Ilya A Akimov

List of Publications by Year
in descending order

139 papers	3,322 citations	172386 29 h-index	161767 54 g-index
143 all docs	143 docs citations	143 times ranked	3070 citing authors

#	Article	IF	Citations
1	Transverse magnetic routing of light emission in hybrid plasmonic-semiconductor nanostructures: Towards operation at room temperature. Physical Review Research, 2022, 4, .	1.3	0
2	Photon Echo Polarimetry of Excitons and Biexcitons in a $CH_3NH_3PbI_3$ Perovskite Single Crystal. ACS Photonics, 2022, 9, 621-629.	3.2	7
3	Accumulation and control of spin waves in magnonic dielectric microresonators by a comb of ultrashort laser pulses. Scientific Reports, 2022, 12, 7369.	1.6	4
4	Extending the time of coherent optical response in ensemble of singly-charged InGaAs quantum dots. Communications Physics, 2022, 5, .	2.0	3
5	Giant effective Zeeman splitting in a monolayer semiconductor realized by spin-selective strong light–matter coupling. Nature Photonics, 2022, 16, 632-636.	15.6	14
6	Plasmon-to-exciton spin conversion in semiconductor-metal hybrid nanostructures. Physical Review B, 2021, 103, .	1.1	2
7	Coexistence of Short- and Long-Range Ferromagnetic Proximity Effects in a Fe/(Cd,Mg)Te/CdTe Quantum Well Hybrid Structure. Nano Letters, 2021, 21, 2370-2375.	4.5	4
8	Homogeneous optical anisotropy in an ensemble of InGaAs quantum dots induced by strong enhancement of the heavy-hole band Landé parameter q. Physical Review B, 2021, 104, .	1.1	5
9	Steplike spectral distribution of photoelectrons at the percolation threshold in heavily p -doped GaAs. Physical Review B, 2020, 102, .	1.1	1
10	Effect of electric current on the optical orientation of interface electrons in AlGaAs/GaAs heterostructures. Physical Review B, 2020, 102, .	1.1	1
11	Resonant thermal energy transfer to magnons in a ferromagnetic nanolayer. Nature Communications, 2020, 11, 4130.	5.8	7
12	Accurate photon echo timing by optical freezing of exciton dephasing and rephasing in quantum dots. Communications Physics, 2020, 3, .	2.0	10
13	Quantum beats in the polarization of the spin-dependent photon echo from donor-bound excitons in CdTe/(Cd,Mg)Te quantum wells. Physical Review B, 2020, 101, .	1.1	5
14	In-plane anisotropy of the hole g factor in CdTe/(Cd,Mg)Te quantum wells studied by spin-dependent photon echoes. Physical Review Research, 2020, 2, .	1.3	4
15	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.	0.2	1
16	Low voltage control of exchange coupling in a ferromagnet-semiconductor quantum well hybrid structure. Nature Communications, 2019, 10, 2899.	5.8	15
17	Spintronics of semiconductor, metallic, dielectric, and hybrid structures (100th anniversary of the) Tj ETQq1 1 0.784314 rgBT /Overlo	0.8	19
18	Spatially asymmetric transients of propagating exciton-polariton modes in a planar CdZnTe/CdMgTe guiding structure. Physical Review B, 2019, 100, .	1.1	1

#	Article	IF	Citations
19	Transverse magneto-optical Kerr effect at narrow optical resonances. Nanophotonics, 2019, 8, 287-296.	2.9	19
20	Epitaxial InGaAs Quantum Dots in Al0.29Ga0.71As Matrix: Intensity and Kinetics of Luminescence in the Near Field of Silver Nanoparticles. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 697 T		
21	Polarimetry of photon echo on charged and neutral excitons in semiconductor quantum wells. Scientific Reports, 2019, 9, 5666.	1.6	12
22	Effect of nuclear quadrupole interaction on spin beats in photoluminescence polarization dynamics of charged excitons in InP/(In,Ga)P quantum dots. Physical Review B, 2019, 100, .	1.1	2
23	Microscopic dynamics of electron hopping in a semiconductor quantum well probed by spin-dependent photon echoes. Physical Review B, 2019, 100, .	1.1	9
24	Wide-band enhancement of the transverse magneto-optical Kerr effect in magnetite-based plasmonic crystals. Physical Review B, 2019, 100, .	1.1	25
25	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.	0.1	0
26	Photon Echo from an Ensemble of (In,Ga)As Quantum Dots. Semiconductors, 2018, 52, 531-534.	0.2	1
27	Transverse Magneto-Optical Kerr Effect in Magnetite Covered by Array of Gold Nanostripes. Semiconductors, 2018, 52, 1857-1860.	0.2	5
28	Long coherent dynamics of localized excitons in (In,Ga)N/GaN quantum wells. Physical Review B, 2018, 98, .	1.1	7
29	Plasmon-excitonic Enhancement of the Transverse Magneto-Optical Kerr effect in the Semiconductor Magnetic Nanostructures. , 2018, , .		0
30	Studies of photon echo from exciton ensemble in (In,Ga)As quantum dots. Journal of Physics: Conference Series, 2018, 951, 012029.	0.3	1
31	Single-beam resonant spin amplification of electrons interacting with nuclei in a GaAs/(Al,Ga)As quantum well. Physical Review B, 2018, 98, .	1.1	3
32	Single-beam optical measurement of spin dynamics in CdTe/(Cd,Mg)Te quantum wells. Physical Review B, 2018, 98, .	1.1	8
33	Interfacial Ferromagnetism in a Co/CdTe Ferromagnet/Semiconductor Quantum Well Hybrid Structure. Physics of the Solid State, 2018, 60, 1578-1581.	0.2	3
34	Magnetic-field-induced crossover from the inverse Faraday effect to the optical orientation in EuTe. Journal of Applied Physics, 2018, 123, 193102.	1.1	7
35	Routing the emission of a near-surface light source by a magnetic field. Nature Physics, 2018, 14, 1043-1048.	6.5	27
36	Photon Echo from Localized Excitons in Semiconductor Nanostructures. Physics of the Solid State, 2018, 60, 1635-1644.	0.2	19

#	Article	IF	Citations
37	Coherent dynamics of localized excitons and trions in ZnO/(Zn,Mg)O quantum wells studied by photon echoes. Physical Review B, 2018, 97, .	1.1	10
38	Coherent optical spectroscopy of charged exciton complexes in semiconductor nanostructures. , 2018, , .		0
39	Mathematical Models of Heat Exchange in Multilayer Constructions with Various Thermalphysic Characteristics in Industrial Installations. International Review on Modelling and Simulations, 2018, 11, 59.	0.2	0
40	Photon echoes from (In,Ga)As quantum dots embedded in a Tamm-plasmon microcavity. Physical Review B, 2017, 95, .	1.1	23
41	Dynamics of exciton magnetic polarons in CdMnSe/CdMgSe quantum wells: Effect of self-localization. Physical Review B, 2017, 95, .	1.1	14
42	Magnon Accumulation by Clocked Laser Excitation as Source of Long-Range Spin Waves in Transparent Magnetic Films. Physical Review X, 2017, 7, .	2.8	35
43	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, .	1.1	19
44	Quasiguided modes of opaline photonic crystals covered by <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ge</mml:mi><mml:mn>12</mml:mn></mml:msub> Physical Review B, 2017, 96, .		
45	Time-resolved photon echoes from donor-bound excitons in ZnO epitaxial layers. Physical Review B, 2017, 96, .	1.1	8
46	Generation of spin waves by a train of fs-laser pulses: a novel approach for tuning magnon wavelength. Scientific Reports, 2017, 7, 5668.	1.6	50
47	High-Resolution Two-Dimensional Optical Spectroscopy of Electron Spins. Physical Review X, 2017, 7, .	2.8	9
48	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, .	1.1	14
49	Excitonic enhancement of the transverse magneto-optical Kerr effect in semiconductor nanostructures. , 2017, , .		0
50	Access to long-term optical memories using photon echoes retrieved from electron spins in semiconductor quantum wells. Proceedings of SPIE, 2016, , .	0.8	1
51	Enhancement of electron hot spot relaxation in photoexcited plasmonic structures by thermal diffusion. Physical Review B, 2016, 94, .	1.1	6
52	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.	1.0	8
53	Ultrafast dynamical response of the lower exciton-polariton branch in CdZnTe. Physical Review B, 2016, 93, .	1.1	1
54	Photon echo transients from an inhomogeneous ensemble of semiconductor quantum dots. Physical Review B, 2016, 93, .	1.1	28

#	Article	IF	Citations
55	Terahertz dynamics of lattice vibrations in Au/CdTe plasmonic crystals: Photoinduced segregation of Te and enhancement of optical response. Physical Review B, 2016, 93, .	1.1	10
56	Optical orientation of hole magnetic polarons in (Cd,Mn)Te/(Cd,Mn,Mg)Te quantum wells. Physical Review B, 2016, 93, .	1.1	11
57	Coherent spin dynamics of carriers in ferromagnetic semiconductor heterostructures with an Mn δ layer. Journal of Experimental and Theoretical Physics, 2016, 123, 420-428.	0.2	2
58	Negative circular polarization dynamics in InP/InGaP quantum dots. Journal of Physics: Conference Series, 2016, 741, 012189.	0.3	2
59	Long-range p–d exchange interaction in a ferromagnet–semiconductor hybrid structure. Nature Physics, 2016, 12, 85-91.	6.5	47
60	Spin-dependent tunneling in semiconductor heterostructures with a magnetic layer. Physical Review B, 2015, 92, .	1.1	11
61	Resonant optical alignment and orientation of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mtext>Mn</mml:mtext><mml:mrow><mml:mn>2</mml:mn> in CdMnTe crystals. Physical Review B, 2015, 92, .	1.1	8
62	Tunable Optical Nanocavity of Iron-garnet with a Buried Metal Layer. Materials, 2015, 8, 3012-3023.	1.3	6
63	Properties of Exchange Coupled All-garnet Magneto-Optic Thin Film Multilayer Structures. Materials, 2015, 8, 1976-1992.	1.3	6
64	Femtosecond Photo-Induced Phenomena in Multiferroic Hexagonal Manganite YMnO₃. Solid State Phenomena, 2015, 233-234, 149-152.	0.3	0
65	Coherent control and angular momentum transfer in semiconductor and plasmonic nanostructures. , 2015, , .		0
66	Photoluminescence of two-dimensional GaTe and GaSe films. 2D Materials, 2015, 2, 035010.	2.0	76
67	Ultrafast coherent spectroscopy in quantum dot nanostructures. , 2015, , .		0
68	Magnetooptical intensity effects in plasmonic crystals. , 2014, , .		0
69	Orientation of electron spins in hybrid ferromagnet–semiconductor nanostructures. Physica Status Solidi (B): Basic Research, 2014, 251, 1663-1672.	0.7	15
70	Magnetophotonic intensity effects in hybrid metal-dielectric structures. Physical Review B, 2014, 89, .	1.1	39
71	Photon echoes. Nature Photonics, 2014, 8, 876-876.	15.6	0
72	Access to long-term optical memories using photon echoes retrieved from semiconductor spins. Nature Photonics, 2014, 8, 851-857.	15.6	74

#	Article	IF	Citations
73	Transformation of mode polarization in gyrotropic plasmonic waveguides. Laser Physics, 2014, 24, 094006.	0.6	36
74	Coherent Coupling of Excitons and Trions in a Photoexcited CdTe/CdMgTe Quantum Well. Physical Review Letters, 2014, 112, 097401.	2.9	44
75	Exciton-Phonon Interactions in an InAs Quantum Dot Ensemble Studied with 2D Coherent Spectroscopy. , 2014, , .		0
76	Plasmon-mediated magneto-optical transparency. Nature Communications, 2013, 4, 2128.	5.8	180
77	Tuning of the transverse magneto-optical Kerr effect in magneto-plasmonic crystals. New Journal of Physics, 2013, 15, 075024.	1.2	80
78	Correlation and dephasing effects on the non-radiative coherence between bright excitons in an InAs QD ensemble measured with 2D spectroscopy. Solid State Communications, 2013, 163, 65-69.	0.9	25
79	Electron spin dynamics and optical orientation of Mn2+ ions in GaAs. Journal of Applied Physics, 2013, 113, 136501.	1.1	6
80	Ultrafast photoinduced linear and circular optical anisotropy in the multiferroic hexagonal manganite YMnO$_3$. Physical Review B, 2013, 88, .	1.1	7
81	Waveguide-Plasmon Polaritons Enhance Transverse Magneto-Optical Kerr Effect. Physical Review X, 2013, 3, .	2.8	75
82	Magnetic field induced nutation of exciton-polariton polarization in (Cd,Zn)Te crystals. Physical Review B, 2013, 88, .	1.1	10
83	Fifth-order nonlinear optical response of excitonic states in an InAs quantum dot ensemble measured with two-dimensional spectroscopy. Physical Review B, 2013, 87, .	1.1	43
84	Influence of confinement on biexciton binding in semiconductor quantum dot ensembles measured with two-dimensional spectroscopy. Physical Review B, 2013, 87, .	1.1	50
85	Biexcitons in semiconductor quantum dot ensembles. Physica Status Solidi (B): Basic Research, 2013, 250, 1753-1759.	0.7	8
86	Plasmonically Enhanced Transverse Magneto-Optical Kerr Effect. , 2013, , .		0
87	Confinement Effects on Biexciton Binding in Semiconductor Quantum Dots Measured with 2D Coherent Spectroscopy. , 2013, , .		0
88	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.	0.9	14
89	Studying periodic nanostructures by probing the in-sample optical far-field using coherent phonons. Applied Physics Letters, 2012, 101, .	1.5	5
90	Magnetic-Field Control of Photon Echo from the Electron-Trion System in a CdTe Quantum Well: Shuffling Coherence between Optically Accessible and Inaccessible States. Physical Review Letters, 2012, 109, 157403.	2.9	36

#	Article	IF	Citations
91	Evidence of Exciton-Trion Coherent Interactions in a CdTe/CdMgTe Quantum Well. , 2012, , .		0
92	Modulation of a surface plasmon-polariton resonance by subterahertz diffracted coherent phonons. Physical Review B, 2012, 86, .	1.1	19
93	Plasmonic crystals for enhancing optical properties. AIP Conference Proceedings, 2012, , .	0.3	1
94	Dynamic spin polarization by orientation-dependent separation in a ferromagnetâ€"semiconductor hybrid. Nature Communications, 2012, 3, 959.	5.8	53
95	Plasmonic crystals for ultrafast nanophotonics: Optical switching of surface plasmon polaritons. Physical Review B, 2012, 85, .	1.1	58
96	Excitons, Biexcitons, and Trions in an InAs Quantum Dot Ensemble Studied with 2D Fourier-Transform Spectroscopy. , 2012, , .		0
97	Coherence of Fine-Structure States of an InAs Quantum Dot Ensemble Studied with 2D Fourier-Transform Spectroscopy. , 2012, , .		0
98	Intensity magnetooptical effect in magnetoplasmonic crystals. Journal of Physics: Conference Series, 2011, 303, 012038.	0.3	7
99	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.	0.9	10
100	Enhanced magneto-optical effects in magnetoplasmonic crystals. Nature Nanotechnology, 2011, 6, 370-376.	15.6	498
101	Optical Orientation of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Mn</mml:mi><mml:mrow><mml:mn>2</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup> in GaAs in Weak Longitudinal Magnetic Fields. Physical Review Letters, 2011, 106, 147402.	2.9	11
102	Exciton magnetic polaron in CdMnSe/CdMgSe quantum wells. Physica Status Solidi (B): Basic Research, 2010, 247, 1508-1510.	0.7	5
103	Spin Relaxation in GaAs Doped with Magnetic (Mn) Atoms. Solid State Phenomena, 2010, 168-169, 47-54.	0.3	1
104	Subnanosecond delay of light inCdxZn1â~'xTecrystals. Physical Review B, 2010, 82, .	1.1	7
105	Spin dynamics of electrons and holes in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mtext>InGaAs</mml:mtext><mml:mo>/</mml:mo><mml:mtext>GaAs</mml:mtext></mml:mrow> wells at millikelvin temperatures. Physical Review B, 2010, 81, .	1.1	26
106	Collective single-mode precession of electron spins in an ensemble of singly charged (In,Ga)As/GaAs quantum dots. Physical Review B, 2009, 79, .	1.1	32
107	Electron-spin dynamics in Mn-doped GaAs using time-resolved magneto-optical techniques. Physical Review B, 2009, 80, .	1.1	20
108	Visible-Bandgap IIâ€"VI Quantum Dot Heterostructures. Nanoscience and Technology, 2008, , 237-254.	1.5	2

#	Article	IF	Citations
109	Nonequilibrium Nuclear-Electron Spin Dynamics in Semiconductor Quantum Dots. Physical Review Letters, 2007, 99, 036604.	2.9	30
110	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
111	Stimulated Emission from the Biexciton in a Single Self-Assembled II-VI Quantum Dot. Physical Review Letters, 2006, 96, 067401.	2.9	50
112	Electron Spin Dynamics in a Self-Assembled Semiconductor Quantum Dot: The Limit of Low Magnetic Fields. Physical Review Letters, 2006, 97, 056602.	2.9	54
113	Coherent control of the biexciton in a single quantum dot. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 383-386.	0.8	1
114	Electron-hole exchange interaction in a negatively charged quantum dot. Physical Review B, 2005, 71, .	1.1	71
115	Two-Photon Coherent Control of a Single Quantum Dot. Physical Review Letters, 2004, 92, 227401.	2.9	65
116	Spin processes related to trions in quantum dots. Physica Status Solidi A, 2004, 201, 412-420.	1.7	18
117	Optical and magnetic anisotropies of the hole states in Stranski-Krastanov quantum dots. Physical Review B, 2004, 70, .	1.1	161
118	Energy spectrum of negatively charged single quantum dot: trion and charged biexciton states. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 17, 31-34.	1.3	10
119	Single-hole spin relaxation in a quantum dot. Physical Review B, 2003, 68, .	1.1	112
120	Single CdSe quantum dots for high-bandwidth single-photon generation. Journal of the Optical Society of America B: Optical Physics, 2003, 20, 2189.	0.9	24
121	Fine structure of the trion triplet state in a single self-assembled semiconductor quantum dot. Applied Physics Letters, 2002, 81, 4730-4732.	1.5	73
122	Optical Non-Linearities Related to Trions in Quantum Wells and Quantum Dots. Physica Status Solidi (B): Basic Research, 2002, 234, 304-312.	0.7	5
123	Inelastic scattering of hot electrons in n-GaAs/AlAs types I and II multiple quantum wells doped with silicon. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 10, 505-510.	1.3	1
124	Momentum Alignment and Spin Orientation of Photoexcited Electrons in GaAs in the Transition from Two- to Three-Dimensional Structures. Semiconductors, 2001, 35, 727.	0.2	2
125	In situ Raman scattering studies of the amorphous and crystalline Si nanoparticles. Solid State Communications, 2000, 113, 553-558.	0.9	69
126	Oxide Thin Films for Tunable Microwave Devices. , 2000, 4, 393-405.		112

#	Article	IF	Citations
127	Lattice dynamical properties of SrTiO[sub 3] thin films. AIP Conference Proceedings, 2000, , .	0.3	2
128	Electric-Field-Induced Soft-Mode Hardening inSrTiO3Films. Physical Review Letters, 2000, 84, 4625-4628.	2.9	99
129	Dielectric and lattice dynamical properties of SrTiO3 thin films. Integrated Ferroelectrics, 2000, 28, 247-256.	0.3	2
130	Observation of the First-Order Raman Scattering inSrTiO3Thin Films. Physical Review Letters, 1999, 82, 4500-4503.	2.9	160
131	Dimensionality effects in the hot-electron photoluminescence of gallium arsenide: 2D-quasi-3D transition. Semiconductors, 1999, 33, 681-683.	0.2	1
132	Inelastic scattering of hot electrons by neutral donors in heavily silicon-doped GaAs/AlAs quantum wells. Semiconductors, 1999, 33, 1124-1127.	0.2	1
133	Soft-Mode Phonons in SrTiO₃ Thin Films Studied by Far-Infrared Ellipsometry and Raman Scattering. Materials Research Society Symposia Proceedings, 1999, 603, 245.	0.1	2
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	Miniband effects on hot-electron photoluminescence polarization in GaAs/AlAs superlattices. Physical Review B, 1997, 56, 6871-6879.	1.1	10
136	Study of the Two-Dimensional to Quasi-Three-Dimensional Transition in GaAs/AlAs Superlattices by Polarized Hot Photoluminescence. Physica Status Solidi (B): Basic Research, 1997, 204, 141-146.	0.7	3
137	Polarization of hot photoluminescence in GaAs/AlAs superlattices. JETP Letters, 1996, 63, 305-310.	0.4	7
138	On Thermal E.M.F. Measurements in Photo‐Semiconducting Dyes. Physica Status Solidi (B): Basic Research, 1966, 17, K95.	0.7	0
139	Nonequilibrium Optical Spin Cooling in Charged Quantum Dots. , 0, , 81-108.		0