

Mikhail Fedorov

List of Publications by Year in descending order

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137
papers

2,296
citations

218381

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253896

43
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141
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141
docs citations

141
times ranked

1001
citing authors

#	ARTICLE	IF	CITATIONS
1	Field-induced effects of narrowing of photoelectron spectra and stabilisation of Rydberg atoms. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1988, 21, L155-L158.	0.6	157
2	Interference suppression of photoionization of Rydberg atoms in a strong electromagnetic field. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989, 6, 928.	0.9	109
3	Packet narrowing and quantum entanglement in photoionization and photodissociation. <i>Physical Review A</i> , 2004, 69, .	1.0	97
4	INTERACTION OF INTENSE OPTICAL RADIATION WITH FREE ELECTRONS (NONRELATIVISTIC CASE). <i>Uspekhi Fizicheskikh Nauk</i> , 1973, 15, 416-435.	0.3	93
5	Anisotropically and High Entanglement of Biphoton States Generated in Spontaneous Parametric Down-Conversion. <i>Physical Review Letters</i> , 2007, 99, 063901.	2.9	84
6	Biphoton wave packets in parametric down-conversion: Spectral and temporal structure and degree of entanglement. <i>Physical Review A</i> , 2008, 78, .	1.0	81
7	Isolated Attosecond Pulses from Laser-Driven Synchrotron Radiation. <i>Physical Review Letters</i> , 2012, 109, 245005.	2.9	68
8	Short-pulse or strong-field breakup processes: a route to study entangled wave packets. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2006, 39, S467-S483.	0.6	65
9	Spontaneous emission of a photon: Wave-packet structures and atom-photon entanglement. <i>Physical Review A</i> , 2005, 72, .	1.0	63
10	Spontaneous parametric down-conversion: Anisotropical and anomalously strong narrowing of biphoton momentum correlation distributions. <i>Physical Review A</i> , 2008, 77, .	1.0	57
11	Gaussian modelling and Schmidt modes of SPDC biphoton states. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2009, 42, 175503.	0.6	53
12	Packet spreading, stabilization, and localization in superstrong fields. <i>Physical Review Letters</i> , 1992, 68, 2592-2595.	2.9	52
13	Intensity-dependent phase-matching effects in harmonic generation. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1995, 12, 863.	0.9	52
14	Observation of Nonspreading Wave Packets in an Imaginary Potential. <i>Physical Review Letters</i> , 2005, 95, 110405.	2.9	50
15	Spectrum of light scattered coherently or incoherently by a collection of atoms. <i>Physical Review A</i> , 1992, 45, 4706-4712.	1.0	46
16	Coherence and interference in a Rydberg atom in a strong laser field: excitation, ionization, and emission of light. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1990, 7, 569.	0.9	44
17	New effects in the multiphoton ionization of atoms. <i>Uspekhi Fizicheskikh Nauk</i> , 1989, 32, 500-520.	0.3	39
18	Strong-field photoionisation of an initially excited hydrogen atom: Formation of Rydberg wavepacket, its structure and trapping of population at Rydberg levels. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990, 23, 2245S-2257S.	0.6	38

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19	Characterization of spectral entanglement of spontaneous parametric-down conversion biphotons in femtosecond pulsed regime. <i>Europhysics Letters</i> , 2009, 87, 64003.	0.7	38
20	Free-electron laser based on the effect of channeling in an intense standing light wave. <i>Applied Physics Letters</i> , 1988, 53, 353-354.	1.5	37
21	Spectrum of light scattered by a strongly driven atom. <i>Physical Review A</i> , 1993, 47, 1327-1335.	1.0	37
22	e-e scattering in the presence of an external field. <i>Journal of Physics A</i> , 1981, 14, 2305-2315.	1.6	34
23	Resonance interaction of autoionising states with an intense electromagnetic field. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1982, 15, 2851-2858.	1.6	30
24	Wavepacket spreading and electron localization in strong-field ionization. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1993, 26, 1181-1195.	0.6	29
25	Interference stabilization of Rydberg atoms: numerical calculations and physical models. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1996, 29, 2907-2924.	0.6	29
26	Entanglement of biphoton states: qutrits and ququarts. <i>New Journal of Physics</i> , 2011, 13, 083004.	1.2	26
27	Interference Stabilization Revisited. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012, 18, 42-53.	1.9	26
28	Semiclassical matrix elements, essential-states models and perturbation theory of above-threshold ionisation. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1989, 22, 1193-1205.	0.6	25
29	Ponderomotive forces and stimulated Compton scattering of free electrons in a laser field. <i>Physical Review E</i> , 1997, 55, 1015-1027.	0.8	25
30	Wave packets, probabilities of transitions, and multiphoton excitation of atoms. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1988, 5, 850.	0.9	23
31	Strong-field photoionization and emission of light in the wave-packet-spreading regime. <i>Physical Review A</i> , 1995, 52, 504-513.	1.0	23
32	Ac Stark effect and trapping of population on Rydberg levels in a strong ionizing field. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989, 6, 1504.	0.9	22
33	Resonant ionisation of atoms and switching-on of the interaction. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1977, 10, 2573-2582.	1.6	21
34	Photodetachment of an electron from a negative ion in the near-threshold region. I. Suddenly switching-on interaction. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1983, 16, 3641-3652.	1.6	21
35	Photodetachment of an electron from a negative ion in the near-threshold region. II. Pulses of radiation with smooth time envelopes. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1983, 16, 3653-3666.	1.6	20
36	Three-photon generation by means of third-order spontaneous parametric down-conversion in bulk crystals. <i>Laser Physics Letters</i> , 2015, 12, 115404.	0.6	20

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37	Strong-field short-pulse photoionization of Rydberg atoms: Interference stabilization and distribution of the photoelectron density in space and time. <i>Physical Review A</i> , 1998, 58, 1322-1334.	1.0	19
38	Interference stabilization of Rydberg atoms: Quasiclassical analytical theory and exact three-dimensional numerical simulations. <i>Physical Review A</i> , 1999, 60, R749-R752.	1.0	18
39	An electron in a quantized plane wave and in a constant magnetic field. <i>Zeitschrift für Physik A</i> , 1973, 261, 191-202.	0.9	17
40	Influence of a strong electromagnetic wave on stimulated bremsstrahlung of electrons. <i>Soviet Journal of Quantum Electronics</i> , 1977, 7, 1260-1266.	0.1	17
41	Stimulated bremsstrahlung in the presence of an intense electromagnetic wave. <i>Journal of Physics A</i> , 1976, 9, L103-L106.	1.6	16
42	Comparison of quasiclassical and exact dipole moments for bound-free transitions in hydrogen. <i>Physical Review A</i> , 1995, 52, 125-129.	1.0	16
43	Relativistic ponderomotive forces. <i>Journal of Experimental and Theoretical Physics</i> , 1999, 89, 640-646.	0.2	16
44	Azimuthal entanglement and multichannel Schmidt-type decomposition of noncollinear biphotons. <i>Physical Review A</i> , 2016, 93, .	1.0	16
45	Free-Electron Laser without Inversion: Gain Optimization and Implementation Scheme. <i>Physical Review Letters</i> , 2000, 85, 4510-4513.	2.9	14
46	L. V. Keldysh's ionization in the Field of a Strong Electromagnetic Wave and modern physics of atomic interaction with a strong laser field. <i>Journal of Experimental and Theoretical Physics</i> , 2016, 122, 449-455.	0.2	14
47	Quasiclassical atomic electron in a strong light field. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1994, 27, 4145-4167.	0.6	13
48	Two-color interference stabilization of atoms. <i>Physical Review A</i> , 2004, 69, .	1.0	13
49	Interaction of atoms with supershort laser pulses and the generation of the supercontinuum. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990, 23, 2505-2520.	0.6	12
50	Wavepacket theory of the Kapitza-Dirac effect. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000, 33, 4535-4550.	0.6	12
51	The Schmidt modes of biphoton qutrits: Poincaré-sphere representation. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2013, 46, 095502.	0.6	12
52	Semiclassical dynamics of strongly driven systems. <i>Physical Review A</i> , 1998, 58, R793-R796.	1.0	11
53	Classical and quantum versions of the Kapitza-Dirac effect. <i>Journal of Experimental and Theoretical Physics</i> , 1999, 89, 460-467.	0.2	11
54	Suppression of interference in e-e scattering by the field of a strong electromagnetic wave. <i>Journal of Physics A</i> , 1984, 17, 3143-3149.	1.6	10

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55	Phase control of the degree of ionization of Rydberg atoms by a strong laser field. Journal of Experimental and Theoretical Physics, 2000, 90, 794-804.	0.2	10
56	Diverging light pulses in vacuum: Lorentz-invariant mass and mean propagation speed. Laser Physics, 2017, 27, 036202.	0.6	9
57	Interaction of electrons with the electromagnetic field in free electron lasers. Uspekhi Fizicheskikh Nauk, 1981, 24, 801-814.	0.3	8
58	Qutrits and ququarts in spontaneous parametric down-conversion, correlations and entanglement. Journal of Experimental and Theoretical Physics, 2012, 115, 15-35.	0.2	8
59	Schmidt decomposition for non-collinear biphoton angular wave functions. Physica Scripta, 2015, 90, 074048.	1.2	8
60	Free-electron laser exploiting a superlattice-like medium. Optics Express, 1998, 3, 162.	1.7	7
61	Rotational quasienergy states and alignment of molecules in a strong laser field. Journal of Experimental and Theoretical Physics, 1999, 89, 837-844.	0.2	7
62	Dynamics of spontaneous radiation of atoms scattered by a resonance standing light wave. Journal of Experimental and Theoretical Physics, 2003, 97, 522-538.	0.2	7
63	Spatial amplification of a laser wave and the transverse spread of electrons in an undulator with a noncollinear configuration. Laser Physics, 2007, 17, 1213-1216.	0.6	7
64	Single biphoton ququarts as either pure or mixed states. Physical Review A, 2011, 84, .	1.0	7
65	Spectral Entanglement in Parametric Down-Conversion with Nondegenerate Frequencies. Advanced Science Letters, 2009, 2, 511-516.	0.2	7
66	Near threshold photodetachment of electrons from negative ions and its dependence on the shape of the laser pulse envelope. Journal of Physics B: Atomic and Molecular Physics, 1984, 17, 3469-3480.	1.6	6
67	Grobe and Fedorov reply. Physical Review Letters, 1993, 70, 1562-1562.	2.9	6
68	Stabilization and structure of wave packets in Rydberg atoms ionized by a strong light field. Optics Express, 1998, 3, 271.	1.7	6
69	Coherent control of strong-field two-pulse ionization of Rydberg atoms. Optics Express, 2000, 6, 117.	1.7	6
70	Calculations of photodissociation in intense laser fields: Validity of the adiabatic elimination of the continuum. International Journal of Quantum Chemistry, 2004, 99, 452-459.	1.0	6
71	Three-photon polarization ququarts: polarization, entanglement and Schmidt decompositions. Laser Physics, 2015, 25, 035204.	0.6	6
72	Luminescence in germania-silica fibers in a $2\lambda/4$ region. Optics Letters, 2017, 42, 2874.	1.7	6

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73	Packet Spreading, Stabilization, and Localization in Superstrong Fields. <i>Physical Review Letters</i> , 1992, 69, 3591-3591.	2.9	5
74	Competition between L - and V-type transitions in interference stabilization of Rydberg atoms. <i>Optics Express</i> , 1998, 2, 51.	1.7	5
75	Interference stabilization of molecules with respect to photodissociation by a strong laser field. <i>Physical Review A</i> , 2002, 65, .	1.0	5
76	Potential scattering of electron wave packets by large-size targets. <i>Physical Review A</i> , 2002, 65, .	1.0	5
77	Temporal interference effects in noncollinear and frequency-nondegenerate spontaneous parametric down-conversion. <i>Physical Review A</i> , 2018, 98, .	1.0	5
78	Entanglement of multiphoton states in polarization and quadrature variables. <i>Laser Physics</i> , 2019, 29, 124006.	0.6	5
79	Laser-induced collective binding in two-electron systems. <i>Physical Review A</i> , 1984, 30, 658-660.	1.0	4
80	Light amplification and electron acceleration by a noncollinear Compton process. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1987, 4, 1109.	0.9	4
81	Laser temporal and spatial effects on ionization suppression. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1992, 9, 1234.	0.9	4
82	Nonstationary theory of wave-packet potential scattering. <i>Physical Review A</i> , 1998, 58, 1195-1203.	1.0	4
83	Interference stabilization of molecules with respect to photodissociation by a strong laser field. <i>Journal of Modern Optics</i> , 2003, 50, 513-527.	0.6	4
84	Invariant Mass and Propagation Speed of Light Pulses in Vacuum. <i>Journal of Physics: Conference Series</i> , 2017, 826, 012025.	0.3	4
85	Hong's "Mandel effect in terms of the temporal biphoton wave function with two arrival-time variables. <i>Laser Physics Letters</i> , 2018, 15, 035206.	0.6	4
86	High resource of azimuthal entanglement in terms of Cartesian variables of noncollinear biphotons. <i>Physical Review A</i> , 2018, 97, .	1.0	4
87	Entanglement of multiphoton two-mode polarization Fock states and of their superpositions. <i>Laser Physics Letters</i> , 2020, 17, 035209.	0.6	4
88	Comments on "Multiphoton processes in homopolar diatomic molecules," "Perturbation theory in closed form for heteronuclear diatomic molecules," and "Multiphoton processes in heteropolar diatomic molecules". <i>Physical Review A</i> , 1975, 11, 1763-1764.	1.0	3
89	Polarization of photoelectrons in the ionization of unpolarized atoms. <i>Uspekhi Fizicheskikh Nauk</i> , 1979, 22, 252-269.	0.3	3
90	Non-stationary scattering of wave-packets. <i>Optics Express</i> , 1998, 2, 404.	1.7	3

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91	Experimental observation of double-peak structure of coincidence spectra in ultrafast spontaneous parametric down-conversion. <i>Physical Review A</i> , 2013, 87, .	1.0	3
92	Diffraction as a reason for slowing down light pulses in vacuum. <i>Europhysics Letters</i> , 2017, 117, 64001.	0.7	3
93	Stabilization of a Rydberg atom and competition between the \hat{b} and V transition channels. <i>Journal of Experimental and Theoretical Physics</i> , 1998, 87, 445-453.	0.2	2
94	Interference stabilisation of Rydberg atoms in a strong laser field. <i>Quantum Electronics</i> , 1999, 29, 578-590.	0.3	2
95	Einstein localization in entangled light scattering. <i>Journal of Modern Optics</i> , 2004, 51, 1779-1786.	0.6	2
96	Strong-field interference stabilization of Rydberg atoms and the pulse-propagation problem. <i>Laser Physics</i> , 2006, 16, 948-956.	0.6	2
97	Modulation and correlation of the radial and angular motions of a Rydberg electron in a resonance microwave field. <i>Quantum Electronics</i> , 2006, 36, 713-719.	0.3	2
98	The threshold conditions for an FELWI. <i>Physica Scripta</i> , 2010, T140, 014058.	1.2	2
99	Biphoton ququarts as either pure or mixed states, features and reconstruction from coincidence measurements. <i>European Physical Journal D</i> , 2013, 67, 1.	0.6	2
100	Features of three-photon polarization states: Entanglement and polarization. <i>International Journal of Quantum Information</i> , 2014, 12, 1560009.	0.6	2
101	On a possible definition of the concept of "mass density" for a classical electromagnetic field in vacuum. <i>Laser Physics Letters</i> , 2015, 12, 096201.	0.6	2
102	Schmidt-mode analysis of quadrature entanglement in superpositions of two-mode multiphoton states. <i>Physica Scripta</i> , 2020, 95, 064001.	1.2	2
103	Resonant interaction between intense electromagnetic waves during ionization of an atom. <i>Soviet Physics Journal (English Translation of Izvestiia Vysshykh Uchebnykh Zavedenii, Fizika)</i> , 1978, 21, 49-55.	0.0	1
104	Resonance ionization of atoms in a strong spatially inhomogeneous electromagnetic field. <i>Soviet Journal of Quantum Electronics</i> , 1980, 10, 454-461.	0.1	1
105	Inverse noncollinear Compton laser as a device for acceleration of electrons. <i>Applied Physics Letters</i> , 1986, 49, 1668-1669.	1.5	1
106	Photon echo formed by exciting pulses with smooth envelopes. <i>Journal of the Optical Society of America B: Optical Physics</i> , 1989, 6, 1314.	0.9	1
107	On amplification of electromagnetic radiation in a free-electron beam passing through an atomic gas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1990, 23, 4181-4184.	0.6	1
108	Interference Stabilization in Atoms and Molecules. <i>AIP Conference Proceedings</i> , 2002, , .	0.3	1

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109	The influence of the surface electron layer on the energy spectrum of photoelectrons. Journal of Experimental and Theoretical Physics, 2002, 95, 705-709.	0.2	1
110	Cross-phase-modulation-induced instability and efficient parametric frequency conversion of ultrashort light pulses. Journal of Experimental and Theoretical Physics, 2006, 102, 707-711.	0.2	1
111	Coherent array of non-spreading atomic wave packets in absorptive optical potentials. Laser Physics Letters, 2006, 3, 31-36.	0.6	1
112	Resonant diffusive radiation in random multilayered systems. Laser Physics, 2007, 17, 1080-1084.	0.6	1
113	Peak doubling in spontaneous parametric down-conversion coincidence spectra with a short-pulse pump*. Physica Scripta, 2012, 85, 058105.	1.2	1
114	State entanglement of biphoton qutrits and ququarts. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 233-236.	0.1	1
115	Lorentz-invariant mass and entanglement of biphoton states. Laser Physics Letters, 2019, 16, 065203.	0.6	1
116	Strong-Field Interference Stabilization in Atoms and Molecules. NATO ASI Series Series B: Physics, 1993, , 245-259.	0.2	1
117	Entanglement Degree Characterization of Spontaneous Parametric-Down Conversion Biphotons in Frequency Domain. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2010, , 46-55.	0.2	1
118	Interference Stabilization. , 1996, , 11-21.		1
119	Einstein localization in entangled light scattering. , 0, .		1
120	Charge symmetry of wave functions for an electron in a quantized electromagnetic wave field. Soviet Physics Journal (English Translation of Izvestiia Vysshikh Uchebnykh Zavedenii, Fizika), 1975, 18, 773-776.	0.0	0
121	Splitting of atomic levels in a strong magnetic field in the presence of an intense resonance wave. Soviet Physics Journal (English Translation of Izvestiia Vysshikh Uchebnykh Zavedenii, Fizika), 1976, 19, 1624-1628.	0.0	0
122	Wave-Front Distortion of High-Order Harmonic Beams Caused by Intensity-Dependent Emission Phases. Journal of X-Ray Science and Technology, 1995, 5, 312-322.	0.7	0
123	STRONG-FIELD REGIMES OF PHOTOIONIZATION. Journal of Nonlinear Optical Physics and Materials, 1995, 04, 757-773.	1.1	0
124	Interference stabilization of Rydberg atoms induced by a strong laser field. , 1996, 2796, 2.		0
125	Introduction. Optics Express, 2001, 8, 351.	1.7	0
126	Delay-Dependent Amplification of a Probe Pulse via Stimulated Rayleigh Scattering. Physical Review Letters, 2002, 88, 213001.	2.9	0

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127	Formation of two-dimensional nonspreading atomic wave packets in the field of two standing light waves. Quantum Electronics, 2005, 35, 675-678.	0.3	0
128	Spectral Characterisation of Spontaneous Parametric-Down Conversion Entangled Photons Source in Femtosecond Pulsed Regime. , 2009, , .		0
129	The THz Radiation from Undulator. , 2010, , .		0
130	Azimuthal entanglement and multimode schmidt decompositions for noncollinear biphotons. Bulletin of the Russian Academy of Sciences: Physics, 2016, 80, 755-759.	0.1	0
131	Three-photon spontaneous downconversion in highly nonlinear germania-silica optical fiber waveguides. , 2016, , .		0
132	Interference Stabilization: \hat{I} -and V-Schemes, Dynamics of Ionization, Initial Coherent Population of Rydberg Levels and Quantum Phase Control of The Ionization Yield. , 2001, , 277-284.		0
133	Schmidt-mode and Stokes-vector representations of biphoton polarization qutrits. , 2013, , .		0
134	Photoionization and Stabilization of Rydberg Atoms with High Values of Orbital Momentum. , 1996, , 45-53.		0
135	Atoms, molecules, and electrons in strong light field. , 1999, , .		0
136	Strong field coherince effects in the processes of photoionization from rydberg levels. , 1989, , 177-193.		0
137	Spontaneous parametric down-conversion: Revisiting the parameters of transverse entanglement outside the near zone. Physical Review A, 2022, 105, .	1.0	0