{2+} in GaAs in Weak Longitudinal Magnetic Fields. Physical Review Letters, 2011, 106, 147402.	7.8	11
54	Spin-dependent tunneling in semiconductor heterostructures with a magnetic layer. Physical Review B, 2015, 92, .	3.2	11

#	ARTICLE	IF	CITATIONS
55	Optical orientation of hole magnetic polarons in (Cd,Mn)Te/(Cd,Mn,Mg)Te quantum wells. Physical Review B, 2016, 93, .	3.2	11
56	Miniband effects on hot-electron photoluminescence polarization in GaAs/AlAs superlattices. Physical Review B, 1997, 56, 6871-6879.	3.2	10
57	Energy spectrum of negatively charged single quantum dot: trion and charged biexciton states. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 31-34.	2.7	10
58	Extrapolation of the intensity autocorrelation function of a quantum-dot micropillar laser into the thermal emission regime. Journal of the Optical Society of America B: Optical Physics, 2011, 28, 1404.	2.1	10
59	Magnetic field induced nutation of exciton-polariton polarization in (Cd,Zn)Te crystals. Physical Review B, 2013, 88, .	3.2	10
60	Terahertz dynamics of lattice vibrations in Au/CdTe plasmonic crystals: Photoinduced segregation of Te and enhancement of optical response. Physical Review B, 2016, 93, .	3.2	10
61	Coherent dynamics of localized excitons and trions in ZnO/(Zn,Mg)O quantum wells studied by photon echoes. Physical Review B, 2018, 97, .	3.2	10
62	Accurate photon echo timing by optical freezing of exciton dephasing and rephasing in quantum dots. Communications Physics, 2020, 3, .	5.3	10
63	High-Resolution Two-Dimensional Optical Spectroscopy of Electron Spins. Physical Review X, 2017, 7, .	8.9	9
64	Microscopic dynamics of electron hopping in a semiconductor quantum well probed by spin-dependent photon echoes. Physical Review B, 2019, 100, .	3.2	9
65	Biexcitons in semiconductor quantum dot ensembles. Physica Status Solidi (B): Basic Research, 2013, 250, 1753-1759.	1.5	8
66	Resonant optical alignment and orientation of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mtext} \rangle \text{Mn} \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle 8 \langle \text{mml:mn} \rangle 2$ in CdMnTe crystals. Physical Review B, 2015, 92, .		
67	Quasi-ordering of composition fluctuations and their interaction with lattice imperfections in an optical spectra of dilute nitride alloys. Semiconductor Science and Technology, 2016, 31, 095012.	2.0	8
68	Time-resolved photon echoes from donor-bound excitons in ZnO epitaxial layers. Physical Review B, 2017, 96, .	3.2	8
69	Single-beam optical measurement of spin dynamics in CdTe/(Cd,Mg)Te quantum wells. Physical Review B, 2018, 98, .	3.2	8
70	Polarization of hot photoluminescence in GaAs/AlAs superlattices. JETP Letters, 1996, 63, 305-310.	1.4	7
71	Subnanosecond delay of light in $\text{Cd}_x\text{Zn}_{1-x}\text{Te}$ crystals. Physical Review B, 2010, 82, .	3.2	7
72	Intensity magneto-optical effect in magnetoplasmonic crystals. Journal of Physics: Conference Series, 2011, 303, 012038.	0.4	7

#	ARTICLE	IF	CITATIONS
73	Ultrafast photoinduced linear and circular optical anisotropy in the multiferroic hexagonal manganite YMnO_3 . Physical Review B, 2013, 88, .	3.2	7
74	Long coherent dynamics of localized excitons in (In,Ga)N/GaN quantum wells. Physical Review B, 2018, 98, .	3.2	7
75	Magnetic-field-induced crossover from the inverse Faraday effect to the optical orientation in EuTe. Journal of Applied Physics, 2018, 123, 193102.	2.5	7
76	Resonant thermal energy transfer to magnons in a ferromagnetic nanolayer. Nature Communications, 2020, 11, 4130.	12.8	7
77	Photon Echo Polarimetry of Excitons and Biexcitons in a $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Single Crystal. ACS Photonics, 2022, 9, 621-629.	6.6	7
78	Electron spin dynamics and optical orientation of Mn^{2+} ions in GaAs. Journal of Applied Physics, 2013, 113, 136501.	2.5	6
79	Tunable Optical Nanocavity of Iron-garnet with a Buried Metal Layer. Materials, 2015, 8, 3012-3023.	2.9	6
80	Properties of Exchange Coupled All-garnet Magneto-Optic Thin Film Multilayer Structures. Materials, 2015, 8, 1976-1992.	2.9	6
81	Enhancement of electron hot spot relaxation in photoexcited plasmonic structures by thermal diffusion. Physical Review B, 2016, 94, .	3.2	6
82	Optical Non-Linearities Related to Trions in Quantum Wells and Quantum Dots. Physica Status Solidi (B): Basic Research, 2002, 234, 304-312.	1.5	5
83	Exciton magnetic polaron in $\text{CdMnSe}/\text{CdMgSe}$ quantum wells. Physica Status Solidi (B): Basic Research, 2010, 247, 1508-1510.	1.5	5
84	Studying periodic nanostructures by probing the in-sample optical far-field using coherent phonons. Applied Physics Letters, 2012, 101, .	3.3	5
85	Transverse Magneto-Optical Kerr Effect in Magnetite Covered by Array of Gold Nanostripes. Semiconductors, 2018, 52, 1857-1860.	0.5	5
86	Epitaxial InGaAs Quantum Dots in $\text{Al}_{0.29}\text{Ga}_{0.71}\text{As}$ Matrix: Intensity and Kinetics of Luminescence in the Near Field of Silver Nanoparticles. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya) 105(10):1502-1517	0.0	5
87	Quantum beats in the polarization of the spin-dependent photon echo from donor-bound excitons in $\text{CdTe}/(\text{Cd,Mg})\text{Te}$ quantum wells. Physical Review B, 2020, 101, .	3.2	5
88	Homogeneous optical anisotropy in an ensemble of InGaAs quantum dots induced by strong enhancement of the heavy-hole band Landé parameter g . Physical Review B, 2021, 104, .	3.2	5
89	Coexistence of Short- and Long-Range Ferromagnetic Proximity Effects in a $\text{Fe}/(\text{Cd,Mg})\text{Te}/\text{CdTe}$ Quantum Well Hybrid Structure. Nano Letters, 2021, 21, 2370-2375.	9.1	4
90	In-plane anisotropy of the hole g factor in $\text{CdTe}/(\text{Cd,Mg})\text{Te}$ quantum wells studied by spin-dependent photon echoes. Physical Review Research, 2020, 2, .	3.6	4

#	ARTICLE	IF	CITATIONS
91	Accumulation and control of spin waves in magnonic dielectric microresonators by a comb of ultrashort laser pulses. <i>Scientific Reports</i> , 2022, 12, 7369.	3.3	4
92	Study of the Two-Dimensional to Quasi-Three-Dimensional Transition in GaAs/AlAs Superlattices by Polarized Hot Photoluminescence. <i>Physica Status Solidi (B): Basic Research</i> , 1997, 204, 141-146.	1.5	3
93	Single-beam resonant spin amplification of electrons interacting with nuclei in a GaAs/(Al,Ga)As quantum well. <i>Physical Review B</i> , 2018, 98, .	3.2	3
94	Interfacial Ferromagnetism in a Co/CdTe Ferromagnet/Semiconductor Quantum Well Hybrid Structure. <i>Physics of the Solid State</i> , 2018, 60, 1578-1581.	0.6	3
95	Extending the time of coherent optical response in ensemble of singly-charged InGaAs quantum dots. <i>Communications Physics</i> , 2022, 5, .	5.3	3
96	Soft-Mode Phonons in SrTiO ₃ Thin Films Studied by Far-Infrared Ellipsometry and Raman Scattering. <i>Materials Research Society Symposia Proceedings</i> , 1999, 603, 245.	0.1	2
97	Lattice dynamical properties of SrTiO ₃ thin films. <i>AIP Conference Proceedings</i> , 2000, , .	0.4	2
98	Dielectric and lattice dynamical properties of SrTiO ₃ thin films. <i>Integrated Ferroelectrics</i> , 2000, 28, 247-256.	0.7	2
99	Coherent spin dynamics of carriers in ferromagnetic semiconductor heterostructures with an Mn $\hat{\Gamma}$ layer. <i>Journal of Experimental and Theoretical Physics</i> , 2016, 123, 420-428.	0.9	2
100	Negative circular polarization dynamics in InP/InGaP quantum dots. <i>Journal of Physics: Conference Series</i> , 2016, 741, 012189.	0.4	2
101	Effect of nuclear quadrupole interaction on spin beats in photoluminescence polarization dynamics of charged excitons in InP/(In,Ga)P quantum dots. <i>Physical Review B</i> , 2019, 100, .	3.2	2
102	Plasmon-to-exciton spin conversion in semiconductor-metal hybrid nanostructures. <i>Physical Review B</i> , 2021, 103, .	3.2	2
103	Momentum Alignment and Spin Orientation of Photoexcited Electrons in GaAs in the Transition from Two- to Three-Dimensional Structures. <i>Semiconductors</i> , 2001, 35, 727.	0.5	2
104	Visible-Bandgap II-VI Quantum Dot Heterostructures. <i>Nanoscience and Technology</i> , 2008, , 237-254.	1.5	2
105	Dimensionality effects in the hot-electron photoluminescence of gallium arsenide: 2D-quasi-3D transition. <i>Semiconductors</i> , 1999, 33, 681-683.	0.5	1
106	Inelastic scattering of hot electrons by neutral donors in heavily silicon-doped GaAs/AlAs quantum wells. <i>Semiconductors</i> , 1999, 33, 1124-1127.	0.5	1
107	Inelastic scattering of hot electrons in n-GaAs/AlAs types I and II multiple quantum wells doped with silicon. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2001, 10, 505-510.	2.7	1
108	Coherent control of the biexciton in a single quantum dot. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005, 202, 383-386.	1.8	1

#	ARTICLE	IF	CITATIONS
109	Spin Relaxation in GaAs Doped with Magnetic (Mn) Atoms. Solid State Phenomena, 2010, 168-169, 47-54.	0.3	1
110	Plasmonic crystals for enhancing optical properties. AIP Conference Proceedings, 2012, , .	0.4	1
111	Access to long-term optical memories using photon echoes retrieved from electron spins in semiconductor quantum wells. Proceedings of SPIE, 2016, , .	0.8	1
112	Ultrafast dynamical response of the lower exciton-polariton branch in CdZnTe. Physical Review B, 2016, 93, .	3.2	1
113	Photon Echo from an Ensemble of (In,Ga)As Quantum Dots. Semiconductors, 2018, 52, 531-534.	0.5	1
114	Studies of photon echo from exciton ensemble in (In,Ga)As quantum dots. Journal of Physics: Conference Series, 2018, 951, 012029.	0.4	1
115	Spatially asymmetric transients of propagating exciton-polariton modes in a planar CdZnTe/CdMgTe guiding structure. Physical Review B, 2019, 100, .	3.2	1
116	Steplike spectral distribution of photoelectrons at the percolation threshold in heavily p-doped GaAs. Physical Review B, 2020, 102, .	3.2	1
117	Effect of electric current on the optical orientation of interface electrons in AlGaAs/GaAs heterostructures. Physical Review B, 2020, 102, .	3.2	1
118	Spin Dynamics of Negatively Charged Excitons in InP/(In,Ga)P Quantum Dots in a Magnetic Field. Physics of the Solid State, 2020, 62, 2033-2038.	0.6	1
119	On Thermal E.M.F. Measurements in Photoconducting Dyes. Physica Status Solidi (B): Basic Research, 1966, 17, K95.	1.5	0
120	Optical quantum control using II-VI quantum dots. Physica Status Solidi C: Current Topics in Solid State Physics, 2006, 3, 841-846.	0.8	0
121	Evidence of Exciton-Trion Coherent Interactions in a CdTe/CdMgTe Quantum Well. , 2012, , .		0
122	Plasmonically Enhanced Transverse Magneto-Optical Kerr Effect. , 2013, , .		0
123	Magneto-optical intensity effects in plasmonic crystals. , 2014, , .		0
124	Photon echoes. Nature Photonics, 2014, 8, 876-876.	31.4	0
125	Exciton-Phonon Interactions in an InAs Quantum Dot Ensemble Studied with 2D Coherent Spectroscopy. , 2014, , .		0
126	Femtosecond Photo-Induced Phenomena in Multiferroic Hexagonal Manganite YMnO_3 . Solid State Phenomena, 2015, 233-234, 149-152.	0.3	0

#	ARTICLE	IF	CITATIONS
127	Coherent control and angular momentum transfer in semiconductor and plasmonic nanostructures. , 2015, , .		0
128	Ultrafast coherent spectroscopy in quantum dot nanostructures. , 2015, , .		0
129	Excitonic enhancement of the transverse magneto-optical Kerr effect in semiconductor nanostructures. , 2017, , .		0
130	Plasmon-excitonic Enhancement of the Transverse Magneto-Optical Kerr effect in the Semiconductor Magnetic Nanostructures. , 2018, , .		0
131	Excitons, Biexcitons, and Trions in an InAs Quantum Dot Ensemble Studied with 2D Fourier-Transform Spectroscopy. , 2012, , .		0
132	Coherence of Fine-Structure States of an InAs Quantum Dot Ensemble Studied with 2D Fourier-Transform Spectroscopy. , 2012, , .		0
133	Confinement Effects on Biexciton Binding in Semiconductor Quantum Dots Measured with 2D Coherent Spectroscopy. , 2013, , .		0
134	In Situ Studies of the Vibrational and Electronic Properties of Si Nanoparticles. Materials Research Society Symposia Proceedings, 1998, 536, 287.	0.1	0
135	Coherent optical spectroscopy of charged exciton complexes in semiconductor nanostructures. , 2018, , .		0
136	Mathematical Models of Heat Exchange in Multilayer Constructions with Various Thermalphysic Characteristics in Industrial Installations. International Review on Modelling and Simulations, 2018, 11, 59.	0.3	0
137	Development and Investigation of Mathematical Models of Thermoelastic Stresses and Strains in Production of Multilayer Structures of Spherical Shape for Aircraft. Russian Aeronautics, 2019, 62, 508-511.	0.2	0
138	Transverse magnetic routing of light emission in hybrid plasmonic-semiconductor nanostructures: Towards operation at room temperature. Physical Review Research, 2022, 4, .	3.6	0
139	Nonequilibrium Optical Spin Cooling in Charged Quantum Dots. , 0, , 81-108.		0